



Research Articles



"I Need to Belong": Examining a Negative Halo Effect for Expressions of the Need to Belong

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Supplementary Materials: Code, Data [see Index of Supplementary Materials]





Abstract

We examine a problem faced by individuals with a high need to belong; expressing a desire for social relationships may make it more difficult to form them. In particular, we suggest expressions of heightened belongingness needs create a negative halo effect whereby people expressing those needs appear to be less attractive and more desperate to potential relationship partners. In two experiments, participants viewed hypothetical targets who endorsed high, moderate, or low levels of the need to belong, and then rated these targets on measures of social attractiveness and social desperation. Results revealed that participants rated both high and low need to belong targets as low in social attractiveness (Experiment 1, N = 116) and social stature (Experiment 2, N = 111), relative to the moderate need to belong target. However, participants rated the high need to belong target significantly higher in social desperation, compared to the moderate and low need to belong targets. Lastly, social desperation significantly mediated the association between (high vs. moderate) expressed need to belong and social attractiveness, suggesting that expressing heightened need to belong is uniquely unattractive to others as it conveys a sense of social desperation. Overall, these results suggest that when they express a desire to form close relationships, those high in the need to belong may have a difficult time achieving a sense of belonging.

Keywords

need to belong, social desperation, social attraction, social stature, negative halo effect



"I want you to want me, I need you to need me" ${\it Cheap Trick}$

Human beings have a strong need to form quality social relationships and seem to have warning systems in place to alert them to when these relationships are not sufficiently numerous or rewarding (Baumeister & Leary, 1995). Sociometer theory, for example, proposes that self-esteem functions as a gauge that fluctuates in response to social acceptance or exclusion (Leary, 2012). Other work suggests that people have a social monitoring system that sensitizes them to their inclusion status, and provides them with information (e.g., the emotional state of a partner) that helps them in the process of forming social connections (Gardner et al., 2000; Pickett & Gardner, 2005; Pickett et al., 2004). Related research has found support for a social reconnection mechanism whereby individuals respond to social exclusion by engaging in a number of strategies for the purpose of reconnecting with others (Maner et al., 2007). Given the strong need to form social connections when they are otherwise lacking, one strategy people may attempt is to explicitly communicate to others that they are lacking in belongingness.

As suggested by Cheap Trick, there are certainly instances in which individuals directly and explicitly express their belongingness needs. People may self-disclose such needs relatively early in interpersonal interactions, as self-disclosure is a means by which closeness is facilitated (e.g., social penetration theory, Altman & Taylor, 1973; initial interactions, Sprecher, 2020; self-expansion, Aron et al., 2013). For example, people on first dates might express how long it has been since their previous relationship or that they are new in town and have not met many people. People also commonly express their desire for social relationships and that they are feeling lonely via social media posts (Guntuku et al., 2019). Beyond these explicit expressions of heightened belongingness needs, people also signal information about their inclusion status implicitly, such as when they join meetup groups or attend singles mixers, which are intended to help people make social acquaintances. Whether implicit or explicit, these expressions and behaviors provide potential partners with information they can use to make conclusions about a person's belongingness needs.

An empirical question is whether these belongingness expressions are effective. While it is possible that expressing belongingness needs may improve people's ability to form new relationships, there are reasons why such appeals may be maladaptive. A potential problem is that people who express a heightened need to belong may, given their strong desire to form new relationships, unwittingly appear as less desirable to others.

Why Might Expressing the Need to Belong Create a Negative Halo Effect?

Impression formation occurs quickly, even in the absence of information about a person (e.g., Ambady & Rosenthal, 1992). Halo effects are mental short cuts that individuals use



to help them simplify the otherwise complex task of impression formation and entail the conclusion that a person possesses several positive or negative characteristics on the basis of their possession of a similarly valanced characteristic. For example, the *what is beautiful is good* stereotype describes a positive halo effect in which beautiful people are assumed to possess other desirable traits, such as intelligence and good humor (Dion et al., 1972). In contrast, negative halo effects exist for people who are overweight (e.g., Wade & DiMaria, 2003) and for those who stutter (Zeigler-Hill et al., 2020), such that people who possess these characteristics are assumed by others to possess unrelated undesirable traits (e.g., low self-esteem).

