How Do Ideal Friend Preferences and Interaction Context Affect Friendship Formation? Evidence for a Domain-General Relationship Initiation Process

Social Psychological and Personality Science I-10 © The Author(s) 2019 Article reuse guidelines: sagepub.com/journals-permissions DOI: 10.1177/1948550619845925 journals.sagepub.com/home/spp



Sabrina A. Huang¹, Alison Ledgerwood², and Paul W. Eastwick²

Abstract

This research examined how people's ideal friend preferences influence the friendship formation process. In an extension of prior research on romantic relationship initiation, we tested whether the match between participants' ideals and a partner's traits affected participants' interest in forming a new friendship in three contexts: evaluating a potential friend's profile, meeting inperson, and chatting online. Results revealed that participants were more interested in becoming friends with a partner whose traits matched (vs. mismatched) their ideal friend preferences when evaluating his or her profile. After a live interaction, however, the effect of the ideal-perceived trait match manipulation on participants' friendship interest was substantially reduced in both in-person and online chatting contexts. People's ideal friend preferences may influence their friendship interest more strongly in descriptive (i.e., indirect) than interactive (i.e., direct) contexts, a finding that mirrors prior results from the romantic domain and documents a role for domain-general relationship initiation processes.

Keywords

friendship, relationship initiation, attraction, matching effects, summarized preference, attribute preference

The study of romantic relationships and the study of friendships revolve around a similar conceptual question: "Why do people like each other?" Yet traditionally, these domains of study have remained separate-allocated to distinct, nonoverlapping chapters in reviews of the close relationships and evolutionary psychological literatures (e.g., Buss, 2016; Miller, 2018). One theoretical rationale for this separation is that romantic and friendship relationships may be governed by distinct, domain-specific psychological systems: they aided ancestral humans in (a) selecting reproductively valuable mates and (b) navigating coalitions and group hierarchies, respectively (Tooby & Cosmides, 1992). The mere fact that romantic but not friendship relationships typically entail sexual, "hot" feelings—especially as people initiate relationships—makes them seem like separate phenomena (Bradbury & Karney, 2013).

Nevertheless, if scholars were to acquire evidence that romantic relationships and friendships function similarly, a domain-general view of relationship initiation might merit stronger consideration. The current examination of *ideal friend preferences*—the attributes and traits that people ideally desire in a friend—brings an established study paradigm from the romantic domain into the friendship domain to see whether the findings generalize.

The Function of Ideal Preferences

Researchers have spent considerable effort identifying which specific attributes or traits people believe to be most desirable in an ideal romantic partner (Buss, Shackelford, Kirkpatrick, & Larsen, 2001; Fletcher, Simpson, Thomas, & Giles, 1999; Hill, 1945) and an ideal friend (Hall, 2012; Sprecher & Regan, 2002; Wiseman, 1986). In both the romantic and friendship domains, these ideals should presumably serve the function of guiding downstream processes such as initial attraction and relationship maintenance (Eastwick, Luchies, Finkel, & Hunt, 2014; Simpson, Fletcher, & Campbell, 2001); that is, people should evaluate partners/friends positively to the extent that the partners/ friends match the participants' ideals.

In the romantic domain specifically, a small but growing set of studies have explored these downstream hypotheses, and the strength of the evidence for such ideal-matching effects seems

Corresponding Author:

¹ Stanford University, Stanford, CA, USA

²University of California, Davis, Davis, CA, USA

Sabrina A. Huang, Department of Communication, Stanford University, Building 120, Room 110, 450 Serra Mall, Stanford, CA 94305, USA. Email: saahuang@stanford.edu

to depend on the particular paradigm researchers use. When participants evaluate photographs or descriptions of potential partners, they are more romantically interested in partners who match (vs. mismatch) their idiosyncratic ideals (Brumbaugh & Wood, 2013; Eastwick & Smith, 2018; Wood & Brumbaugh, 2009). But when participants evaluate potential partners in face-to-face settings, they tend to be similarly interested in partners who match (vs. mismatch) their ideals (see Eastwick, Finkel, & Simpson, 2019, for a review).

Several studies have specifically compared the effects of ideal partner preferences across these two contexts (i.e., evaluating descriptions vs. face-to-face partners) within the same sample of participants. In one study (Eastwick, Finkel, & Eagly, 2011, Study 1), participants first evaluated a potential romantic partner's profile, which was manipulated to either match or mismatch their ideal partner preferences (reported at an earlier session). After viewing the profile, participants interacted with the partner (an opposite-sex confederate) inperson in a heavily scripted interaction. After seeing only the potential partner's profile, participants were more romantically interested in a partner who matched (vs. mismatched) their ideal partner preferences, but this ideal-matching effect disappeared after interacting in-person. In other words, the extent to which a potential partner's attributes matches one's ideals may affect romantic interest when encountering the partner in an indirect context (e.g., seeing a profile) but not in a direct context (e.g., interacting face-to-face).

