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# Boundaries to the Articulation of Possible Selves Through Social Networking Sites: The Case of Facebook Profilers' Social Connectedness

Sandra Zwier, Ph.D., Theo Araujo, MBA, Mark Boukes, B.Sc., and Lotte Willemsen, M.Sc.

## Abstract

This study aims to contribute to an emerging literature that seeks to understand how identity markers on social networking sites (SNSs) shape interpersonal impressions, and particularly the boundaries that SNSs present for articulating unconstrained "hoped-for possible selves." An experiment employing mock-up Facebook profiles was conducted, showing that appearing with friends on a Facebook profile picture as well as increasingly higher number of Facebook friends strengthened perceptions of a profiler's hoped-for level of social connectedness. Excessive numbers of friends, however, weakened perceptions of a profiler's real-level social connectedness, particularly among participants with smaller social networks on Facebook themselves. The discussion focuses on when people come to find that reasonable boundaries of self-generated information on an SNS have been exceeded.

## Introduction

SOCIAL NETWORKING SITES (SNSs) are often assumed to present an opportunity to articulate a better version of oneself, or what has been named "hoped-for possible selves."<sup>1-4</sup> Extant empirical literature indeed shows that identity markers on SNSs such as profilers' photos and numbers of friends listed can play a role in impression formation.<sup>5-10</sup>

The present study focuses on the possible boundaries to the articulation of possible selves through SNSs. Despite the opportunities presented by SNSs, the emerging empirical literature points to such boundaries. SNS profiles consist of self-generated markers, among which the picture, personal description, biography, and so on, which people may potentially shape at will. They, however, also consist of friends-generated markers (information friends post to an individual's profile) and system-generated markers (such as the display of the number of friends one has on the SNS), which are only partly under a profiler's control.<sup>6,11</sup> Recent findings showed that interpersonal impressions on SNSs are shaped at least as heavily by markers where profile owners have less or no control such as comments posted by friends, as by markers where they have complete control.<sup>6-8</sup>

Another important boundary for potentially unconstrained articulation of hoped-for possible selves on SNSs

concerns identity markers that may appear excessive to the extent that they become "beyond believe." This may, for instance, be the case if a profiler's looks on the SNS profile photo are those of a supermodel or if the SNS biography is full of extraordinary achievements. It may be expected that such SNS identity markers sustain the inference that the profiler is articulating a self that is hoped-for. However, at the same time sustain the inference that the profiler is articulating a self that may not actually be real.

Our study focuses on the boundaries in the articulation of a profiler's *social connectedness*—broadly defined as the depth and breadth of interpersonal relationships an individual entertains with other people. Social connections can be regarded as among the most fundamental human needs, as exemplified through its placement in Maslow's hierarchy of needs,<sup>12</sup> and the seminal work by Baumeister and Leary,<sup>13</sup> which links interpersonal connectedness to a range of psychological effects, among which health and well-being. Social connectedness can hence be regarded as a significant element in self-articulation through SNSs.

When applied to Facebook, a first identity marker that may signal a profiler's social connectedness is the profile photo. A Facebook profile photo together with other people rather than alone can function as a marker of a hoped-for self with a high-level social connectedness. Yet, earlier research has shown that Facebook profile photos together with friends are

common enough to not constitute a marker that would appear to be excessive.<sup>1</sup> A profile photo together with friends was therefore expected to function as a marker of a hoped-for as well as a real self with high-level social connectedness:

H1: A Facebook profile photo with friends will lead to stronger perceptions that a profiler has *hoped-for* as well as *real* social connectedness than a Facebook profile photo alone.

A second identity marker on SNSs that may signal social connectedness is the number of friends listed on the SNS system. The friends number listed on the system can be comparatively low or high, but also rise up to a point where it is beginning to appear excessive. An earlier empirical study showed that high numbers of friends on Facebook enhanced perceptions of the profiler's social attractiveness up to a certain point, but that excessively high friend numbers lowered rather than enhanced the profiler's perceived social attractiveness.<sup>5</sup> In line with this, we expected that excessive friend numbers on the Facebook system would not function as an important marker of a real self with high-level social connectedness. Rather, an excessively high friend number on an SNS system was expected to weaken rather than strengthen perceptions of the profiler's real social connectedness. On the other hand, it was expected that excessive friend numbers would function as a significant marker of a hoped-for self that is socially connected, leading to the following hypothesis:

H2: A Facebook profile displaying an excessively high friend count will strengthen perceptions that a profiler has a *hoped-for* self that is socially connected when compared to a Facebook profile displaying an average-range or lower friend count. However, profiles with an excessively high friend count will weaken perceptions that a profiler has a *real* self that is socially connected when compared with profiles displaying an average-range friend count.