In this paper, we suggest that in some contexts expressions of a heightened need to belong may result in a negative halo effect that reduces, rather than improves, a person's chances of forming social relationships. In particular, while expressions of the need to belong may be seen as appropriate, or even desirable in contexts such as meet and greet events where the purpose is to meet new people, such expressions may be counterproductive in contexts that are not specifically designed to forge social connections. When a person expresses having a heightened need to belong, potential partners may conclude that this person not only lacks social relationships, but also possesses other negative traits as well. Such expressions may signal that a person has low relational value (Lau & Gruen, 1992) and imply that they have previously been excluded or rejected by others (e.g., DeWall & Bushman, 2011). Evidence of prior exclusion by others may communicate to potential partners that an individual expressing the need to belong possesses socially undesirable attributes or behaves in non-normative ways (Leary, 2021).

Potential partners, moreover, may view expressions of a heightened need to belong as a 'last resort' attempt to form social relationships and therefore the behavior of a person who is socially desperate. In this context, we use the term *social desperation* to refer to the urgency of people's desire to form relationships, as well as the excessive dependency on those few relationships they may already have. Thus, the socially desperate may be seen as "trying too hard," while at the same time being needy and clingy, which ultimately makes them unattractive social partners. Socially desperate people may also be perceived as being relatively unselective in their choice of social relationships, which also makes them less attractive. In support of this possibility, research on speed dating reveals that some individuals employ a strategy of unselectivity (McClure et al., 2010), which describes people who indicate that they would like to form a relationship with all of the other speed daters. Although this might seem like an effective strategy for increasing the likelihood of attracting a mate, unselective individuals are perceived as less attractive by potential partners (McClure et al., 2010) and inspire lower feelings of romantic desire and chemistry in potential mates (Eastwick et al., 2007).



Current Research

In the current research, we suggest that expressing a heightened need to belong may create a negative halo effect, which makes it more difficult, not easier, for individuals to attain a sense of belonging. Specifically, we predict that potential partners will be both sensitive to and disapproving of social traits that suggest that a person is high in the need to belong. To test this hypothesis, participants imagined meeting a person who expressed high, moderate, or low levels of the need to belong, and then rated that person on social attractiveness (Experiment 1), social stature (Experiment 2), and social desperation (Experiments 1 and 2). Moreover, for both experiments, we predicted that the effect of target need to belong on participant ratings of social attraction and social stature would be mediated by perceptions of social desperation. That is, we hypothesized that participants would evaluate the target expressing a high need to belong more negatively because they perceived them to be socially desperate.

Experiment 1

Method

Participants

Participants were 121 individuals recruited from Amazon Mechanical Turk. In exchange for their participation, participants received \$0.40. Five participants failed an attention check item (described below). This left 116 participants (40 female, 76 male) in the final sample. Participants ranged in age from 18 to 68 (M=30.58, SD=9.69), and the sample was comprised of 71.6% individuals of European ancestry, 11.2% of African ancestry, 11.2% of Asian ancestry, 2.6% of Hispanic, Latino, or Spanish ancestry, and 3.4% who reported having an ancestry other than those listed above or did not report their ancestry.

Materials and Procedure

We randomly assigned participants to one of three need to belong conditions. In each condition, participants read a vignette that consisted of a quote from an ostensibly real person who expressed a high, moderate, or low level of the need to belong. We chose this vignette method to maximize construct and content validity, as staging interactions with a confederate would reduce experimental control and the use of vignettes is common in social psychology to study social perceptions (e.g., Brooks et al., 2018; van Tilburg et al., 2023). Prior to reading the vignette, participants read the following instructions:

¹⁾ Experiments 1 and 2 were not preregistered. Data, syntax, and results for Experiments 1 and 2 are available in the Supplementary Materials (see McIntyre et al., 2022). Study materials are available by contacting the first author.



