

Signaled Similarity of Personality Dimensions in Mate Choice

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Signaling theory offers an interpretation of how one's impression of a potential mate's personality affects mating strategies. It remains unclear how people perceive the (dis)similarity of a potential mate to one's own personality and use this information in mating contexts. We focus on this distance in personality similarity between a potential mate and oneself, particularly in deciding whether to interact. We present a novel framework for investigating this issue via an online chatting tool. The actual personality of 24 participants was measured according to the Big Five Inventory. Then, participants were paired to have a conversation. Their face, occupations, and income were hidden, and their voice transformed to be neutral in pitch. They talked about their own experiences as related to the Big Five dimensions. Analysis of their communications showed their willingness to consider their partners as a friend, lover, and spouse was most explained by the distance between self-recognition of the impression of one's own personality presumably held by the partner and the impression of the partner's personality. Our results suggest people rely on the meta-perception of their personality rather than their actual personality, at least when considering potential mates when they first meet.

Keywords

Big Five, homogamy, romantic attraction, signaling, online communication

Introduction

Homogamy (“birds of a feather flock together”) is more common than heterogamy (“opposites attract”), at least within long-term romantic relationships, and leads to increased relationship satisfaction (see Hromatko et al., 2015, for a review). People tend to be like their spouses, and often marry others from the same social group or

those with similar status (see Kalmijn, 1998), education, or genome-wide genetic similarity (Domingue et al., 2014). Watson et al. (2014) reported individuals actively seek particular characteristics in a mate, which leads to similarity within couples.

Many characteristics underlie romantic attraction, including personality, where homogamy is usually generally observed. Generally, perceived similarity to oneself influences initial attraction (Klohn & Luo, 2003). A meta-analysis by Montoya et al. (2008) revealed that actual and perceived personality similarity was vital, in studies using hypothetical romantic contexts and those that involved face-to-face interactions. Moreover, perceived, rather than actual, similarity was most strongly linked with attraction. Likewise, Tidwell et al. (2013) reported that in a speed-dating setting perceived more than actual personality leads to greater romantic interest.

How personality relates to romantic attraction is poorly studied (Gerlach & Reinhard, 2020). However, personality traits are well-known to influence issues relevant to interpersonal relationships including friendship formation (e.g., Selfhout et al., 2010) and mate choice (Stone et al., 2012). Personality can affect longer-term relationships, for instance, friendship maintenance (Wilson et al., 2015) and marital satisfaction (Sayehmiri et al., 2020). These studies focus on the unidirectional effects of personality (e.g., one's personality is examined in relation to relationship satisfaction); a different approach relies on extracting the bidirectional effects caused by two people interacting. For example, Harris and Vazire (2016) examined how (dis) similarities of personality contribute to one's decision to interact with the other person. This bidirectional approach is critical given it is a social-cognitive task to estimate other people's personalities, which is an inherent part of forming interpersonal relationships (Funder, 2012).

Indeed, scholars disagree about whether people are accurate in their estimations of others' personalities (e.g., Funder et al., 1995) or not (e.g., Darbyshire et al., 2016). Inaccuracy may stem from one's deviation between their actual personality and its impression on other people. Signaling theory (Smith & Harper, 1995) is helpful for understanding these inaccuracies because human personality can be a signal that simply manipulates the impression of other people at a low cost for mate choice (Zahavi, 1975). Individuals attempting to estimate another person's personality presumably receive the signaled personality and then form their impression. That is, the perception of someone's personality can be created by the signaler's (unconscious) manipulation of how they are perceived. There are significant advantages within mating contexts to being perceived more favorably; for example, those perceived to be high in extroversion, conscientiousness, and agreeableness are preferred (Figueroa et al., 2006).

Past work indicates that similarity in actual and perceived personality plays an essential role in various

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interpersonal situations (friendship formation, Harris & Vazire, 2016; romantic attraction, Montoya et al., 2008). In the current work, we examine one's actual personality versus perceptions of their personality using signaling theory, whereby one's advertised personality may be manipulated to provide inaccurate assessments. This conjecture is not new; past researchers documented personality is signaled using low-cost behaviors such as telling a story to appear virtuous (Berthon et al., 2023). Likewise, Huston and Levinger (1978) found that first impressions act as signals, where the perceiver may be stimulated into wanting to learn more about the person (p. 120). Nevertheless, previous work on willingness to form romantic relationships has relied on analyses using actual personality dimensions or self-reported perceived similarity of personality. Moreover, tendencies observed in prior studies have been inconsistent among surveys, and thus, there has been no consensus on the mechanisms of decision-making (Weidmann et al., 2017). It remains unclear how people connect each dimension of perceived personality to their willingness to become a lover or spouse with their partner. This perspective might be key to a more precise understanding of how people perceive chemistry in their personalities and connect it to decision-making regarding mate choice. Thus, we investigate perceptions of another person's signaled personality in terms of its (dis)similarity to one's own personality (what we call "distance") for each personality dimension, and then link this distance with their willingness to interact in the context of mating (versus friendship, included for comparison).

