

**Social Presence on LinkedIn: Perceived Credibility and Interpersonal Attractiveness
Based on User Profile Picture**

Chad Edwards, Western Michigan University, USA

Brett Stoll, Western Michigan University, USA

Natalie Faculak, Western Michigan University, USA

Sandi Karman, Western Michigan University, USA

Abstract

LinkedIn is a social networking site dedicated to making business connections for the purposes of building a professional network and sharing employment opportunities. Social networking sites (SNS) have allowed more content to be user-generated, making it increasingly difficult for users to assess credibility of information regarding source, message, and medium. Like other social media sites, LinkedIn provides information about a user that viewers can use to make judgments about the source, such as their credibility and attractiveness. With the use of Sundar's MAIN model, the present study investigated the importance of social presence in the form of a profile picture when individuals are judging credibility of a LinkedIn user's profile. Findings demonstrated significant differences between social presence (picture/no picture) conditions and social attraction and competence. Results indicated that users who post a profile picture along with their LinkedIn profile are perceived as more socially attractive and more competent than users who do not post a picture.

Keywords: Social Media, LinkedIn, Credibility, Attraction, MAIN Model

Introduction

Social media and social networking sites (SNS) continue to grow and expand, providing a level of connectivity upon which people rely almost ritualistically. Many individuals interact with these media at least once daily (Baym, 2010). From email to the Internet, instant messaging to texting, Facebook and Twitter, YouTube and Instagram, social media is changing the dynamics of communication based on its capabilities to reach diverse networks of people. As the medium has changed, social media has caused us to adapt the manner in which we communicate and the types of information we choose to include in our messages. Among the various forms of SNS, LinkedIn, launched in 2003, differentiates itself from others (e.g., Facebook and Twitter) with its mission to build professional networks. LinkedIn facilitates business connections for the purposes of establishing large, professional networks and sharing employment opportunities (LinkedIn.com, 2013; Thew, 2008). Since its creation, the professional networking site has boomed in membership (Skeels and Gruidin, 2009), with more than 345 million users globally as of February 2015.

The allowance of more user-generated content in social networking sites has made making it increasingly difficult for users to assess credibility of information regarding source, message, and medium (Edwards, Spence, Gentile, Edwards, & Edwards, 2013; Sundar, 2008; Westerman, Spence, & Van Der Heide, 2012). Like other social media sites, LinkedIn provides information about a user that viewers can use to make judgments about the source, such as their credibility and social attractiveness. How users make credibility judgments is a significant area of research that can influence social networking sites and user-generated information (Haas & Wearden, 2003). Recent studies have investigated how users make assessments of credibility on Twitter as well as the popular social networking site, Facebook (Edwards et al., 2013; Westerman et al., 2012).

Social Media for Professions

Positioned as a network built for professions, LinkedIn and its members rely heavily on the sites ability to make users seems credible. Despite the significant role source credibility plays in the success of this SNS, LinkedIn has largely escaped the scope of current research literature and how users manage self-image and perceive other users. However, within this rather large research gap, researchers such as Bohnert and Ross (2009) have investigated the effects of social networking sites on evaluation of job candidates. Their research examined

the role of profile orientation, finding that applicants with either a family-oriented or a professional-oriented social networking profile were seen as more fit and reliable for the job compared to those with profiles oriented toward activities such as drinking alcohol as well as those who had no discernible orientation due to a lack of available cues and information.

Research such as the previously highlighted study brings up a critical point of emphasis. The essential difficulty in judging the credibility of the individual through a LinkedIn profile is that there is an inherent level of bias and subjectivity, because it is wholly user-generated (Fawley, 2013). With individuals able to entirely manipulate the profile's information in order to present themselves as competent, likeable, and knowledgeable, it may be difficult for other members, particularly recruiters and "connections", to objectively ascertain what is true, an exaggeration of truth, or an outright falsification. Given the potential implications for inaccurate or misrepresented information on social networking sites (Fawley, 2013; Klumper & Rosen, 2009), employers seeking to use LinkedIn as a means of finding and critiquing potential candidates face a critical barrier toward properly assessing credibility from these profiles. Legal considerations such as negligent hiring, information inaccuracy, privacy, and justice need to be taken into consideration and may pose a threat to a company if it is believed that a social networking website was wrongfully used to judge a potential job candidate (Slovensky, 2012). This is not to say that social networking sites cannot be valuable tools in the hiring process, but merely suggests that the weight assigned to such evaluations should have limited influence.