"Imagine that you have no prior knowledge of this person and you are meeting them for the first time. As you read the quote, try to form an impression of the person. Please read the quote carefully, because you will be asked to evaluate this person based on what they said." Each of the vignettes was constructed using four items taken directly from the Need to Belong Scale (NTBS; Leary et al., 2013) with minimal adjustment to item wording, and pilot testing revealed the validity of this manipulation.² In the *High Need to Belong* condition, participants read the following quote:

"I want other people to accept me and I worry a lot about whether other people don't care about me. I need to feel that there are people I can turn to in times of need, so if other people don't seem to accept me, it bothers me a great deal."

In the *Moderate Need to Belong* condition, participants read the following quote:

"I want other people to accept me, but I don't worry too much if there are other people who don't care about me. I feel that there are people I can turn to in times of need, so if other people don't seem to accept me, it doesn't bother me much."

In the *Low Need to Belong* condition, participants read the following quote:

"I do not care if other people accept me and I do not worry at all about whether other people don't care about me. I don't need to feel that there are people I can turn to in times of need, so if other people don't seem to accept me, it does not bother me at all."

Following this, participants completed the Social Attraction Scale (SAS; McCroskey et al., 2006). The SAS consists of 12 items such as, "I think this person could be a friend of mine" and "I would not like to spend time socializing with this person." Note that we modified the original scale language to refer to "this person" rather than "he/she." Participants responded to each item by indicating their level of agreement on a 7-point scale (1 = $strongly\ disagree$, 7 = $strongly\ agree$). We reverse scored appropriate items so that higher scores represented a higher degree of social attraction. The SAS demonstrated high reliability (α = .95).

Next, we asked participants to rate the target on a variety of trait adjectives designed to assess social desperation. Participants rated the words dependent, desperate, needy,

²⁾ In a pilot study (N = 60), participants read one of the three vignettes and rated the target's level of need to belong using the six items from the NTBS that were not used in the creation of the vignettes. The results were significant, F(2, 57) = 47.63, p < .001, with Tukey post-hoc analyses revealing that the high need to belong target was rated significantly higher in the need to belong (M = 4.66, SD = 0.38) than the moderate (M = 3.03, SD = 0.80) and low (M = 2.03, SD = 1.11) need to belong targets (ps < .001). The moderate target was also significantly higher in the need to belong than the low target (p < .001).



clingy, and tries too hard on a 7-point scale (1 = strongly disagree, 7 = strongly agree). This scale demonstrated good reliability (α = .90).

Finally, after completing these measures, participants completed an attention check in which they were presented with all three vignettes and asked to identify the one that they read at the outset of the experiment. Participants then completed a brief demographics questionnaire, assessing age, gender, and ethnicity.

Results

A one-way ANOVA revealed a significant effect of vignette condition on social attraction, F(2, 113) = 14.17, p < .001, $\eta_p^2 = .20$. As predicted, participants perceived the target expressing high need to belong as significantly less attractive (M = 4.33, SD = 1.21) than the moderate need to belong target (M = 5.26, SD = 0.92), p = .001, d = 0.82. Interestingly, participants did not perceive the target expressing high need to belong as significantly more or less attractive than the low need to belong target (M = 3.90, SD = 1.24), p = .224, d = 0.37. Participants did, however, perceive the target expressing low need to belong as significantly less attractive than the moderate target, p < .001, d = 1.20.

Next, we also found a significant effect of vignette condition on ratings of social desperation, F(2, 113) = 76.85, p < .001, $\eta_p^2 = .58$. As predicted, participants perceived the target expressing high need to belong as significantly higher in social desperation (M = 5.30, SD = 0.89) than the moderate need to belong target (M = 2.72, SD = 1.40), p < .001, d = 2.27, and the low need to belong target (M = 2.42, SD = 1.09), p < .001, d = 2.54. Participants did not perceive the targets expressing moderate or low need to belong significantly differently in social desperation, p = .465, d = 0.27.