There are at least two possible explanations for this context effect (Eastwick et al., 2014). One possibility is that the hot, romantic affect that accompanies face-to-face settings disrupts the use of ideals. Like affective forecasts (Wilson & Gilbert, 2003), participants' ideals may have better predictive power in cooler, less affect-laden contexts (e.g., when evaluating a profile). A second possibility is that people are more likely to rely on high-level, abstract mental tools (e.g., ideals for traits) when they evaluate targets indirectly (e.g., a profile) rather than directly (e.g., face-to-face; Hamilton & Thompson, 2007; Nussbaum, Trope, & Liberman, 2003; Park, Young, & Eastwick, 2015; Trope, Ledgerwood, Liberman, & Fujita, 2019). If the affective explanation plays a primary role in driving the context effect in the romantic domain, then a different pattern might emerge in the same-sex friendship domain, which tends not be associated with passion and other sexual, hot feelings. In contrast, the construal-level explanation applies equally well to both domains.

In light of these open questions, the present investigation aimed to replicate Study 1 of Eastwick, Finkel, and Eagly (2011) in a friendship context. If the results generalize to friendships, we should find that the extent to which a friend matches (vs. mismatches) participants' ideal friend preferences (a) will predict friendship interest when participants evaluate the potential friend's profile (an indirect context) but (b) fail to predict friendship interest when participants evaluate the potential friend face-to-face (a direct context). Such findings would also reduce the likelihood that an affective mechanism explains the existing context effects in this literature.

Online Interactions

A second goal of the current study was to examine an additional interaction context: online instant messaging. With Facebook alone reporting 900 million monthly active users for its instant messaging services, online interactions have become integral for forming and strengthening relationships (Boase, Horrigan, Wellman, & Rainie, 2006; Marcus, 2016).

It is unclear a priori whether online instant messaging more closely approximates the indirect experience of viewing a person's profile or the direct experience of interacting face-to-face. On the one hand, both evaluating profiles and online chat partners are evolutionarily novel tasks, so they may both elicit psychological processes that are dissimilar from face-to-face interactions. Also, relative to face-toface settings, the additional physical distance and reduced social presence (e.g., voice inflection, nonverbal cues) that accompany instant messaging could increase perceived psychological distance, thereby increasing people's reliance on abstract mental tools like ideal preferences (Fujita, Henderson, Eng, Trope, & Liberman, 2006; Ledgerwood, 2014; Short, Williams, & Christie, 1976). On the other hand, according to the "death of distance" perspective (Cairncross, 2000), online communication allows users to overcome barriers (like physical distance) that would normally create psychological distance. In some cases, computer-mediated interactions may entirely eliminate the effect of physical distance on psychological distance (Oh, Curley, & Subramani, 2008). These perspectives offer competing predictions about whether the psychological experience of chatting with a potential friend online is more like reading a profile or interacting face-to-face, and it is therefore an open question whether effects of ideal partner preference-matching will emerge in this context.

The Present Research

The current study tested whether Study 1 of Eastwick et al. (2011) would generalize to the friendship domain; it also extended this prior study by adding an online interaction condition (alongside the profile-evaluation and face-to-face interaction conditions). We predicted that participants evaluating a potential friend who matches (vs. mismatches) their ideals would report greater levels of friendship interest when evaluating the potential friend's profile. Furthermore, we predicted that this effect would be reduced or eliminated following an in-person interaction. We advanced no a priori hypotheses about whether the ideal-matching manipulation would have a substantial impact on friendship interest after an online interaction. Additionally, we explored the possibility that participants' construal level of the target (i.e., abstract vs. concrete), as assessed by the Behavior Identification Form (BIF; Vallacher & Wegner, 1989), might shift depending on the context in which participants were evaluating the target.



Figure 1. Example procedure. Note. For each block, Step 1 (ideal vs. nonideal), Step 3 (face-to-face vs. online), and picture set were counterbalanced across participants. Green text represents a participant's "ideal" traits, orange text represents the participant's "nonideal" traits, and blue text represents a random trait that was neither the participant's ideal nor the nonideal.

Method

Participants and Power

Participants were 140 undergraduate students at UC Davis who completed both a prescreen survey at the beginning of the academic quarter and the experiment itself for course credit (n = 122 women, 18 men, $M_{age} = 19.6$, $SD_{age} = 1.6$; 1.4% African American, 46.4% Asian, 20.7% Hispanic, 11.4% White, 18.7% multiracial or "Other", 1.4% unreported). All participants were included regardless of sexual orientation; hypothesis tests reveal identical conclusions if we exclude n = 3 who reported (at the end of the study) a 1 (on a 1–9 scale) to the item "I am exclusively attracted to members of the opposite sex."

An additional six participants completed the study but failed attention checks for both components of the study and were excluded from all analyses reported below, per our preanalysis plan. One participant failed one attention check and failed to provide the dependent measures for the other component of the study; this participant was also excluded from all analyses. Participants who failed only one attention check (n = 9 for the inperson component only, n = 8 for the online component only) were otherwise retained for the analyses involving the task for which they passed the attention check (see Materials section). We aimed to recruit at least 100 participants (the sample size of Eastwick et al., 2011, Study 1), which would have provided 92% power to detect the same ideal versus nonideal effect size (d = 0.68) observed in the profile condition in Eastwick et al., 2011, Study 1. Ultimately, we continued collecting data through the end of the academic quarter (before looking at the data), and so we managed to exceed our target considerably; N = 140 provides 98% power to detect effect size d = 0.68.

Procedure

Overview. The present study used a mixed repeated-measures design consisting of two blocks corresponding to the evaluation of two different potential same-sex friends (Figure 1). Participants evaluated each potential friend twice: once after viewing the potential friend's written profile and once after a scripted interaction (i.e., four total friendship interest reports per

participant). All participants met one potential friend inperson and the other over online chat (both were in reality a same-sex confederate). We manipulated one of the potential friends to match and one to mismatch the participant's ideal friend preferences.

