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The Friend-Number Paradox

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We show that individuals expect others to be more likely to make friends with them when they have a larger versus smaller number of friends. Others, however, exhibit preferences that are diametrically opposed to this intuitive expectation. We coin it the friend-number paradox and study its underlying mechanism.

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EXTENDED ABSTRACT

Little research has examined people's competence in predicting others' perceptions of their own attractiveness in social networks. Mispredictions of this kind are consequential: They hinder the establishment and maintenance of desirable relationships and negatively affect the efficient allocation of resources to achieve particular goals in the social realm. For example, a woman might overestimate others' liking for her and adopt an interaction strategy that actually decreases her popularity (Dai, Dong, and Jia 2014). A political candidate who over-predicts his or her favorability in the eyes of minority groups might distribute his or her attention and resources in a suboptimal manner that decreases the chances of winning. In short, correct insights into others' preferences towards oneself are important for people's well-being and functioning in general and for accomplishment of effective marketing campaigns in particular.

In this research, we propose and investigate a fundamental preference mismatch in social networking with regard to individuals' numbers of friends. By "social networking," we are referring to the will and practices undertaken to expand one's social circle. It includes but is not limited to the use of Internet-based social media platforms. In addition, we focus on social networking for the purpose of establishing "pure" friendships rather than those formed in pursuit of economic, professional, or other interests (e.g., establishing business connections). We show that people expect others to be more willing to make friends with them when they already have a large number of friends, whereas others actually exhibit a preference that is diametrically opposed to that expectation: People are actually more willing to make friends with someone who has a small number of friends. We coin the term *friend-number paradox* to describe this mismatch between people's expectation and others' actual preference. In the following, we explicate the reasons behind this paradox and report the results of four studies confirming the validity of our propositions.

Theoretical Background

Preference for Small Number of Friends

Social ties are the building blocks of the social world and are thus highly valued, with larger numbers of social ties often reflecting higher social esteem and more likeable personality traits. It therefore seems reasonable to assume that people prefer individuals with larger numbers of friends as social networking targets (Feld 1991). However, social ties are valuable only to the extent that adequate levels of relationship quality are maintained, and relationship quality is essentially entrenched in the obligations and expectations inherent in social ties. Reliability and the due fulfillment of obligations and expectations cost attention, time, and other resources.

In his seminal paper, Coleman (1988) suggested that obligations and expectations constitute a major form of social capital that facilitates actions within social networks and is an important resource with regard to efficiency and well-being. Given the importance of social capital, its accumulation is an implicit yet fundamental objective in social networking. In other words, relationship quality is the primary concern of social networking. Hence, an individual's ability to honor his or her obligations to another person and to meet that person's expectations (i.e., ability to build social capital with that person) should be a predominant predictor of the latter's preference for networking

with the individual. We propose that this ability is negatively affected by an individual's number of social ties because limited resources become more diluted with a larger number of social ties. Therefore, a person would expect the quality of his or her relationship with a given individual to be poorer if that individual had a large number of friends, and be less likely to make the effort to become friends with that individual. In other words, we predict that people are more likely to network with individuals who have fewer existing friends.

Preference Mispredictions in Social Networking

If the preceding observations are valid, then why would people overlook others' concern for relationship quality and mispredict their preferences? For one thing, taking the perspective of others requires effort and motivation (Epley, Keysar, Van Boven, and Gilovich 2004; Lin, Keysar, and Epley 2010). As a result, people often exhibit an egocentric bias, focusing on self-relevant information while paying insufficient attention to concerns that might underlie others' judgments (Ross and Sicoly 1979; Windschitl, Kruger, and Simms 2003). It is therefore proposed that when predicting the number of social ties that others prefer, people are prone to overlooking others' concern for relationship quality and focus instead on the symbolic significance of social ties. In other words, they may infer that the greater the number of ties they have, the higher their social esteem and more likeable their personality traits, and thus the stronger others' preference for networking with them.

Furthermore, we propose that this preference mismatch is also a result of people's neglect of their own obligations and expectations in the social network when formulating the predictions. Research shows that people are inclined to neglect various kinds of "expenses" when they make judgments and predictions (Berman, Tran, Lynch and Zauberman 2016; Campbell and Warren 2015; Frederick, Novemsky, Wang, Dhar, and Nowlis 2009). For example, they often neglect opportunity costs in their decisions and choices (Frederick et al. 2009). If insufficient consideration has been given to the obligations and expectations inherent in social ties, individuals are likely to become insensitive to the decrease in relationship quality caused by increases in the numbers of social ties, and thus express a preference for a larger number of ties in their predictions.