Another important perspective is that people might make decisions regarding mate choice, taking care of how their own personality is perceived by their potential mates, as well as their perception of the partners' personality. Previous studies have investigated the relationship between willingness to interact with someone and personality similarity by relying on actual personalities. However, it is not self-evident that the actual scores for personality dimensions are directly connected to their decision-making regarding mate choice just because they are self-reporting scores. Given that partners' personalities are inherently signaled to others, the receiver's personality is also signaled to the signaler. One theoretical contribution of the current work is that a new variable for meta-perception of one's own signaled personality, which has not yet been explored, has the potential of stronger explanatory power for willingness to interact romantically than the actual personality measures as mainstream.

In keeping with past research (Montoya et al., 2008; Tidwell et al., 2013), we hypothesize that people with perceived similar personalities will be more willing to interact with each other romantically than those who are dissimilar. We test our hypotheses using a novel experimental framework to extract how participants' willingness to interact is formed through real-time communication. An online video chatting tool is used, where we anonymize participants so that they could have conversations focusing solely on personality.

Methods

Participants

We hired a survey company to recruit participants. They were from the company's registered users, and were in their 20s or 30s, single, heterosexual, and living in Japan. Twenty-four participants consisting of 12 men and 12 women from the Kanto and the Kinki regions were included. They were paid for their participation.

Interviews

A professional moderator performed interviews twice. Round 1 was performed from December 20th to 22nd, 2022. Round 2 was performed on December 25th and 26th, 2023, and January 31st, 2024. We obtained responses from one pair per day, resulting in 24 responses in total. In each interview, two opposite-sex participants in the same age class (20s or 30s) and living in the same region were paired. They conversed virtually for 30 minutes using an online video chatting tool. The participants' cameras were turned off, so participants viewed a black screen with a generic name (e.g., Mr. X, Ms. Y), along with the panel in Figure 1. Their voices were transformed so they sounded as gender-neutral as possible (i.e., men's voices were transformed to be higher pitch and women's voices were transformed to be lower pitch). Participants were instructed not to discuss occupations or income. Thus, participants knew only their partner's sex and that they were of similar age. The paired participants lived in the same region, meaning their communication had similar intonation and dialect to avoid potential bias due to prejudice or favoritism toward a region. Thus, by excluding information other than personality, such as appearance, voice, social status, or dialect, the interview was designed to maintain the participant's focus on their partner's personality as much as possible.

The moderator prompted the participants' conversations by asking them to talk about the five topics shown in the panel that reflect the Big Five dimensions (see Figure 1; based on Miller, 2009). Participants saw the panel but with dimension labels omitted. The moderator instructed them to talk about their own experiences related to each topic and to ask questions about their partner's story if they wished. The participants could choose the order of topics so that they could initiate and maintain their conversations as naturally as possible. The moderator served as a timekeeper, and participants talked about each topic for approximately six minutes. The moderator suggested the participants write short notes, if they wished, to help keep the conversation flowing. At the end of the interview, participants were asked to complete a surprise questionnaire about their interest in further interacting with the other participant as a potential friend, lover, or spouse.

Pre- and Post-interview Questionnaires

The participants were asked to answer questionnaires before and after the interviews. The *pre-interview* questionnaire pertained to the Big Five dimensions (Gosling, et al., 2003) of the respondents themselves (Actual Big Five, ABF) as measured by self-reported Big Five Scale items (Wada, 1996).

The *post-interview* questionnaire was designed to ascertain participants' perceptions about their partner

based on the interaction. It included four parts. Part 1 was a modified version of TIPI-J items to determine their perception of their partner (Perceived Big Five, PBF; Supplementary Material S1), which corresponds to signaled personality. Part 2 was another modified version of TIPI-J items to determine the participant’s perception of how the partner perceived their personality (Meta-Perception of Big Five, MPBF; Supplementary Material S1). Part 3 addressed how willing they would be to consider their partner on 5-point Likert-type scales (1= strongly disagree, 3 = neutral, 5 = strongly agree) as a potential friend, lover, and spouse (Supplementary

Material S1). Part 4 ascertained the impression of the partner’s voice that was transformed to a neutral pitch (Supplementary Material S1).