We next sought to test whether the effect of vignette condition on social attraction was mediated by social desperation. We used the GLM Mediation module for Jamovi (Gallucci, 2020; Rosseel, 2012), which conducts mediation analyses in situations when the independent variable is multicategorical, as in the current study. The moderate need to belong condition was coded as the reference condition and was compared to the high and low need to belong conditions respectively. Confirming our predictions, results (based on 1,000 bootstrap samples) indicated that the effect of vignette condition on ratings of social attraction is mediated by social desperation. Comparing moderate versus high need to belong conditions, the indirect effect was significant, b = -0.86, p < .001, 95% CI [-1.36, -0.37], and the direct effect of condition on social attraction drops to non-significance when including the mediator in the model (unmediated b = -0.93, p < .001; mediated b = -0.07, p = .84). Comparing moderate versus low need to belong conditions, the indirect effect was non-significant, b = 0.10, p = .296, 95% CI [-0.10, 0.29]. Thus, perceptions of social desperation mediated the condition effects for moderate versus high need to belong on the social attractiveness of the vignette targets.



Discussion

The results of Experiment 1 provide preliminary evidence that expressing heightened levels of the need to belong results in a negative halo effect. In particular, the results revealed that individuals expressing high levels of the need to belong were viewed as less socially attractive relative than those expressing moderate levels. Further, those expressing a heightened need to belong were perceived to be more socially desperate than those at moderate or low levels of the need to belong and perceptions of social desperation mediated the effects of the need to belong on social attraction.

Although the results supported our predictions with respect to targets expressing high versus moderate levels of the need to belong, targets expressing high need to belong did not differ significantly from those expressing low need to belong on social attractiveness, even though they were seen as more socially desperate.

Experiment 2 sought to replicate and extend these results using a different measure of social attractiveness, which would provide additional evidence for a negative halo effect. Participants rated targets expressing differing levels of the need to belong on social stature (e.g., popular, respected), which previous theorizing suggests is a fundamental component of social attraction (see Fiske et al., 2007; Montoya & Horton, 2014). We predicted that participants would evaluate targets expressing high need to belong as lower in social stature and higher in social desperation relative to the moderate and low targets, and that social desperation would mediate the association between need to belong condition and social stature.

Experiment 2

Method

Participants

Participants were 124 individuals recruited from Amazon Mechanical Turk. In exchange for their participation, participants received \$0.60. Thirteen participants failed an attention check item similar to the one used in Experiment 1. This left 111 participants (57 female, 54 male) in the final sample. Participants ranged in age from 20 to 73 (M=35.96, SD=12.98), and the sample was comprised of 73.9% individuals of European ancestry, 8.1% of African ancestry, 5.4% of Asian ancestry, 5.4% of Hispanic, Latino, or Spanish ancestry, and 7.2% who reported having an ancestry other than those listed above or did not report their ancestry.

Materials and Procedure

As in Experiment 1, participants were randomly assigned to read one of the three need to belong vignettes. After reading the vignette, participants rated the social stature of the target by completing a 5-item measure, which consisted of the adjectives *popular*, *socially*



skilled, respected, lonely (reverse scored), and socially awkward (reverse scored). For each trait, participants rated the target in relation to other people on a graduated-interval scale from 1 (bottom 5%) to 10 (upper 5%). Responses were averaged to create a single measure of social stature ($\alpha = .77$).

Following this, participants rated the target on the same measure of social desperation used in Experiment 1 (α = .91). Finally, participants completed a brief demographics questionnaire, assessing age, gender, and ethnicity.

Results

A one-way ANOVA revealed a significant effect of vignette condition on social stature, F(2, 108) = 27.82, p < .001, $\eta_p^2 = .34$. As predicted, participants perceived the target expressing high need to belong as significantly lower stature (M = 4.08, SD = 1.24) than the moderate need to belong target (M = 6.14, SD = 1.38), p < .001, d = 1.61. Similar to Experiment 1, participants did not perceive the target expressing high need to belong as significantly higher or lower social stature than the low need to belong target (M = 4.36, SD = 1.23), p = .619, d = 0.22. Participants did, however, perceive the target expressing low need to belong as significantly lower stature than the moderate target, p < .001, d = 1.39.