Ideal-perceived trait match (ideal vs. nonideal) and interaction context (in-person vs. online) were manipulated withinsubjects and counterbalanced, such that (a) if a participant met an ideal-matching partner in the first block, they would then meet a nonideal partner in the second block, and vice versa; and (b) if a participant met a partner in-person in the first block, they would then meet a partner online in the second block, and vice versa. Three female and two male research assistants worked in opposite-sex pairs; the research assistant who was the opposite sex of the participant served as the experimenter, whereas the same-sex research assistant served as the confederate. Once the second block of the study was complete, participants filled out a final questionnaire and were debriefed.

Prescreen and cover story. Days/weeks prior to arriving at the laboratory, participants completed a seemingly unrelated prescreen questionnaire in a separate setting. This questionnaire included a list of 19 traits (adapted from Eastwick et al., 2011; Fletcher et al., 1999) such as "broad-minded," "ambitious," "generous," and "sporty and athletic" (see Supplemental Material). From this list, participants were asked to select (a) three traits that were most essential or desirable in an ideal friend and (b) three traits that were least essential or desirable in an ideal friend.

Participants arrived for the experiment at a small waiting area outside the laboratory. A few seconds after their arrival, a same-sex confederate walked into the waiting area. Next, the experimenter greeted both the participant and the confederate and led them to separate rooms inside the laboratory to complete the consent process. Next, the experimenter explained to the participant that they would be meeting and interacting with two participants of the same sex. Prior to the in-person, face-to-face interaction portion of the study, participants were informed that they would be interacting with the other participant they saw arrive moments ago (i.e., the confederate); prior to the online interaction portion, they were informed that they would be interacting with another participant online (in reality the same confederate pretending to be a third participant). The experimenter asked the participants in both cases to "try to imagine that you are meeting with this person and you are trying to determine whether or not you would like this person as a friend."

Profile evaluation. In Step 1 of both blocks (see Figure 1), participants were presented with a paper "profile" (see Supplemental Material for details). The experimenter explained that the profile contained three traits that the upcoming (in-person or online) interaction partner selected to best describe himself or herself, along with the full list of 19 traits that the partner ostensibly used to make his or her selection. In the ideal (vs. nonideal) condition, two of the three traits listed on the profile were traits that the participant had previously indicated as "most (vs. least) essential or desirable in an ideal friend" on the prescreen questionnaire. (To maximize believability, the third trait was always a random trait that the participant had not listed as either "most essential" or "least essential.") Before leaving the room, the experimenter instructed the participant to look over the partner's profile for a minute and to "imagine what he or she might be like." After a minute had passed, the experimenter returned, collected the profile, and handed the participant the first partner impression questionnaire (Step 2 of both blocks in Figure 1), which included the friendship interest dependent measure.

In-person interaction. For the in-person interaction (Step 3 of one of the blocks), the experimenter brought the participant to the room with the confederate and seated them across from each other at a small table. The participant and confederate were then asked to each describe a set of four Thematic Apperception Test (TAT; Murray, 1971) pictures for one another, which were placed facedown on the table in front of them. The experimenter asked the participant and confederate "to describe [each picture] as objectively as you can" for 30 s without showing it to the other person and to take turns describing their pictures until they had described all eight. After asking the confederate to start first, the experimenter left the room. All confederates memorized identical, natural-sounding descriptions for their four pictures (see Supplemental Material). Following this task, the experimenter returned, took the participant back to the other room, and provided another partner impression questionnaire to complete about the confederate (Step 4 of the same block).

Online interaction. For the online interaction (Step 3 of one of the blocks), the experimenter opened an instant messaging program (Pidgin) on a computer at the participant's desk. Participants were instructed to complete a similar TAT picture-description task (but using a different set of four pictures; picture sets were counterbalanced across the two interaction conditions) with another same-sex partner using the instant messaging program. Participants were asked to describe each

picture for 45 s instead of 30 s because pretesting indicated that typing the picture descriptions took more time than verbally communicating the descriptions; the time increase allowed confederates to convey the same amount of information in the online and in-person portions of the study. After informing the participant that the confederate would start first, the experimenter left the room. The confederate followed predetermined scripts that were lightly edited versions of the in-person interaction scripts for the same pictures, tweaked to appear more natural in an instant messaging context. Once the participant completed the task, the experimenter returned and provided another partner impression questionnaire (Step 4 of the same block).

Materials

Participants completed a partner impression questionnaire on four separate occasions: once after viewing the first partner's profile, once after interacting with the first partner, once after viewing the second partner's profile, and once after interacting with the second partner (Figure 1; see also Supplemental Material). The primary dependent variable, friendship interest, was an average of the first 4 items on the questionnaire (adapted from Eastwick et al., 2011): "I would be excited to get to know my interaction partner better," "I really like my interaction partner," "I would be interested in hanging out with my interaction partner," and "I think my interaction partner is very much like my ideal friend." Participants answered the items on a scale from 1 (*strongly disagree*) to 9 (*strongly agree*); reliabilities (α s) were generally strong (Table 1).

After each post-profile impression questionnaire, participants completed an attention check that asked which three traits the partner had written on his or her profile. If participants recalled any of these three traits incorrectly, their data were excluded from that block of the study.