In this work, we analyze how the three types of scales based on Big Five personality dimensions (i.e., ABF, PBF, and MPBF, illustrated in Figure 2) correspond and contribute to one’s interest in interacting further. We extract how respondents’ MPBF and their partners’ PBF, rather than respondents’ ABF and their partners’ PBF, unconsciously function within romantic attraction. Consequently, we contend that personality, via the MPBF and the PBF, is a signal of one’s mating strategy.

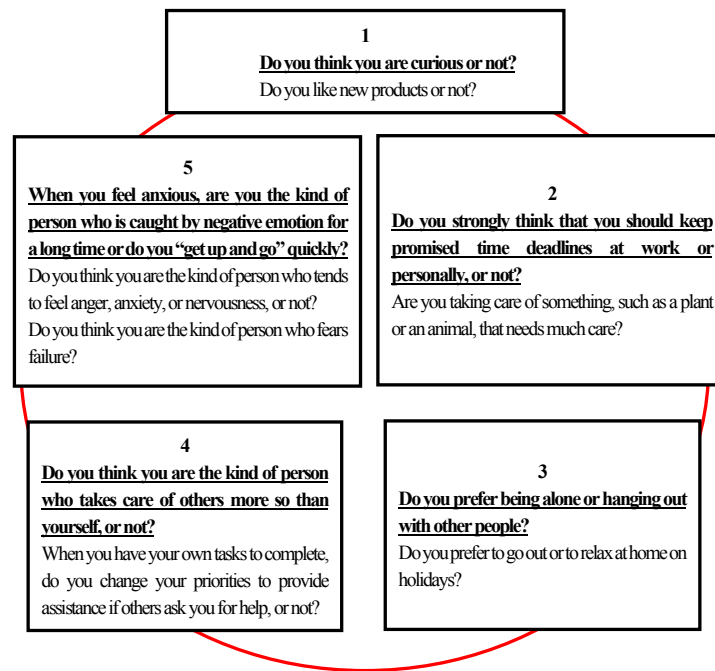


Figure 1. Panel of conversation topics. The participants were presented with this panel by the moderator to guide the conversations. It represents the five conversation topics, as related to Big Five personality dimensions. Topic 1 corresponds to openness, 2 to conscientiousness, 3 to extroversion, 4 to agreeableness, and 5 to neuroticism. The original panel was presented in Japanese.

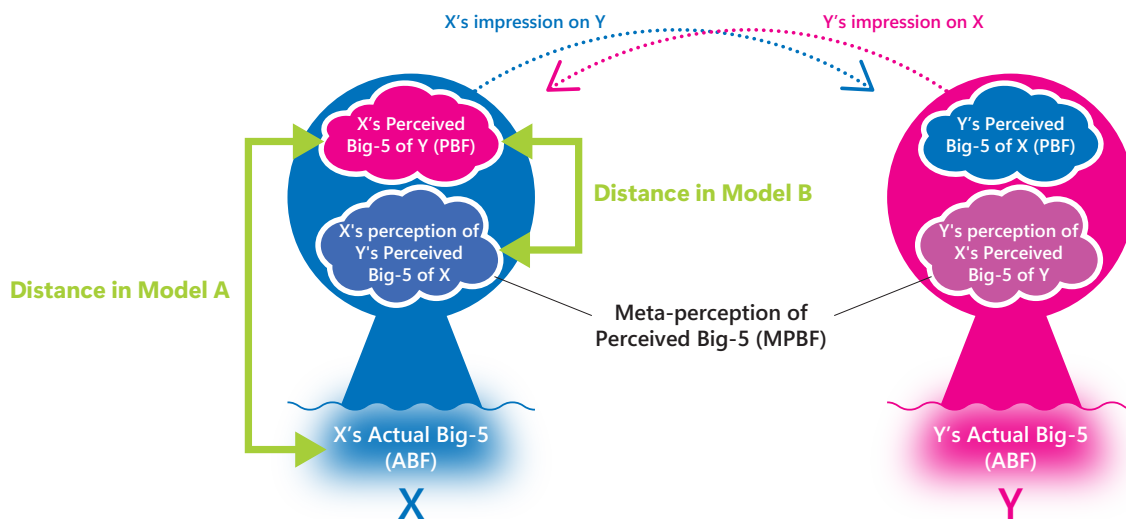


Figure 2. Two definitions of personality distances. While the distance in Model A is a baseline measure, the distance in Model B is our proposed measure that most explains willingness to interact with the other participant as friends, lovers, and spouses. ABF: Actual Big Five, PBF: Perceived Big Five, MPBF: Meta-Perception of Big Five.