As in Experiment 1, we also found a significant effect of vignette condition on social desperation, F(2, 108) = 94.35, p < .001, $\eta_p^2 = .63$. As predicted, participants perceived the target expressing high need to belong as significantly higher in social desperation (M = 5.59, SD = 0.90) than the moderate need to belong target (M = 2.81, SD = 1.22), p < .001, d = 2.58, and the low need to belong target (M = 2.48, SD = 1.11), p < .001, d = 2.88. Participants did not perceive the targets expressing moderate or low need to belong significantly differently in social desperation, p = .407, d = 0.30.

Finally, we sought to test whether the effect of vignette condition on social stature was mediated by social desperation. As in Experiment 1, we used the GLM mediation module for Jamovi (Gallucci, 2020; Rosseel, 2012) and we coded the moderate need to belong condition as the reference condition, which we compared to the high and low need to belong conditions respectively. Confirming our predictions, results (based on 1,000 bootstrap samples) indicated that the effect of vignette condition on ratings of social stature is mediated by social desperation. Comparing moderate versus high need to belong conditions, the indirect effect was significant, b = -0.99, p = .010, 95% CI [-1.74, -0.22], and the direct effect of condition on social stature drops in magnitude when including the mediator in the model (unmediated b = -2.07, p < .001; mediated b = -1.07, p = .022). Comparing moderate versus low need to belong conditions, the indirect effect was non-significant, b = 0.12, p = .318, 95% CI [-0.11, 0.34]. Thus, perceptions of social desperation mediated the condition effects for moderate versus high need to belong on the social stature of the vignette targets.



General Discussion

Previous conceptualizations of the need to belong have focused on the adaptive and self-regulatory properties of this trait, suggesting that people respond to social starvation by seeking to form close relationships. Although prior research has examined various strategies employed by people high in the need to belong to satiate their social needs, research has not previously examined the effectiveness of explicitly expressing this need, nor the impact of such expressions on potential partners. In the current research, we examined whether expressing a heightened need to belong would create a negative halo effect, which would negatively affect potential social partners' judgments.

In support of this possibility, the results of two experiments revealed that participants rated targets who expressed a high need to belong as less socially attractive (Experiment 1) and lower in social stature (Experiment 2) than targets who expressed a moderate need to belong. In addition, in both experiments, participants rated targets who expressed a high need to belong as more socially desperate than targets who expressed moderate or low need to belong. Moreover, the reduced social attractiveness of expressing high (vs. moderate) belongingness needs was mediated by social desperation.

These findings indicate that expressions of high belongingness needs create a negative halo effect that make it more difficult for individuals to form the social relationships they seek. Expressions of heightened belongingness needs may serve as a warning signal to potential partners, which affects impression formation more broadly. In particular, communicating to others one's lack of belonging appears to be interpreted by others as a signal of low relational value (Lau & Gruen, 1992). Potential partners may interpret a person's high belongingness needs as indicating that they are not adequately accepted in their social environment (e.g., which may suggest that they have been excluded or rejected by others) and make for poor prospective social partners (Kurzban & Leary, 2001). Indeed, predominant theories of interpersonal relationships highlight the importance of social exchanges (Machia et al., 2020), where satisfying relationships are evaluated in terms of rewards and costs, and people may assume that those who lack social connections will offer few relational rewards and several costs. As such, individuals might avoid those who express a high need to belong in order to protect themselves from affiliating with a poor relational partner.

Although we found evidence for a negative halo effect with respect to expressions of high belongingness needs, it seems likely that there are contexts in which these expressions may be viewed favorably by potential partners. For example, in situations that are specifically oriented to forge social connections (e.g., singles mixers), expressions of high belongingness needs may facilitate the formation of new relationships. In these contexts, such expressions may lead potential partners to the perceive the individual to be high in responsiveness (Reis, 2012). Because the current results do not directly speak to this possibility, future research should investigate the conditions under which expression of high belongingness needs are evaluated positively by potential partners.



In addition to finding negative halo effects for expressions of high belongingness needs, the current research also revealed that people expressing a *low* need to belong are also unattractive to potential partners. Participants rated the target expressing low need to belong as less socially attractive (Experiment 1) and lower in social stature (Experiment 2) than the target expressing moderate belongingness needs, and similar to the target expressing high belongingness needs. However, while they were rated as less socially attractive, targets expressing low need to belong were not rated as socially desperate, relative to the moderate need to belong targets.