In summary, we propose that people expect others to be more willing to make friends with them when they have a large number of friends. Others, in contrast, are more willing to make friends with someone who has a small number of friends. This preference mismatch arises because people overlook others' concern with relationship quality and focus on the symbolic meaning of social ties when making predictions about others. Further, the difference in relationship quality concern is closely related to neglect of one's obligations to and expectations from friends at the time these predictions are formulated. We conducted four studies that demonstrate this preference mismatch and test the validity of our hypotheses. We describe the major findings of the studies in the next section.

Study 1: Friend Number on Facebook

Method

102 participants ($M_{Age} = 35.21$, 59% male) took part in a short choice study. The participants read that Facebook is one of today's most widely used online social networking sites. Then, those in the

others' preference condition were asked to predict whether others would be more likely to make friends with them if their Facebook page showed that they had 500 friends or 50 friends. Participants in the *own preference* condition were asked whether they would be more likely to make friends with a person whose Facebook page showed 500 friends or 50 friends.

Results

71% (36/51) of participants in the *others' preference* condition predicted that others would be more likely to make friends with them if they had 500 rather than 50 friends on Facebook. In contrast, only 31% (16/51) of participants in the *own preference* condition preferred an individual with 500 rather than 50 Facebook friends. The difference between the two conditions was highly significant ($\chi^2(1) = 15.69, p < .001$).

Study 2: Preference for a Target Person's Relationship Quality

The results of Study 1 are consistent with our proposed effect. However, an alternative explanation could also account for our findings: Individuals with an *excessive* number of friends are associated with certain negative impressions (e.g., frivolousness) that affect others' inferences about their social esteem and personality traits. Therefore, participants in the *own preference* condition may have chosen the person with fewer friends not because of relationship quality concerns but out of concerns over the target person's social esteem or personality traits.

In Study 2, we tested this alternative explanation by asking participants whether they would prefer a target person who had many good relationships (strong relationship quality) versus another who had merely many acquaintances (weak relationship quality). Like relationship quantity, average relationship quality should also negatively influence an individual's ability to build social capital with others. However, stronger average relationship quality should be unconditionally associated with higher social esteem and more likeable personality traits. If the effects in Study 1 were indeed driven by differing concerns over relationship quality, then we would expect a significant difference in preferences to again emerge between the two judgment conditions.

Method

101 participants ($M_{Age} = 35.61$, 62% male) took part in this study. Participants in the *others' preference* condition read a scenario in which they were asked to imagine themselves in each of two situations. In one situation, they had lived in a community for a long time and had good relationships with many people. In the other, they had recently moved to a new community and had made the acquaintance of the same number of people as in the first situation. They then selected the situation in which they thought others would be more willing to make friends with them.

In the *own preference* condition, participants were instructed to imagine two fictitious persons in their community who were similar to each other in all aspects except that one had lived in the community for a long time and had good relationships with many people, whereas the other had moved to the community recently and was merely acquainted with the same number of people. They were then asked to select the person with whom they would prefer a friendship.

Results

Of the participants in the *others' preference* condition, 84% (42/50) thought that others would be more likely to make friends with them if they had many good friends rather than an equal number of acquaintances. In the *own preference* condition, however, only 51% (26/51) of participants expressed a preference for making

friends with a person with many good friends over one with an equal number of acquaintances. The difference between the two conditions was highly significant ($\chi^2(1) = 12.51, p < .001$). These results therefore provide further evidence that the preference mismatch is driven by concerns over relationship quality rather than inferences about the target person's social esteem or personality traits.

Study 3: Concern With Relationship Quality

Study 3 provided evidence supporting the mediating role of differences in relationship quality concern in the current effect.

Method

100 participants ($M_{Age} = 38.89$, 52% male) took part in this study. Study 3 adopted a design similar to that of Study 1. After participants made their choices, they were given four descriptions regarding their concerns for relationship quality and were asked to indicate whether those concerns had occurred to them when they were making their choices.

Results

The choice data replicated results of our previous studies. 72% (36/50) of the participants in the *others' preference* condition predicted that another individual would be more likely to make friends with them when they had 200 instead of 50 friends. However, only 22% (11/50) of participants in the *own preference* condition expressed a preference for making friends with another individual with 200 versus 50 friends ($\chi^2(1) = 25.09, p < .001$).

Analysis of the combined measure of relationship quality concern ($\alpha = .90$) revealed that the participants in the *own preference* condition were concerned with relationship quality to a significantly greater extent ($M = 5.20, SD = 1.50$) than those in the *others' preference* condition ($M = 4.33, SD = 1.44; F(1, 98) = 8.88, p = .004; d = .59$). We confirmed the mediating effect of relationship quality concern on the relationship between judgment perspective and friend-number preference using the bootstrapping method (Hayes 2013). With 5000 bootstrap samples, the indirect mediating effect was estimated to be $-.93$ (boot $SE = .57$), with its 95% bias-corrected confidence interval $(-2.27, -0.23)$ excluding zero.