How individual differences impact impression formation on SNSs to our knowledge has remained almost unexplored so far. It, however, seems likely that perceptions on the basis of SNS identity markers are shaped by a perceiver's own make-up. Where perceptions of other people's social connectedness are concerned, the size of the perceiver's own social network appears especially relevant. Specifically, having high numbers of Facebook friends oneself is likely to reduce the impression that other people's high friend counts are excessive. It could therefore be expected that excessive friend numbers would not weaken perceptions of the profiler's real social connectedness for people with high friend numbers on an SNS themselves:

H3: Perceptions that a profiler with an excessively high friend count has a *real* self that is socially connected will be stronger among perceivers with larger-sized social networks on Facebook than among perceivers with smaller-sized social networks. Perceptions that a profiler with an excessively high friend count has a *hoped-for* self that is socially connected will, on the other hand, be equally strong among perceivers with larger-sized social networks on Facebook as among perceivers with smaller-sized social networks.

## Methods

### Sample

Participants were recruited among the contacts of an international group of communication science students. The eventual sample had 89 participants, of which 59.6 percent females, with an average age of 26.1 years ( $SD=4.0$ ). The majority (69.7 percent) resided in the Netherlands, whereas Germany and Chile residents accounted for 5.6 percent of the participants each, followed by United States and Brazil with 3.4 percent each, and other countries, among which Austria, Canada, Ecuador, France, Malaysia, and Switzerland, accounted for 12 percent of the sample. The majority (52.8 percent) of the participants had a college graduate degree, whereas 30.3 percent had achieved postgraduate level and 16.9 percent had other education levels.

### Experimental design

The experimental design was a four within-subjects (Profiler's number of Facebook friends: unusually low vs. fairly low vs. fairly high vs. unusually high)  $\times$  2 within-subjects (Type of profile photo: alone vs. with friends)  $\times$  4 between-subjects (Participant's social network size on Facebook: none vs. fairly small vs. fairly large vs. very large)  $\times$  2 repeated measures (Perceptions of the profiler's social connectedness: hoped-for vs. real) factorial design. The stimulus materials and operationalizations of the variables are further discussed below.

### Stimulus materials

Each participant viewed two Facebook profiles in the experiment, and two different mock-up Facebook profiles were therefore created for this experiment. These mock-ups held the authentic Facebook outlook features except that participants could not browse through the profiles, and names and photos of the Facebook profiler's friends were blurred to avoid any influence of friends' names or photos. Both mock-up profiles featured young American males ("Rick Harper" and "Alex Bennett"), supposedly coming from larger American cities (Atlanta and San Francisco), and being similar in age group to the average participant (August 26 and October 2, 1987). These details were systematically varied across the two profiles so as to prevent any influence of these factors, whereas the order in which profiles were shown was reversed to control for order effects. Participants were told that both profilers had held their Facebook account for about 2 years so that this factor remained constant across conditions. Figure 1 shows examples of mock-up Facebook profiles.

### Independent variables

**Type of profile photo.** The profile photo that appeared in the mock-up Facebook profiles was a within-subjects factor and the two profiles each participant saw featured different photo types: The first profiler appeared alone and the second profiler together with two friends, or vice versa. The profiler was highlighted in those conditions where he appeared with friends, whereas the same photo cropped to show only the profiler was used in the conditions where the profiler appeared alone. The profile photos hence were different within conditions, but identical across conditions (see also Fig. 1).



FIG. 1. Examples of mock-up Facebook profiles employed in the experiment.

Profiler's number of Facebook friends. Profiler's number of Facebook friends was also a within-subjects factor. The number of Facebook friends in the first profile participants saw was unusually low (36 friends), fairly low (84 friends), fairly high (233 friends), or unusually high (947 friends), and similarly for the second profile that participants saw, though the two profiles a participant saw never had the same number of Facebook friends. Corresponding to what was found in earlier studies<sup>5,6</sup> a pilot study among 19 Facebook profile owners conducted before the actual experiment confirmed that the number of Facebook friends per level was perceived as intended by the study.

Participant's social network size on Facebook. Levels of participant's own social network size on Facebook consisted of four categories: None (those with currently no Facebook social network of their own, 11 percent), fairly small (those who currently had 0–100 Facebook network friends, 47 percent), fairly large (those with 100–200 Facebook network friends, 20 percent), and very large (those with more than 200 Facebook network friends, 32 percent).