Participants also completed an exploratory measure of partner construal (on each of the four partner impression questionnaires) intended to assess whether they were currently conceptualizing the interaction partner at a high (i.e., abstract) or low (i.e., concrete) level. Park, Young, and Eastwick (2015) found that participants conceptualized interaction partners at lower levels when the partner was near (i.e., in the same room) versus far (i.e., in a different room); we planned to examine whether our interaction context manipulations (post-profile vs. in-person; post-profile vs. online) affected participants' reports on this measure (e.g., perhaps participants conceptualize the partner at a higher, more abstract level in the profile context than the in-person/online contexts). This measure (adapted from Park et al., 2015) was an average of 15 items taken from the BIF questionnaire (e.g., Imagine your partner Locking a door. Is your partner: (A) putting a key in the lock, (B) securing the house); each item was given a score of either 1 for a high-level answer (securing the house) or 0 for a low-level answer (putting a key in the lock). Alphas for this scale were weaker than the friendship interest measure (Table 1).

Table I. Alphas and Correlations for Dependent Variables.

Variable	α	Ι	2	3	4	5	6	7	8	9	10	11	12
In-Person													
Friendship Interest													
I. Post-Profile	.86	-											
2. Post-Interaction	.94	.60	-										
Partner Construal													
3. Post-Profile	.63	.37	.26	-									
4. Post-Interaction	.75	.22	.40	.44	-								
Accuracy													
5. Post-Profile	-	.70	.47	.26	.29	-							
6. Post-Interaction	-	.46	.72	.20	.28	.51	-						
Online													
Friendship Interest													
7. Post-Profile	.87	.41	.33	.17	.17	.44	.21	-					
8. Post-Interaction	.92	.40	.50	.24	.25	.44	.35	.64	-				
Partner Construal													
9. Post-Profile	.64	.03	.08	.22	.26	.04	04	.19	.09	-			
10. Post-Interaction	.76	04	.01	.14	.23	.05	.02	.04	.26	.44	-		
Accuracy													
II. Post-Profile	-	.54	.40	.14	.16	.70	.53	.55	.40	04	02	-	
12. Post-Interaction	-	.38	.39	.13	.15	.50	.43	.39	.57	.00	.10	.59	-

Note. Correlations in bold are significant (p < .05).



Figure 2. In-person, face-to-face portion of the study results for friendship interest. *Note.* Error bars represent one standard error above and below the mean.

Results

Friendship Interest

We set and recorded the following analysis plan ahead of time: We would conduct 2 (Ideal-Perceived Trait Match: ideal vs. nonideal) × 2 (Assessment: post-profile vs. post-interaction) mixed-design analyses of variance (ANOVAs), with repeated measures on the second factor, on friendship interest scores. According to this plan, this ANOVA would be conducted once for (a) the in-person portion of the study (n = 131), and once for (b) the online portion of the study (n = 132). Descriptive statistics are presented in Figures 2 and 3 and Table 2. For effect sizes, we report partial and generalized η^2 (Bakeman, 2005) for ANOVA results and *d* for comparisons between two means. Note that 90% confidence intervals



Figure 3. Online portion of the study results for friendship interest. *Note.* Error bars represent one standard error above and below the mean.

(CIs) around η^2 are comparable to 95% CIs around *d* (Steiger, 2004).

In-person interaction. Both the main effect of ideal-perceived trait match, F(1, 129) = 4.96, p = .028, $\eta_G^2 = .030$, $\eta_p^2 = .037$, 90% CI = [0.002, 0.103], and the main effect of assessment, F(1, 129) = 6.75, p = .010, $\eta_G^2 = .010$, $\eta_p^2 = .050$, 90% CI [0.006, 0.122], were significant. Importantly, the predicted two-way interaction was also significant, F(1, 129) = 6.94, p = .009, $\eta_G^2 = .011$, $\eta_p^2 = .051$, 90% CI [0.007, 0.123]. To unpack the nature of this two-way interaction, we examined the simple main effect of ideal-perceived trait match at each level of assessment. After viewing the profile, the effect of ideal-perceived trait match on friendship interest was significant and large, F(1, 129) = 24.98,

Ideal-Perceived Trait Match			In-Pers	on		Online					
		Post-Profile		Post-Interaction			Post-Profile		Post-Interaction		
	N	М	SD	М	SD	N	М	SD	М	SD	
Nonideal	73	5.87	1.18	6.37	1.34	63	5.66	1.04	5.94	1.06	
Ideal	58	6.55	0.99	6.54	1.29	69	6.50	1.12	6.15	1.33	

Table 2. Cell Ns, Means, and Standard Deviations of Friendship Interest.

Table 3. Cell Ns, Means, and Standard Deviations of Partner Construal.