Study 4: Reminder of Obligations and Expectations

As previously noted, differences in the degree of concern with relationship quality are inextricably associated with the failure to consider the obligations and expectations inherent in social ties when predicting the preferences of others. Hence, reminding participants of those obligations and expectations should attenuate or even reverse a preference for large numbers of friends in their predictions, thereby bringing those predictions more in line with the actual preferences of others. Study 4 examined this prediction.

Method

Study 4 employed a similar design as in Studies 1 and 3. A *reminder* condition was added in which participants were asked to think about and write down what others would expect them to do in various situations as friends before they predicted others' preference for their number of friends in social networking. 205 participants ($M_{Age} = 33.31$, 59% male) were randomly assigned to three between-participants conditions.

Results

The participants' choices differed significantly among the three conditions ($\chi^2(2) = 31.18, p < .001$). Replicating our previous findings, the majority of participants (79%; 56/71) in the *own preference* condition preferred another individual with 50 rather than 200 friends, whereas only a small proportion of participants (32%; 23/71) in the *others' preference (baseline)* condition correctly pre-

dicted that preference by the majority of others ($\chi^2(1) = 31.07, p < .001$). More importantly, compared with the baseline condition, a significantly larger percentage (57%; 36/63; $\chi^2(1) = 8.30, p = .004$) of participants in the *reminder* condition predicted that others would be more likely to make friends with them if they had 50 rather than 200 friends, although the percentage still differed from that in the *own preference* condition ($\chi^2(1) = 7.33, p = .007$). These findings again provide support for our proposed mechanism underlying the friend-number paradox.

General Discussion

One important motivation for engaging in social networking is to expand one's number of social ties. In the studies reported herein, we found that in the process of such engagement, people paradoxically prefer individuals with a relatively small rather than large number of friends. At the same time, they are rather inept at predicting that preference of others, judging instead that others would prefer to network with them if they had more rather than fewer friends.

The current research examines a fundamental mismatch between people's predictions of others and their own personal preferences. We investigated the mismatch in the context of social networking, which is highly relevant to daily life and important to well-being. However, we believe that the friend-number paradox is pertinent to a much wider scope of contexts, and hope that further studies will be inspired to explore its broader implications.

REFERENCES

- Berman, Jonathan Z., An TK Tran, John G. Lynch Jr, and Gal Zauberman (2016), "Expense Neglect in Forecasting Personal Finances," *Journal of Marketing Research*, 53 (4), 535-50.
- Campbell, Margaret C., and Caleb Warren (2015), "The progress bias in goal pursuit: When one step forward seems larger than one step back," *Journal of Consumer Research*, 41 (5), 1316-31.
- Coleman, James S. (1988), "Social capital in the creation of human capital," *American Journal of Sociology*, 94, S95-S120.
- Dai, Xianchi, Ping Dong, and Jayson S. Jia (2014), "When does playing hard to get increase romantic attraction?" *Journal of Experimental Psychology: General*, 143 (2), 521-6.
- Epley, Nicholas, Boaz Keysar, Leaf Van Boven, and Thomas Gilovich (2004), "Perspective taking as egocentric anchoring and adjustment," *Journal of Personality and Social Psychology*, 87 (3), 327-39.
- Feld, Scott L. (1991), "Why your friends have more friends than you do," *American Journal of Sociology*, 96 (6), 1464-77.
- Frederick, Shane, Nathan Novemsky, Jing Wang, Ravi Dhar, and Stephen Nowlis (2009), "Opportunity cost neglect," *Journal of Consumer Research*, 36 (4), 553-61.
- Hayes, Andrew F (2013), *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*, Guilford Press.
- Lin, Shuhong, Boaz Keysar, and Nicholas Epley (2010), "Reflexively mindblind: Using theory of mind to interpret behavior requires effortful attention," *Journal of Experimental Social Psychology*, 46 (3), 551-6.
- Ross, Michael, and Fiore Sicoly (1979), "Egocentric biases in availability and attribution," *Journal of Personality and Social Psychology*, 37 (3), 322-36.
- Windschitl, Paul D., Justin Kruger, and Ericka Nus Simms (2003), "The influence of egocentrism and focalism on people's optimism in competitions: When what affects us equally affects me more," *Journal of Personality and Social Psychology*, 85 (3), 389-408.