#### Dependent variables

Perceptions of the profiler's social connectedness. Perceptions of the profilers' social connectedness were assessed by five items tapping profilers' social connectedness as hoped-for; that is, perceptions of how much he aspires to connect with other people (e.g., "[Alex/Rick] is likely to send Facebook friend invitations to people he barely knows"), and five items assessing perceptions of the profiler's social connectedness as real (e.g., "Many people are keen on being liked by [Alex/Rick]"). Items were assessed on 7-point Likert type scales ranging from *very unlikely* (1) to *very likely* (7), whereas all items were presented in randomized order. The reliabilities of items concerning the profiler's perceived social connectedness as hoped-for (Cronbach's  $\alpha=0.84$ ) as well as his perceived social connectedness as real (Cronbach's  $\alpha=0.84$ ) were high and were hence combined into single variables of Profiler's perceived social connectedness as hoped-for ( $M=4.42$ ,  $SD=1.31$ ) and Profiler's perceived social connectedness as real ( $M=3.93$ ,  $SD=1.16$ ), respectively.

#### Manipulation check

One multiple-choice question asked whether the first or the second profiler had a Facebook profile photo with friends, and a second item asked whether the first or the second profiler had a higher or lower number of Facebook friends listed in the profile.

#### Procedure

Upon the start of the experiment, participants received an URL link that led them to the online survey. They were informed that the survey was about friendships on SNSs, and were then shown the first mock-up Facebook profile on screen. The scales of perceived social connectedness as hoped-for and perceived social connectedness as real were then presented, whereby all items were presented in randomized order. Another Facebook profile appeared on screen and participants rated this profiler on the same scales. The size of participants' social network on Facebook was then assessed via a multiple-choice item, after which participants indicated biographical details among which age, gender, level of education, and country of residence. The two manipulation check items rounded up the questionnaire, whereas the last page provided a debriefing statement where it was clarified that the profiles were fictional and made for the purpose of this study.

## Results

#### Manipulation checks

Ninety-one (91 percent) respondents correctly answered the manipulation check question if first or the second profiler had a profile photo with friends, and the same share (91 percent) of respondents correctly answered the question if the first or second profiler had a higher number of Facebook friends. Those 10 respondents failing either or both of manipulation check items were not retained for further analysis, resulting in a sample size of 79 respondents.

#### Effects of Facebook profile markers on perceptions of profiler's social connectedness

Hypotheses 1 and 2 were tested with a multivariate analysis of the variance with repeated measures, which had the

Type of Facebook profile photo (alone vs. with friends) and Number of Facebook friends (unusually low vs. fairly low vs. fairly high vs. unusually high) as independent factors, and Perceptions of the profiler's social connectedness (perceived social connectedness as hoped-for vs. real) as repeated measures.

The Type of Facebook profile photo yielded a significant main effect on Perceptions of the profiler's social connectedness ( $F[1, 156]=10.99, p<0.01; \eta^2=0.04$ ). In line with Hypothesis 1, perceptions of the profiler's social connectedness were higher when a profiler appeared on the profile photo together with friends ( $M=4.60, SD=1.16$ ) than when appearing alone ( $M=3.91, SD=1.18$ ). No interaction effect was found between the type of profile photo and perceptions of the profiler's social connectedness as repeated measures ( $F[1, 156]=0.02, ns$ ). This means that whether a profiler appeared on the profile photo alone or with friends impacted perceptions of the profiler's hoped-for and real social connectedness to the same extent.

The analysis also yielded a significant main effect of Number of Facebook friends on Perceptions of the profiler's social connectedness ( $F[3, 154]=37.63, p<0.001; \eta^2=0.41$ ), with *post hoc* Scheffe tests indicating that perceptions of the profiler's social connectedness differed significantly ( $p<0.05$ ) across all four conditions. The profiler's social connectedness was perceived to be highest when the profiler listed an unusually high number of Facebook friends ( $M=5.39, SD=0.74$ ), significantly weaker when the number of friends decreased to fairly high ( $M=4.75, SD=0.91$ ), significantly weaker again when the number of friends decreased to fairly low ( $M=3.98, SD=0.96$ ), and, finally, the weakest when the friends' number was unusually low ( $M=3.20, SD=0.97$ ). These results suggest that perceptions of a profilers' social connectedness are positively enhanced through increasingly higher number of friends on a Facebook profile. Hypothesis 2, however, predicted that though increasingly high friend numbers on a Facebook profile would strengthen perceptions of a profilers' social connectedness as hoped-for, it would weaken perceptions of a profilers' social connectedness as real. A significant interaction between the Number of Facebook friends and Perceptions of the profiler's social connectedness as repeated measures confirmed ( $F[3, 154]=4.12, p<0.01; \eta^2=0.06$ ) that the effect of the number of Facebook friends was not the same for perceptions of the profiler's social connectedness as hoped-for versus real. As shown by the means plotted in Figure 2, increasing numbers of Facebook friends consistently strengthened perceptions of the profiler's social connectedness as hoped-for, but eventually hampered perceptions of his social connectedness as real.