Results

Distributions of the three types of Big Five Dimensions

Figure 3 shows the average responses from all the respondents for the three measures of ABF, MPBF, and PBF for each Big Five dimension. For the distributions of the three types of Big Five dimensions, PBF was larger than the respondents' ABF for conscientiousness ($p < .001$) and agreeableness ($p < .001$), whereas PBF was smaller than the ABF for extroversion ($p < .05$) and neuroticism ($p < .001$) (Figure 3). This pattern suggests that there are gaps between the ABF and PBF for every dimension except openness and that the participants' personality was perceived to be different from their actual personality by their partners for the four personality dimensions out of all Big Five dimensions. Furthermore, although the tendencies were not necessarily significant, MPBF was between ABF and PBF for all the Big Five dimensions (Figure 3), suggesting that MPBF might tend to have intermediate values between the participants' actual personality and the impression of their personality that the partners had.

Regression Analysis

We constructed multi-linear regression models to investigate how distances of Big Five dimensions contributed to one's interest in interacting with their partner as a potential Friend, Lover, and Spouse. We performed forced-entry regression with Equation 1, pooling the responses per sex.

$$\{D_f, D_l, D_s\} = \alpha_1 \times P_o + \alpha_2 \times P_c + \alpha_3 \times P_e + \alpha_4 \times P_a + \alpha_5 \times P_n + \alpha_6 \times V + \alpha_7 \times A + \alpha_8 \times Y + \alpha_9 \quad (1)$$

- D_f : Interest in partner as a potential friend
- D_l : Interest in partner as a potential lover
- D_s : Interest in partner as a potential spouse
- P_o : Distance in openness
- P_c : Distance in conscientiousness
- P_e : Distance in extroversion
- P_a : Distance in agreeableness
- P_n : Distance in neuroticism
- V : Voice attractiveness of the partner
- A : Age dummy (1: participants were in their 20s, 0: participants were in their 30s)

Y : Round dummy (1: sampled in Round 2, 0: sampled in Round 1)

α_{1-8} : Coefficients

α_9 : Intercept

We defined two models of distances for each personality dimension. Model A defined the distance as the absolute difference between respondents' ABF and their partners' PBF. Model B defined the distance as the absolute difference between respondents' MPBF and their partners' PBF. Recall ABF was measured by Big Five Scale items (Wada, 1996) while PBF and MPBF were measured by modified version of TIPI-J items (Oshio et al., 2014), so this calculation standardized the number of items comprising each question (e.g., 11 to 13 items per dimension on the BFS vs two items per dimension on the TIPI-J) before calculating the distance. Variables V , A and Y were introduced to adjust other effects than the personality distances.

Tables 1 and 2 show the regression analysis results using Equation (1) with the distances defined as Models A and B, respectively. All the R2 values in Model B were larger than .80 and the same settings of Model A, where post hoc power analysis revealed that the probability $1-\beta$ ($\alpha = .05$) for the R2 values to be different from 0 was larger than .90 for all the settings except Model B pooling female responses (Tables 1 and 2). Although the increase in the R2 values from Model A to Model B was relatively difficult to detect due to the sample size limitation, the post hoc power analysis showed extremely large values in the probability $1-\beta$ for Model B pooling male samples when the explained variables were set as willingness to be a lover and spouse (Table 2). Similarities or dissimilarities in each Big Five dimension that contributed to the willingness to be a lover or spouse greatly differed between male and female participants. For openness, women favored similarities. For conscientiousness, men favored dissimilarities while women favored similarities. For extroversion, both sexes favored dissimilarities. For agreeableness, men favored similarities. For neuroticism, men favored similarities, while women favored dissimilarities (Table 2).