Ideal-Perceived Trait Match			In-Pers	on		Online					
		Post-Profile		Post-Interaction			Post-Profile		Post-Interaction		
	N	М	SD	М	SD	N	М	SD	М	SD	
Nonideal Ideal	70 57	0.64 0.69	0.20 0.18	0.72 0.71	0.21 0.20	62 68	0.60 0.67	0.18 0.19	0.57 0.55	0.24 0.27	

p < .001, d = 0.88, 95% CI [0.52, 1.24]: Participants were more interested in becoming friends with an ideal (vs. nonideal) confederate. After the in-person interaction, however, the effect of ideal-perceived trait match on friendship interest was small and no longer significant, F(1, 129) = 1.62, p = .206, d = 0.22, 95% CI [-0.12, 0.57]: Participants reported similar levels of interest in becoming friends with an ideal (vs. nonideal) confederate. This finding supported our hypothesis and replicated Study 1 of Eastwick et al. (2011) in a friendship context; for comparison purposes, the ideal-perceived trait match effect sizes in that study were d = 0.68, 95% CI [0.26, 1.07] after viewing the profile and d= 0.07, 95% CI [-0.33, 0.46] after the in-person interaction.

Online interaction. The main effect of ideal-perceived trait match was significant, F(1, 130) = 8.36, p = .005, $\eta_G^2 = .050$, $\eta_p^2 = .060$, 90% CI [0.011, 0.136]; the main effect of assessment was not significant, F(1, 130) = 0.12, p = .729, $\eta_G^2 = .000$, $\eta_p^2 = .001$, 90% CI [0.000, 0.026]. Most interestingly, the two-way interaction was significant, F(1, 130) = 14.14, p < .001, $\eta_G^2 = .019$, $\eta_p^2 = .098$, 90% CI [0.031, 0.183]. Again, we examined the simple main effect of ideal-perceived trait match within each level of assessment. After viewing the profile, the effect of ideal-perceived trait match on friendship interest was large and significant, F(1, 130) = 48.59, p < .001, d = 1.21, 95% CI [0.84, 1.58]: Participants expressed more interest in becoming friends with an ideal (vs. nonideal) confederate. After the online chat, however, this effect was much smaller, F(1, 130) = 3.25, p = .073, d = 0.32, 95% CI [-0.03, 0.66].¹

Auxiliary Analyses

Partner construal. We conducted two one-way assessment (postprofile vs. post-interaction) within-subjects ANOVAs on partner construal scores, once for (a) the in-person interaction portion of the study and once for (b) the online interaction

portion of the study. Means are presented in Table 3. For the online interaction, this effect was significant and in the expected direction, $F(1, 129) = 12.64, p < .001, \eta_G^2 = .027,$ $\eta_{p}^{2} = .089, 90\%$ CI [0.026, 0.173]. That is, participants conceptualized the partner at a lower level (i.e., less abstract BIF responses) after interacting with the confederate through instant messaging online than after evaluating the confederate's profile. For the in-person interaction, this effect was significant but in the opposite direction from the one predicted, $F(1, 126) = 8.82, p = .004, \eta_{\rm G}^2 = .019, \eta_{\rm p}^2 = .065, 90\%$ CI [0.013, 0.144]. Unexpectedly, participants conceptualized the partner at a higher level (i.e., more abstract BIF responses) after interacting with the confederate face-to-face than after evaluating the confederate's profile. In short, the online interaction portion of the study replicated the Park et al. (2015) effect such that reduced distance caused participants to evaluate their interaction partners at a lower level, but this effect was in the opposite direction for the in-person interaction portion of the study.

Profile accuracy. To check that participants did not come to distrust the profile information after interacting with their partners (as in Eastwick et al., 2011, Study 1), we conducted a within-subjects ANOVA on the item "The three characteristics chosen by my interaction partner are probably accurate in describing him or her," which was included on all four partner impression questionnaires. This item did not differ across the two conditions for either the in-person interaction, $M_{\text{Assess1}} = 6.31$, $M_{\text{Assess2}} = 6.50$; F(1, 129) = 2.00, p = .160, $\eta_{\text{G}}^2 = .004$, $\eta_{\text{P}}^2 = .015$, 90% CI [0.000, 0.067], or the online interaction, $M_{\text{Assess1}} = 6.16$, $M_{\text{Assess2}} = 6.06$; F(1, 131) = 0.67, p = .416, $\eta_{\text{G}}^2 = .001$, $\eta_{\text{P}}^2 = .005$, 90% CI [0.000, 0.043]. In other words, the in-person and online interactions did not seem to reduce participants' beliefs that the information they read on the profile was accurate. (Tests for possible order effects are reported in the Supplemental Material.)

Discussion

The present investigation examined how ideal friend preferences and interaction context jointly influence participants' interest in becoming friends with a same-sex individual. Participants evaluating a written profile expressed greater interest in becoming friends with someone who possessed ideal (vs. nonideal) traits in a friend. However, after an in-person interaction, this difference in friendship interest disappeared: Participants reported similar levels of friendship interest, regardless of whether the potential friend was ideal or nonideal.

Interestingly, the results for the online interaction portion of the study mirrored the in-person results: The ideal manipulation affected participants' friendship interest much more strongly after viewing the profile than after the online chat. Instant messaging may approximate face-to-face interaction in some respects; even though humans did not evolve to socialize online, online communication may nevertheless be sufficiently realistic that it elicits psychological processes that are akin to the direct forms of interaction that characterized most of humans' evolved history (Reeves & Nass, 1996).