The role of the participants' social network sizes on Facebook was analyzed through the same ANOVA employed to test Hypotheses 1 and 2, but with participant's social network size on Facebook (none vs. fairly small vs. fairly large vs. very large) as a further independent factor. This analysis yielded the expected significant three-way interaction between Number of Facebook friends, participant's social network size on Facebook, and Perceptions of the profiler's social connectedness ( $F[9, 148]=2.35, p<0.05; \eta^2=0.14$ ), meaning that the effect of a profiler's number of Facebook friends on perceptions of his social connectedness was moderated by the size of participants' social network on Facebook. Figure 3

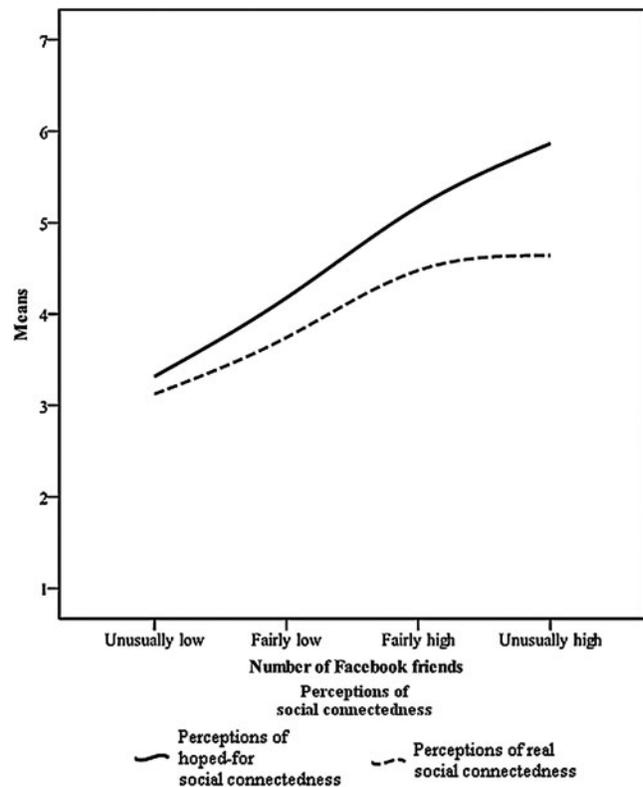


FIG. 2. The effect of the number of friends on a Facebook profile on perceptions of profiler's hoped-for versus real social connectedness.

shows that, in line with Hypothesis 3, perceptions of a profiler's social connectedness were consistently enhanced with increasing numbers of Facebook friends, no matter the size of people's own Facebook social networks. Participants with large-sized Facebook social networks also perceived increasingly higher social connectedness as real with increasing numbers of a profiler's friends. Participants with no or fairly small-sized social networks on Facebook themselves, on the other hand, tended to clearly differentiate between perceptions of the profiler's hoped-for for versus real social connectedness. In their perception, the profiler's hoped-for social connectedness was clearly strengthened with increasing number of friends, but perceptions of his real social connectedness were weakened as the number of friends increased.

## Discussion

The present study advanced extant knowledge on the role of SNSs in impression formation by demonstrating that (a) identity markers in SNSs that seem excessive lead to the inference that a profiler hopes to articulate a quality, but weaken the inference that this quality is real, and (b) that this is also moderated by perceiver's own online behavior: in this case, the perceiver's own social network size in the SNS. Interpersonal impression formation in SNSs, hence, is not only based in information rendered through the profile itself, but also in the profile of the beholder. As usage of SNSs becomes more and more pervasive to a considerable share of the global population with Internet access, this