An especially problematic feature of workplace networking sites such as LinkedIn is the ability to add a profile picture. As an example, this feature stands in contrast to traditional means of initial employee evaluations, the résumé, which does not typically include a picture of the individual applying for a position. This added feature might influence the perceptions of an employer differently than from only reading a résumé. The current study examines whether utilizing the profile picture feature hinders or helps the LinkedIn user, specifically for the benefit of creating a sense of credibility and attractiveness. In looking toward prior research, particularly in regards to Sundar's (2008) MAIN Model, insight is obtained regarding how having a profile picture creates a sense of presence of those who are not physically present and how viewers of profiles use these cues to determine credibility and attractiveness.

Social networking sites are a form of computer-mediated communication (CMC) that enables people that do not share physical space to connect and gain social interaction (Walther, 1992). Although people are able to interact to a degree and are able to gain a great deal of information about each other (Edwards et al., 2013), sites like LinkedIn lack the nonverbal communication channel traditionally available in face-to-face communication. Tidwell and Walther (2002) argue that an important aspect of impression development through CMC is being able to give the communicator some form of social presence. A profile picture is one way to foster social presence. While the picture may give the feeling of social presence and humanizes the standard résumé (Fawley, 2013), does this cue alone have significant influence to deem how credible, likeable, and hireable another person will view the user?

Literature Review

MAIN Model

The present study investigates the importance of a social presence in the form of a profile picture when individuals are judging credibility and attractiveness of a LinkedIn user's profile. Sundar's (2008) MAIN model describes how credibility judgments can be made of online materials by processing heuristic cues. These cues are mental short cuts that help form perceptions. For heuristic cues to be applicable, they must be cognitively available at the time a person is analyzing information (Sundar, 2008). The heuristic cue being used must also be applicable to the situation at hand; in this case, it must be relevant to how LinkedIn profiles are viewed. Based on this model, we argue that there are two heuristics relevant to a user judging a person's credibility through a LinkedIn profile: social presence and identity.

A picture can invoke the feeling of social presence (Sundar, 2008). Social presence cues to the individual that they are communicating with a real person. Establishing social presence is one way to influence credibility, without having to insert authority or other form of power. The picture directly confers that the individual has importance, believability, and is knowledgeable. Depending on the nature of the content, in this case the picture, this heuristic is likely "to lead to more positive credibility evaluations" (Sundar, 2008, p. 84). Given the prominence of this profile picture feature on LinkedIn and other social networking sites, this seems likely. In instances where the user does not upload a profile picture, an anonymous avatar photo is displayed, which may signify an individual intentionally seeking to disguise

themselves or an individual who is not competent in using the technology platform. While this clearly has implications for the social presence heuristic, the lack of a profile picture could influence an identity heuristic.

According to the MAIN Model, the identity heuristic is likely to be triggered whenever the user is able to represent one's self through the manipulation of the content (Sundar, 2008). The affordance of being able to manage self-identity online leads the viewer of the profile to feel as though they are connecting with the person. Nowak (2013) indicates that when people have the ability to represent themselves through avatars, they will do so with honest accuracy. Both of these cues, social presence and identity, lend to the idea that having a LinkedIn profile with a picture will lead viewers of the profile to see the individual as more credible and socially and task attractive.

H1. LinkedIn profiles with a user's picture will be viewed as more credible than the LinkedIn profile without a user's picture.

H2. LinkedIn profiles with a user's picture will be viewed as more (a) socially attractive and (b) task attractive than the LinkedIn profile without a user's picture.

Methods

In order to test the hypotheses that (H1): LinkedIn profiles with a user's picture will be viewed as more credible than the LinkedIn profile without a user's picture and (H2): LinkedIn profiles with a user's picture will be viewed as more (a) socially attractive and (b) task attractive than the LinkedIn profile without a user's picture, an online experiment was conducted.

Participants

Participants for this study were recruited via a convenience sample from several communication courses at a large Midwestern university. All participants had a LinkedIn account, which was determined through an exclusion criteria question built into the questionnaire. A link for the study was also distributed via social networking sites, in an effort to gain more participants in a snowball sample. Of the 106 participants, 74 were females (69.8%) and 32 were males (30.2%). The majority of participants self-identified as White/Caucasian (86.8%, $n = 92$) followed by Latino/American (4.7%, $n = 5$), African-American (2.8%, $n = 3$), Asian American (2.8%, $n = 3$), Pacific Islander (.9%, $n = 1$) and other

(1.9%, $n = 2$). Participants' ages ranged from 19 to 57 years, with a mean of 29.95 years ($SD = 10.20$) and a median of 26 years.