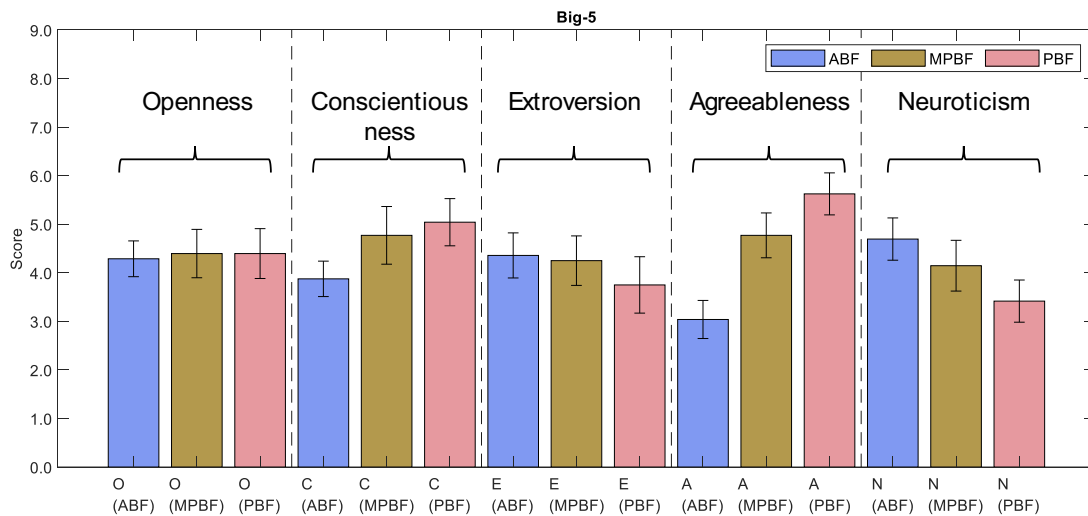


Figure 3. Distribution of the 3 measures (ABF, MPBF, and PBF) per Big Five dimension. All the 24 responses were pooled. Error bars show 95% confidence intervals. O: Openness, C: Conscientiousness, E: Extroversion, A: Agreeableness, N: Neuroticism, ABF: Actual Big Five, PBF: Perceived Big Five, MPBF: Meta-Perception of Big Five.

Table 1. Coefficients for Equation (1) with Model A distances.

Explained variable	Friend		Lover		Spouse		
	Male	Female	Male	Female	Male	Female	
Sex							
Estimate							
(Intercept)	1.322	1.438	-5.354	†-4.861	-2.855	†-4.861	
Distances in Big Five dimensions	Openness	0.018	0.361	0.548	-0.758	0.531	-0.758
	Conscientiousness	0.157	-0.260	0.717	-0.268	0.454	-0.268
	Extroversion	0.056	0.363	-0.229	0.439	-0.490	0.439
	Agreeableness	0.349	0.004	0.779	0.051	0.697	0.051
	Neuroticism	-0.335	-0.019	-2.447	†0.985	-2.195	†0.985
Voice attractiveness	0.552	0.414	2.506	*1.315	2.019	*1.315	
Age (1: 20s, 0: 30s)	0.949	0.753	2.199	0.560	1.305	0.560	
Year (1: Round 2, 0: Round 1)	-0.416	0.341	-1.506	†2.973	-1.716	†2.973	
R2	0.631	0.552	0.755	0.911	0.771	0.911	
n	12	12	12	12	12	12	
f2 (different from 0)	1.710	1.232	3.082	10.236	3.367	10.236	
1-β (different from 0, Post hoc, α = 0.05)	0.247	0.191	0.401	0.853	0.430	0.853	

Note. Significant difference from zero noted with †, *, ** for 90%, 95%, and 99% confidence, respectively.

Table 2. Coefficients for Equation (1) with Model B distances.

Explained variable	Friend		Lover		Spouse		
	Male	Female	Male	Female	Male	Female	
Sex							
Estimate							
(Intercept)	*2.813	-0.641	1.330	*-6.195	*2.246	*-6.195	
Distances in Big Five dimensions	Openness	0.165	-0.765	-0.112	*-1.123	-0.079	*-1.123
	Conscientiousness	-0.125	†-0.402	0.186	*-0.505	*0.213	*-0.505
	Extroversion	0.161	0.248	*0.214	*0.385	†0.119	*0.385
	Agreeableness	-0.052	0.085	-0.081	0.084	*-0.109	0.084
	Neuroticism	-0.028	0.394	** -0.314	*0.818	** -0.307	*0.818
Voice attractiveness	0.408	†0.929	**1.008	**1.868	**0.739	**1.868	
Age (1: 20s, 0: 30s)	0.361	0.553	-0.319	-0.098	†-0.422	-0.098	
Year (1: Round 2, 0: Round 1)	-0.508	†2.998	*-1.316	**4.803	** -1.438	**4.803	
R2	0.932	0.876	0.99	0.968	0.994	0.968	
n	12	12	12	12	12	12	
f2	Different from 0	13.706	7.065	99.000	30.250	165.667	30.250
	R2 increase (from Model A to Model B)	4.426	2.613	23.500	1.781	37.167	1.781
1-β (Post hoc, α = 0.05)	Different from 0	0.930	0.718	1.000	0.998	1.000	0.998
	R2 increase (from Model A to Model B)	0.530	0.351	0.992	0.256	1.000	0.256