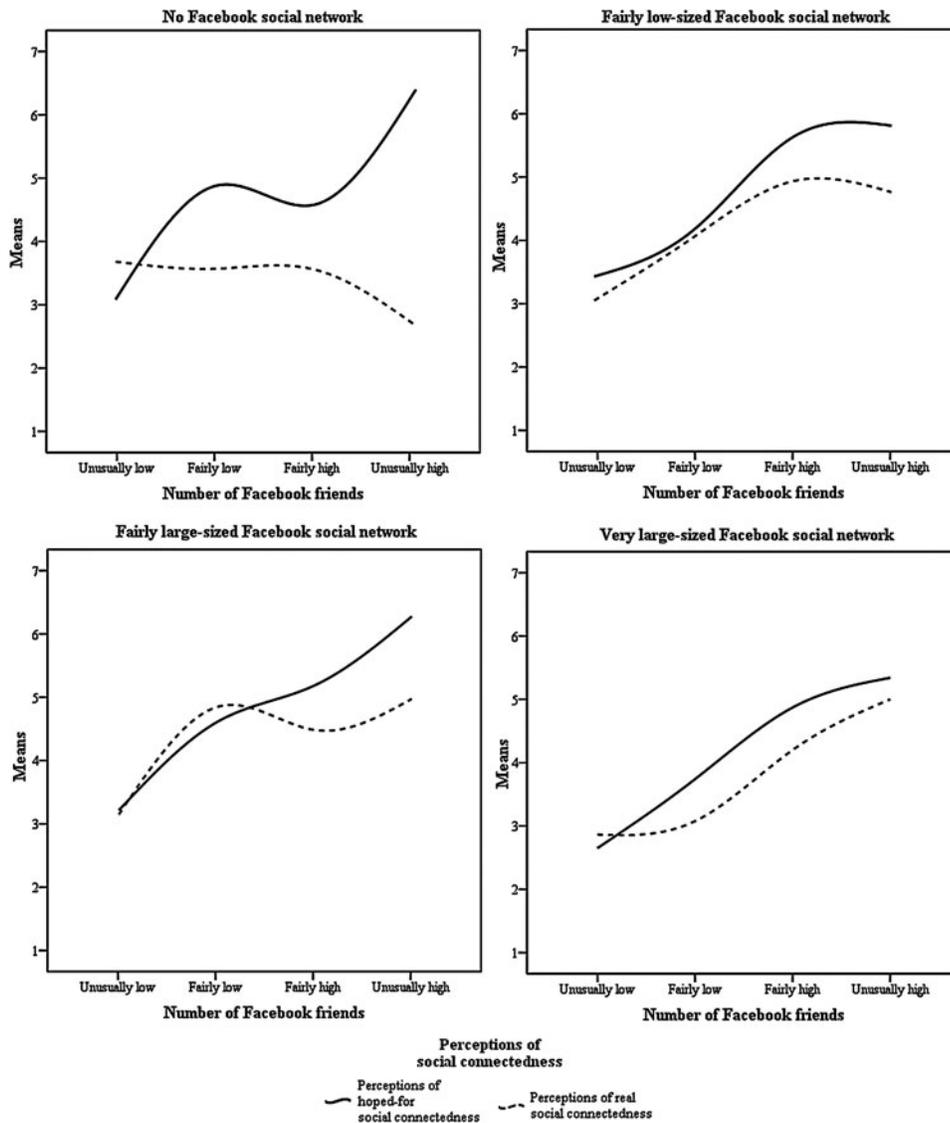


FIG. 3. The effect of the number of friends on a Facebook profile on perceptions of profiler’s hoped-for and real social connectedness, as a function of participants’ social network size on Facebook.

calls for a definition of warranting factors in impression formation whereby exceedingly high friend counts, but potentially also other identity markers such as the whiteness of a smile or amounts of adventurous hobbies, may make an SNS profile seem unwarranted and thereby impede rather than fuel the interpersonal impression as hoped-for.

Open to question is when people come to find that reasonable boundaries of self-generated information on an SNS have been exceeded. The results of the present study suggest that perceivers with higher involvement in an SNS may evaluate identity markers such as number of friends not simply by their face value but rather work with different concepts of what people can reasonably do or have, and therefore attribute different meanings to these markers in impression formation. One hypothesis that would require further research is that perceivers with lower social involvement in an SNS may interpret identity markers more literally (i.e., “nobody would realistically have 947 friends”), whereas perceivers with higher involvement with the SNS may evaluate the markers with a different—and less literal—perspective.

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Address correspondence to:

Dr. Sandra Zwier

The Amsterdam School of Communication Research ASCoR

University of Amsterdam

Kloveniersburgwal 48

1012 CX Amsterdam

The Netherlands

E-mail: s.m.zwier@uva.nl