Implications

These findings provide experimental evidence that in-person and online interactions reduce the impact of ideal friend preferences on friendship interest; that is, participants' ideals matter more when learning about potential friends in descriptive (i.e., indirect) than interactive (i.e., direct) contexts. The romantic domain contains considerable evidence of a direct versus indirect context effect (for a review, see Eastwick et al., 2019); thus, our discovery of a similar context effect in the current study lends support to the idea that there may be important domain-general mechanisms that apply to both romantic and platonic relationship initiation. Indeed, the comparative process that people use to weigh a target's attributes against abstract attribute preferences (also called summarized preferences) likely applies in nonsocial domains as well (e.g., workplace fit; Wood, Lowman, Harms, & Roberts, 2019; see also Ledgerwood, Eastwick, & Smith, 2018). Thus, this study is consistent with contemporary evolutionary examinations of mating-relevant processes that document (sometimes surprising) evidence of domain generality (e.g., Street et al., 2018), and it bolsters recommendations that the domain specificity versus domain generality of a given psychological mechanism should not be assumed a priori (Bolhuis, Brown, Richardson, & Laland, 2011, Kurzban & Haselton, 2006; cf. Tooby & Cosmides, 2015).

Of course, platonic and romantic contexts exhibit obvious differences: The majority of our participants were unlikely to be experiencing high intensity, hot affect as they evaluated these potential friends. For this reason, these results are not easy to reconcile with an affective forecasting explanation for the direct versus indirect context effects in the romantic domain (e.g., Eastwick & Finkel, 2008). Construal-level explanations (Nussbaum et al., 2003)—which suggest that people draw from high-level mental tools (e.g., ideals) more readily in indirect, psychologically distant rather than direct, psychologically close contexts-may ultimately attain more traction. However, our findings offered conflicting evidence for the (related) idea that participants construe spatially distant (vs. close) interaction partners at a higher level (Park et al., 2015). In the online portion of the study, participants exhibited the predicted effect, but surprisingly, this effect actually reversed for the in-person portion of the study. These results provide conflicting support for the notion that participants' construal of the interaction partner can serve as the mechanism underlying the context effects observed in this study. It is interesting to consider whether distance may directly prompt people to rely on ideal preferences as abstract guides for behavior without necessarily causing them to construe the interaction partner himself or herself at a higher level (cf. Ledgerwood, Trope, & Liberman, 2015; Ledgerwood, Wakslak, Sánchez, & Rees, in press). Further research should continue to probe the potential mechanism underlying these effects.

Strengths and Limitations

This study used a highly powered, within-subjects design that allowed for the direct comparison of the effects of ideal matching in three different contexts: evaluating a partner's profile, evaluating a partner in-person, and evaluating a partner online. In addition, because we manipulated the interaction partner's traits—and because participants largely believed this manipulation (see Profile Accuracy section)—we reduced some motivated reasoning confounds that hinder strong inference in this domain (e.g., if I like someone, I might be motivated to perceive that they possess attributes that fit my ideals; Eastwick et al., 2019). Also, our manipulated profiles were idiosyncratically tailored using a wide assortment of possible traits, so it is unlikely that these effects are due to the presence or absence of a small handful of traits that appeared repeatedly across profiles.

A limitation of the current study is that the results may only inform our understanding of how ideal friend preferences affect friendship interest after a single initial interaction. Relatedly, the carefully controlled trait information that participants encountered on the profiles comes at a necessary cost to external validity; ideals may function differently when participants infer for themselves what traits a potential friend possesses. Future research should examine if ideals affect evaluations of real life, developing friendships, especially given that some evidence from the romantic domain is consistent with the possibility that ideals matter after a relationship has been firmly established (Lam et al., 2016). In addition, although our manipulations were designed idiosyncratically for each participant, it is plausible that the normative desirability of traits was higher in the ideal than nonideal condition (e.g., reliable is more normatively desirable than adventurous, Fletcher et al., 1999; indeed, *reliable* appeared on an ideal profile more often than adventurous). This means that our ideal-matching manipulation contained a mix of normative- and distinctive-fit information (Wood & Furr, 2016; Wood et al., 2019), and the large ds we detected for our manipulation in the profile conditions

would almost certainly be smaller in designs that permit the complete elimination of normative desirability (Eastwick et al., 2019).² Finally, there are constraints on the generalizability of our sample. Our participants are primarily female—so we cannot be certain that men show these effects as strongly—and our sample of five confederates might not generalize to the broader stimulus category of "potential friends." We selected our confederates primarily based on their ability to execute their scripts competently; it is possible that this pattern of findings would not extend to particularly unattractive or socially unskilled confederates, for example.

Conclusion

The current study found that the match between participants' ideal friend preferences and traits of a potential friend affected friendship interest after participants evaluated a potential friend's profile, but not after an interaction (in-person or online) with the potential friend. As in the romantic domain, people may be more likely to rely on their ideals in indirect rather than direct contexts; furthermore, online chat may elicit psychological processes that are more akin to other direct forms of interaction. These findings highlight a critical domain-general process that characterizes relationship formation, both romantic and platonic.

Authors' Note

All authors contributed to the study concept and design. Testing and data collection were performed by S.A Huang. P.W. Eastwick and S.A. Huang performed the data analysis and interpretation. S.A. Huang drafted the paper, and P.W. Eastwick and A. Ledgerwood provided critical revisions. All authors approved the final version of the paper for submission.

Acknowledgments

We thank Amber Sanchez, Heather Rees, Jehan Sparks, and Yilin Andre Wang for their helpful feedback and suggestions, and Anabel Martinez-Torres, Claire Bonino-Britsch, Edward Garcia, Grace Zhong, and Phillip Wu for their help with data collection. This project would not have been possible without them.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

This research was supported by an APS/Psi Chi Summer Research Grant and a UC Davis Provost's Undergraduate Fellowship to the first author and a UC Davis Small Grant to the second author.