Note. Significant difference from zero noted with †, *, ** for 90%, 95%, and 99% confidence, respectively.

Discussion

There are three contributions from the current study. The first contribution is that people may rely more on self-recognition of how their personality is perceived by others, rather than on their actual personality, at least when they first meet and have short communications. Here, perception is key: individuals attempt to estimate another person's actual personality by relying on the signal being presented to them, and they further predict how the other person feels about their own personality. This conclusion is supported by the finding that PBF was significantly higher for conscientiousness and agreeableness, and lower for neuroticism, than ABF. While previous studies identified that agreeableness and neuroticism were influential in romantic relationships and friendships (Harris & Vazire, 2016), our result suggested that conscientiousness was strongly signaled too. Considering that our survey did not specify the purposes for the communications, such as dating and willingness for further interaction was ascertained in a post hoc manner, signaled conscientiousness might be used for first-met communications in a broader context, not limited to romantic attraction.

Second, we found that, generally, participants' interest in further interacting with their partners as potential friends, lovers, and spouses, was most explained by the distance of self-recognition of (dis)similarity on the personality dimensions. That is, the distance of perceived (dis)similarity in personality yielded the largest explanatory power. Thus, one's interest to consider someone as a potential mate may be determined by their self-estimation of mutual impressions of (dis)similarity in personality, rather than using one's own personality, at least in the context of a short communication. This estimation is moderately but not entirely precise.

Third, whether people pursue similarities or dissimilarities in a potential mate's particular personality dimension might greatly differ per sex. Past research indicates that women, more than men, prefer extroversion in a partner, for example (Figueredo et al., 2006). However, the desired personality could be determined in a relative manner based on one's own personality rather than as absolute target values. Furthermore, women sought similarity in conscientiousness and dissimilarity in neuroticism, whereas men sought dissimilarity in conscientiousness and similarity in neuroticism. There may be separate motivations for the mechanisms underlying these sex differences. For conscientiousness, women are typically reported to have higher scores than men (Schmitt et al., 2008), suggesting that women have a lower interest in, probability of, infidelity (Schmitt & Shackelford, 2008) and vice versa. Parental investment theory (Trivers, 1972) suggests that parents expect their partners to engage in long-term mating despite sex differences in the degree to which personality dimensions are apparent (Buss et al., 1992). That is, both sexes might expect higher conscientiousness to be associated with a low probability of partner infidelity. For neuroticism, which shows a less consistent correlation with short-term mating (Schmitt et al., 2008) yet can be a source of mental cost when they spend time together (Mahambrey, 2020), women typically are reported to have higher scores than men (Schmitt et al., 2008). Thus, both sexes may seek low neuroticism to avoid stressful partners. Sex differences in how the dimensions

impact romantic attraction warrant more research, as does the possible link to relationship longevity.

A limitation of the current work is the small sample of 24 participants, but this sample size was due to the recruitment via demographics (age, location, relationship status, sexual orientation), length of the interviews (i.e., 30 minutes with a moderator), and the in-depth analysis. It also remains to be determined whether the importance of one's *actual* vs perceived personality changes over time. Yet, important and significant findings were still obtained. The post hoc power analysis suggested that the proposed regression models based on meta-perception of (dis)similarity in personality had sufficient explanatory power for most of the settings, with even larger explanatory power than models based on *actual* personality for a part of the settings. We plan to replicate these findings to detect a significant increase in explanatory power for the other settings, including female responses.

Using the framework of signaling theory, we propose that people signal their personality by manipulating how it is perceived by others at the start of interpersonal interactions, taking care of how they would be perceived by others. Here we show that willingness to consider someone as a potential friend, lover, or spouse is most explained by the distance in perceptions of personality dimensions. We found that people rely more on self-recognition about impressions of their personality as perceived by others, rather than on their actual personality, at least when they first meet and have short communications.