Why might targets expressing a low need to belong be perceived as unattractive if not because of a heightened social desperation? One possibility is that expressing low levels of the need to belong is associated with a distinct negative halo effect. These individuals may be perceived as being aloof, or even high in social anhedonia, which is characterized by a lack of experiencing pleasure during social interactions (Brown et al., 2007; Kwapil et al., 2009; Silvia & Kwapil, 2011). In particular, the socially anhedonic may be perceived to be disengaged during social interactions, lacking warmth and positive emotions (Silvia & Kwapil, 2011). Thus, while potential partners of those expressing a low need to belong may not perceive them as socially desperate, since they do not desire social relationships, they may nevertheless view them as poor relationship prospects who are low in attractiveness and social stature. So, although individuals' reasons differ for unfavorably evaluating those expressing low vs. high need to belong as poor prospective partners, they may similarly view relationships with those expressing either low or high need to belong as being unrewarding and costly (Machia et al., 2020). This, however, remains an empirical question, and future research should explore the mechanisms underlying individuals' diminished attraction to those expressing low belongingness needs.

The current research also highlights the role of social desperation in social perception, a concept that is noticeably absent from the literature on social relationships, despite its potential utility to describe a host of interpersonal behaviors. Although it is used sometimes to describe depressed or even suicidal individuals (e.g., Damsgaard et al., 2021; Watson & Andrews, 2002), it is not a commonly studied state or trait. However, our current results suggest that individuals' attraction to social partners is at least partly influenced by whether they perceive them to be socially desperate. Thus, future research should investigate the antecedents and consequences of social desperation, particularly through the lens of individuals who possess this attribute. For example, it may be that socially desperate people are willing to engage in riskier behaviors in order to form close relationships, relative to those who are not desperate.

Despite offering a novel perspective on the need to belong, by focusing on the impact of expressions of belongingness needs, our current research has a number of limitations. In particular, in generating the text of the vignettes, we tried to maximize construct and content validity by using items directly from the need to belong scale (Leary et al., 2013). In doing so, however, the vignettes may have unintentionally manipulated several



aspects of belongingness (e.g., desire for acceptance, worry about acceptance, reliance on others). Accordingly, these data are not able to directly identify which components of belongingness expressions are influencing perceptions of social desperation. Moreover, the inherent simplicity of the vignette methodology is not able to capture the nuance of actual social interactions, which include multiple streams of information (i.e., verbal and non-verbal) that people may use to form social perceptions of others. Finally, because our focus was on isolating differences in expressing belongingness needs, our vignettes did not include contextual information that may have affected how participants interpret those expressions. Future research should investigate the expression of belongingness needs using a diversity of methodological approaches and across different contexts to enhance our understanding of when such expressions have positive versus negative impacts on social perceptions.

Beyond limitations with our use of vignettes, our sample was also a limitation of the current research. Specifically, we recruited participants from an online participant pool and limited the sampling frame to people from the United States. As such, the results may not generalize across cultures or within more diverse samples and future research should explore these questions in diverse samples. Finally, these experiments were conducted using samples from Mturk, and some have called into question the quality of data from this platform (see Chmielewski & Kucker, 2020). Future research may consider using alternative sources of participants.

Conclusion

Despite their desire to form close relationships, those expressing a high need to belong may have a difficult time achieving a sense of belongingness. In this research, we found that expressions of heightened belongingness needs influence the broader perceptions of potential partners in an unfavorable way. Relative to people expressing moderate belongingness needs, those expressing high (and low) belongingness needs were perceived to be less socially attractive. Additionally, those expressing a high need to belong were perceived as socially desperate, which mediated their lowered attractiveness. These findings highlight the difficult task that those high in the need to belong face when trying to form social relationships.



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Data Availability: Data, syntax, and results for Experiments 1 and 2 are available in the Supplementary Materials (see McIntyre et al., 2022).

Supplementary Materials

Data, syntax, and results for Experiments 1 and 2 are available in the Supplementary Materials (see McIntyre et al., 2022). Study materials are available by contacting the first author.

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