Supplemental Material

The supplemental material is available in the online version of the article.

Notes

- 1. We also conducted a multilevel model (with the four dependent measure reports nested within participant) to test the three-way Ideal-Perceived Trait Match (ideal vs. nonideal) × Assessment (post-profile vs. post-interaction) × Interaction Context (inperson vs. online) interaction. This analysis permitted the intercept to vary randomly and used eligible data from N = 123 participants who passed both attention checks. The three-way interaction was not significant, t(369) = 0.48, p = .635, d = 0.05, suggesting that the two-way interaction patterns observed in Figures 2 and 3 did not meaningfully differ from each other.
- 2. To the extent that our manipulation contains some amount of normative desirability, it is all the more impressive that a brief face-toface/online chat was sufficient to entirely eliminate the effect of this manipulation.

References

- Bakeman, R. (2005). Recommended effect size statistics for repeated measures designs. *Behavior Research Methods*, 37, 379–384.
- Boase, J., Horrigan, J. B., Wellman, B., & Rainie, L. (2006). The strength of Internet ties: The Internet and e-mail aid users in maintaining their social networks and provide pathways to help when people face big decisions. Washington, DC: The Pew Internet and American Life Project.
- Bolhuis, J. J., Brown, G. R., Richardson, R. C., & Laland, K. N. (2011). Darwin in mind: New opportunities for evolutionary psychology. *PLoS Biology*, 9, e1001109. doi:10.1371/journal.pbio. 1001109
- Bradbury, T. N., & Karney, B. R. (2013). *Intimate relationships*. New York, NY: W. W. Norton.
- Brumbaugh, C. C., & Wood, D. (2013). Mate preferences across life and across the world. *Social Psychological and Personality Science*, 4, 100–107.
- Buss, D. M. (Ed.) (2016). *The handbook of evolutionary psychology*. Hoboken, NJ: Wiley.
- Buss, D. M., Shackelford, T. K., Kirkpatrick, L. A., & Larsen, R. J. (2001). A half century of mate preferences: The cultural evolution of values. *Journal of Marriage and Family*, 63, 491–503.
- Cairneross, F. (2000). *The death of distance: How the communications revolution is changing our lives.* Cambridge, MA: Harvard Business School Press.
- Eastwick, P. W., & Finkel, E. J. (2008). Sex differences in mate preferences revisited: Do people know what they initially desire in a romantic partner? *Journal of Personality and Social Psychology*, 94, 245–264.
- Eastwick, P. W., Finkel, E. J., & Eagly, A. H. (2011). When and why do ideal partner preferences affect the process of initiating and maintaining romantic relationships? *Journal of Personality and Social Psychology*, 101, 1012–1032.
- Eastwick, P. W., Finkel, E. J., & Simpson, J. A. (2019). Best practices for testing the predictive validity of ideal partner preference-matching. *Personality and Social Psychology Bulletin*, 45, 167–181.

- Eastwick, P. W., Luchies, L. B., Finkel, E. J., & Hunt, L. L. (2014). The predictive validity of ideal partner preferences: A review and meta-analysis. *Psychological Bulletin*, 140, 623–665. doi:10.1037/ a0032432
- Eastwick, P. W., & Smith, L. K. (2018). Sex-differentiated effects of physical attractiveness on romantic desire: A highly powered, preregistered study in a photograph evaluation context. *Comprehensive Results in Social Psychology*, *3*, 1–27.
- Fletcher, G. J., Simpson, J. A., Thomas, G., & Giles, L. (1999). Ideals in intimate relationships. *Journal of Personality and Social Psychology*, 76, 72–89.
- Fujita, K., Henderson, M. D., Eng, J., Trope, Y., & Liberman, N. (2006). Spatial distance and mental construal of social events. *Psychological Science*, 17, 278–282.
- Hall, J. A. (2012). Friendship standards: The dimensions of ideal expectations. *Journal of Social and Personal Relationships*, 29, 884–907.
- Hamilton, R. W., & Thompson, D. V. (2007). Is there a substitute for direct experience? Comparing consumers' preferences after direct and indirect product experiences. *Journal of Consumer Research*, 34, 546–555.
- Hill, R. (1945). Campus values in mate selection. Journal of Home Economics, 37, 554–558.
- Kurzban, R., & Haselton, M. G. (2006). Making hay out of straw: Real and imagined debates in evolutionary psychology. In J. H. Barkow (Ed.) *Missing the Revolution: Evolutionary Perspectives on Culture and Society*. New York: Oxford University Press.
- Lam, B. C., Cross, S. E., Wu, T. F., Yeh, K. H., Wang, Y. C., & Su, J. C. (2016). What do you want in a marriage? Examining marriage ideals in Taiwan and the United States. *Personality and Social Psychology Bulletin*, 42, 703–722.
- Ledgerwood, A. (2014). Evaluations in their social context: Distance regulates consistency and context dependence. *Social and Personality Psychology Compass*, 8, 436–447.
- Ledgerwood, A., Eastwick, P. W., & Smith, L. K. (2018). Toward an integrative framework for studying human evaluation: Attitudes toward objects and attributes. *Personality and Social Psychology Review*, 22, 378–398.
- Ledgerwood, A., Trope, Y., & Liberman, N. (2015). Construal level theory and regulatory scope. In R. Scott & S. Kosslyn (Eds.), *Emerging trends in the social and behavioral sciences*. Hoboken, NJ: John Wiley.
- Ledgerwood, A., Wakslak, C. J., Sánchez, A. M., & Rees, H. R. (in press). A brief, distance-based intervention can increase intentions to follow evidence-based guidelines in cancer screening. *Social Psychological and Personality Science*, doi: 10.1177/ 1948550618779387.
- Marcus, D. (2016, January 7). Here's to 2016 with messenger. Retrieved October, 2016, from https://www.facebook.com/notes/ david-marcus/heres-to-2016-with-messenger/10154485804004148/
- Miller, R. (2018) *Intimate relationships*. New York, NY: McGraw-Hill Education.
- Murray, H. A. (1971). *Thematic apperception test*. Cambridge, MA: Harvard University Press.
- Nussbaum, S., Trope, Y., & Liberman, N. (2003). Creeping dispositionism: The temporal dynamics of behavior prediction. *Journal*