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Author contribution

HK, MLF, NT, and YC developed the study concept and design. HK and AS analyzed data. AS, YH, GL, and YC validated the study. HK, MLF, and YH wrote the manuscript.

Ethical statement

This study was approved by the ethics board of Central Research Institute of Electric Power Industry with the management codes of No. G2022003 (December 8th, 2022) and No. G2022005 (December 13th, 2023).

Data accessibility & program code

The dataset is attached as the Supplementary Dataset.

Supplementary material

Electronic supplementary materials are available online.

References

- Berthon, P. R., Ferguson, S. T. L., Pitt, L. F., & Wang, E. (2023). The virtuous brand: The perils and promises of brand virtue signaling. *Business Horizons*, 66(1),

- 27–36. <https://doi.org/10.1016/j.bushor.2021.10.006>
- Buss, D. M., Larsen, R. J., Westen, D., & Semmelroth, J. (1992). Sex differences in jealousy: Evolution, physiology, and psychology. *Psychological Science*, 3(4), 251–256. <https://doi.org/10.1111/j.1467-9280.1992.tb00038.x>
- Darbyshire, D., Kirk, C., Wall, H. J., & Kaye, L. K. (2016). Don't judge a (face) book by its cover: Exploring judgement accuracy of others' personality on Facebook. *Computers in Human Behavior*, 58, 380–387. <https://doi.org/10.1016/j.chb.2016.01.021>
- Domingue, B. W., Fletcher, J., Conley, D., & Boardman, J. D. (2014). Genetic and educational assortative mating among US adults. *Proceedings of the National Academy of Science*, 111(22), 7996–8000. <https://doi.org/10.1073/pnas.1321426111>
- Figueredo, A. J., Sefcek, J. A., & Jones, D. N. (2006). The ideal romantic partner personality. *Personality and Individual Differences*, 41(3), 431–441. <https://doi.org/10.1016/j.paid.2006.02.004>
- Funder, D. C. (2012). Accurate personality judgment. *Current Directions in Psychological Science*, 21(3), 177–182. <https://doi.org/10.1177/0963721412445309>
- Funder, D. C., Kolar, D. C., & Blackman, M. C. (1995). Agreement among judges of personality: Interpersonal relations, similarity, and acquaintanceship. *Journal of Personality and Social Psychology*, 69(4), 656–672. <https://doi.org/10.1037/0022-3514.69.4.656>
- Gerlach, T. M. & Reinhard, S. K. (2020). Personality and romantic attraction. In V. Zeigler-Hill, & T. K. Shackelford (Eds.), *Encyclopedia of Personality and Individual Differences* (pp. 3683–3687). Springer. https://doi.org/10.1007/978-3-319-24612-3_717
- Gosling, S. D., Rentfrow, P. J., & Swann Jr., W. B. (2003). A very brief measure of the Big-Five personality domains. *Journal of Research in Personality*, 37(6), 504–528. [https://doi.org/10.1016/S0092-6566\(03\)00046-1](https://doi.org/10.1016/S0092-6566(03)00046-1)
- Harris, K., & Vazire, S. (2016). On friendship development and the Big Five personality traits. *Social and Personality Psychology Compass*, 10(11), 647–667. <https://doi.org/10.1111/spc3.12287>
- Hromatko, I., Bajoghli, H., Rebernjak, B., Joshaghani, N., & Tadinac, M. (2015). Relationship satisfaction as a function of mate value. *Evolutionary Behavioral Sciences*, 9(4), 242–256. <https://doi.org/10.1037/ebs0000055>
- Huston, T. L., & Levinger, G. (1978). Interpersonal attraction and relationships. *Annual Review of Psychology*, 29, 115–156. <https://doi.org/10.1146/annurev.ps.29.020178.000555>
- Kalmijn, M. (1998). Intermarriage and homogamy: Causes, patterns, trends. *Annual Review of Sociology*, 24, 395–421. <https://doi.org/10.1146/annurev.soc.24.1.395>
- Klohnen, E. C., & Luo, S. (2003). Interpersonal attraction and personality: What is attractive: Self-similarity, ideal similarity, complementarity or attachment security? *Journal of Personality and Social Psychology*, 85(4), 709–722. <https://doi.org/10.1037/0022-3514.85.4.709>