of Personality and Social Psychology, 84, 485–497. doi:10.1037/0022-3514.84.3.485

- Oh, H., Curley, S. P., & Subramani, M. R. (2008). The death of distance? The influence of computer-mediated communication on perceptions of distance. *ICIS 2008 Proceedings*, 149.
- Park, L. E., Young, A. F., & Eastwick, P. W. (2015). (Psychological) distance makes the heart grow fonder: Effects of psychological distance and relative intelligence on men's attraction to women. *Personality and Social Psychology Bulletin*, 41, 1549–1573.
- Reeves, B., & Nass, C. I. (1996). The media equation: How people treat computers, television, and new media like real people and places. Cambridge, England: Cambridge University Press.
- Short, J., Williams, E., & Christie, B. (1976). The social psychology of telecommunications. London, England: John Wiley.
- Simpson, J. A., Fletcher, G. J. O., & Campbell, L. (2001). The structure and function of ideal standards in close relationships. In G. J. O. Fletcher & M. Clark (Eds.), *Blackwell handbook of social psychology: Interpersonal processes* (pp. 86–106). Oxford, England: Blackwell.
- Sprecher, S., & Regan, P. C. (2002). Liking some things (in some people) more than others: Partner preferences in romantic relationships and friendships. *Journal of Social and Personal Relationships*, 19, 463–481.
- Steiger, J. H. (2004). Beyond the F test: Effect size confidence intervals and tests of close fit in the analysis of variance and contrast analysis. *Psychological Methods*, 9, 164–182.
- Street, S. E., Morgan, T. J., Thornton, A., Brown, G. R., Laland, K. N., & Cross, C. P. (2018). Human mate-choice copying is domaingeneral social learning. *Scientific Reports*, 8, 1715.
- Tooby, J., & Cosmides, L. (1992). The psychological foundations of culture. In J. H. Barkow, L. Cosmides, & J. Tooby (Eds.), *The* adapted mind: Evolutionary psychology and the generation of culture. New York, NY: Oxford University Press.
- Tooby, J., & Cosmides, L. (2015). The theoretical foundations of evolutionary psychology. In D. M. Buss (Ed.), *The handbook of evolutionary psychology: Foundations* (2nd ed., Vol. 1, pp. 3–87). Hoboken, NJ: John Wiley.
- Trope, Y., Ledgerwood, A., Liberman, N., & Fujita, K. (2019). Different levels of mental and social tools enable expansive versus contractive regulation (Unpublished manuscript). New York University, New York City.
- Vallacher, R. R., & Wegner, D. M. (1989). Levels of personal agency: Individual variation in action identification. *Journal of Personality* and Social Psychology, 57, 660–671.
- Wilson, T. D., & Gilbert, D. T. (2003). Affective forecasting. Advances in Experimental Social Psychology, 35, 345–411.
- Wiseman, J. P. (1986). Friendship: Bonds and binds in a voluntary relationship. *Journal of Social and Personal Relationships*, *3*, 191–211.
- Wood, D., & Brumbaugh, C. C. (2009). Using revealed mate preferences to evaluate market force and differential preference explanations for mate selection. *Journal of Personality and Social Psychology*, 96, 1226–1244. doi:10.1037/a0015300
- Wood, D., & Furr, R. M. (2016). The correlates of similarity estimates are often misleadingly positive: The nature and scope of the

problem, and some solutions. *Personality and Social Psychology Review*, 20, 79–99.

Wood, D., Lowman, G. H., Harms, P. D., & Roberts, B. W. (2019). Exploring the relative importance of normative and distinctive organizational preferences as predictors of work attitudes. *Journal of Applied Psychology*, 104, 270–292. doi:10.1037/ apl0000356

Author Biographies

Sabrina A. Huang is a PhD student in the Department of Communication at Stanford University. Her research investigates how people form and maintain friendships and romantic relationships, and how the use of technology may affect these processes.

Alison Ledgerwood is a professor and Chancellor's Fellow in the Department of Psychology at UC Davis. She investigates the contextual factors that shape people's likes and dislikes.

Paul W. Eastwick is a professor in the Department of Psychology at the University of California, Davis. His research investigates how people initiate romantic relationships and the psychological mechanisms that promote attachment and commitment.

Handling Editor: Gregory Webster