- Mahambrey, M. (2020). Self-reported Big Five personality traits of individuals who have experienced partner infidelity. *Personal Relationships*, 27(2), 274–302. <https://doi.org/10.1111/pere.12315>
- Miller, G. (2009). *Spent: Sex, evolution, and consumer behavior*. Penguin.
- Montoya, R. M., Horton, R. S., & Kirchner, J. (2008). Is actual similarity necessary for attraction? A meta-analysis of actual and perceived similarity. *Journal of Social and Personal Relationships*, 25(6), 889–922. <https://doi.org/10.1177/0265407508096700>
- Oshio, A., Abe, S., Cutrone, P., & Gosling, S. D. (2014). Further validity of the Japanese version of the Ten Item Personality Inventory (TIPI-J): Cross-language evidence for content validity. *Journal of Individual Differences*, 35(4), 236–244. <https://doi.org/10.1027/1614-0001/a000145>
- Sayehmiri, K., Kareem, K. I., Abdi, K., Dalvand, S., & Gheshlagh, R. G. (2020). The relationship between personality traits and marital satisfaction: a systematic review and meta-analysis. *BMC Psychology*, 8, Article 15. <https://doi.org/10.1186/s40359-020-0383-z>
- Schmitt, D. P., Realo, A., Voracek, M., & Allik, J. (2008). Why can't a man be more like a woman? Sex differences in Big Five personality traits across 55 cultures. *Journal of Personality and Social Psychology*, 94(1), 168–182. <https://doi.org/10.1037/0022-3514.94.1.168>
- Schmitt, D. P., & Shackelford, T. K. (2008). Big Five traits related to short-term mating: From personality to promiscuity across 46 nations. *Evolutionary Psychology*, 6(2), 246–282. <https://doi.org/10.1177/147470490800600204>
- Selfhout, M., Burk, W., Branje, S., Denissen, J., Van Aken, M., & Meeus, W. (2010). Emerging late adolescent friendship networks and Big Five personality traits: A social network approach. *Journal of Personality*, 78(2), 509–538. <https://doi.org/10.1111/j.1467-6494.2010.00625.x>
- Smith, M. J., & Harper, D. G. C. (1995). Animal signals: Models and terminology. *Journal of Theoretical Biology*, 177(3), 305–311. <https://doi.org/10.1006/jtbi.1995.0248>
- Stone, E. A., Shackelford, T. K., & Buss, D. M. (2012). Is variability in mate choice similar for intelligence and personality traits? Testing a hypothesis about the evolutionary genetics of personality. *Intelligence*, 40(1), 33–37. <https://doi.org/10.1016/j.intell.2011.10.003>
- Tidwell, N. D., Eastwick, P. W., & Finkel, E. J. (2013). Perceived, not actual, similarity predicts initial attraction in a live romantic context: Evidence from the speed-dating paradigm. *Personal Relationships*, 20(2), 199–215. <https://doi.org/10.1111/j.1475-6811.2012.01405.x>
- Trivers, R. L. (1972). Parental Investment and Sexual Selection. In B. G. Campbell (Ed.), *Sexual Selection and the Descent of Man, 1871–1971* (pp. 136–179). Aldine.
- Wada, S. (1996). Construction of the Big Five Scales of personality trait terms and concurrent validity with NPI. *The Japanese Journal of Psychology*, 67(1), 61–67. <https://doi.org/10.4992/jjpsy.67.61>
- Watson, D., Beer, A., & McDade-Montez, E. (2014). The role of active assortment in spousal similarity. *Journal of Personality*, 82(2), 116–129. <https://doi.org/10.1111/jopy.12039>
- Weidmann, R., Schönbrodt, F. D., Ledermann, T., & Grob, A. (2017). Concurrent and longitudinal dyadic polynomial regression analyses of Big Five traits and relationship satisfaction: Does similarity matter?. *Journal of Research in Personality*, 70, 6–15. <https://doi.org/10.1016/j.jrp.2017.04.003>
- Wilson, R. E., Harris, K., & Vazire, S. (2015). Personality

and friendship satisfaction in daily life: Do everyday social interactions account for individual differences in friendship satisfaction? *European Journal of Personality*, 29(2), 173–186. <https://doi.org/10.1002/per.1996>

Zahavi, A. (1975). Mate selection—a selection for a handicap. *Journal of Theoretical Biology*, 53(1), 205–214. [https://doi.org/10.1016/0022-5193\(75\)90111-3](https://doi.org/10.1016/0022-5193(75)90111-3)