Stimuli

Stimuli for the experiment were created using mock LinkedIn profiles. The profiles were manipulated via the html code from an existing profile. For this experiment, all content of the profiles were held constant with exception of the profile picture, which was manipulated based on the condition (picture/no picture). The picture selected for use in the photo condition was determined based on pilot study ratings of attractiveness. All pictures included in the pilot study were of smiling individuals (both male and female) wearing professional dress. The photos ultimately selected for the study were ones determined by pilot study participants as most average in attractiveness¹.

Procedures

Participants accessed the study through a link provided. They viewed an informed consent document and then were randomly assigned to one of two conditions, (1) viewing either the LinkedIn profile with a user photo or (2) a LinkedIn profile without a user photo. Participants were permitted to view the mock profile for as long as desired before moving on to the next page of the questionnaire. Following exposure to the mock profile, participants were instructed to respond to two measures, source credibility and attraction (social and task) of the profile user. Lastly, participants were routed to a debriefing page and thanked for their participation in the experiment.

Instruments

Participants completed the McCroskey and Teven (1999) source credibility scale. This 18-item semantic differential scale identified three factors to be most important in assessing a source's credibility: competence (6 items; e.g., "untrained/trained"), character (6 items; e.g., "honest/dishonest"), and caring (6 items; e.g., "concerned with me/not concerned with me"). Previous studies have reported reliability coefficients of .84 and .86 (Edwards et al., 2013; Westerman et al., 2012). In this study, reliability coefficients of .95 for competence ($M = 30.57$, $SD = 6.35$), .94 for character ($M = 28.37$, $SD = 5.65$), and .91 for caring ($M = 25.63$, $SD = 5.25$) were obtained.

¹ Of the 25 participants not affiliated with main study, the profile pictures chosen were rated of average attractiveness (female 96% and male 88%).

The next scale participants completed were the social attractiveness (5-item) and task attractiveness (5-item) scales developed by McCroskey and McCain (1974). These scales collectively consisted of 10 items to which participants responded along a 5-point Likert-type scale (1 = strongly agree, and 5 = strongly disagree; e.g., “I think he (she) could be a friend of mine”) based on their perceptions of the LinkedIn user. Previous studies have reported reliability coefficients of .66 to .90 for task attractiveness and from .66 to .93 for social attractiveness (McCroskey et al., 2006; Walther et al., 2001). In this study, reliability coefficients of .76 for social attractiveness ($M = 20.37$, $SD = 3.23$) and .84 for task attractiveness ($M = 21.46$, $SD = 3.62$) were obtained.

Results

A multivariate analysis of variance (MANOVA) was conducted to evaluate the relationship between the effects of manipulated social presence on a user’s LinkedIn profile (picture or no picture) along the three dimensions of source credibility (competence, character, and caring), as well as social attractiveness and task attractiveness. A MANOVA was chosen because the dependent variables were related.

Table 1

Correlations among the dependent variables

	Competence	Caring	Character	Social Attraction
Caring	.49*	-	-	-
Character	.58*	.70*	-	-
Social Attraction	.36*	.31*	.29*	-
Task Attraction	.47*	.28*	.54*	.39*

* $p < .01$.

Significant differences were found among the social presence (picture) condition on the dependent measures of credibility, social attractiveness, and task attractiveness, Wilks’s $\lambda = .89$, $F = (5,100) 2.46$, $p < .05$. The multivariate η^2 based on Wilks’s Lambda was small, .11. Table 2 details the means and standard deviations on the dependent variables for the groups.

Table 2

Means and Standard deviations for the two conditions on the dependent variables

Variable	Picture		No Picture	
	M	(SD)	M	(SD)
Competence	31.75 _a	(5.29)	29.24 _b	(7.18)
Caring	26.20 _a	(5.16)	25.00 _a	(5.33)
Character	28.77 _a	(5.43)	27.92 _a	(5.91)
Social Attraction	21.23 _a	(3.18)	19.40 _b	(3.04)
Task Attraction	21.43 _a	(3.20)	21.50 _a	(4.08)

Note: means in a row with differing subscripts are significantly different at $p < .05$ in the Tukey honestly significant difference comparison.

As a follow-up to the MANOVA, five ANOVAs were conducted regarding the effect of picture presence on the each of the dependent variables. Tests of between-subject effects were significant for social attractiveness [$F(1, 104) = 7.94, p < .006, \eta^2 = .07$] and competence [$F(1, 104) = 4.25, p < .05, \eta^2 = .04$]. The ANOVAs were not significant for caring [$F(1, 104) = 1.38, p > .05, \eta^2 = .01$], character [$F(1, 104) = .59, p > .05, \eta^2 = .006$], or task attraction [$F(1, 104) = .003, p > .05, \eta^2 = .00$]. Results demonstrated that the group that viewed a picture with the mock LinkedIn profile perceived higher social attraction than the group that did not view a picture with the mock LinkedIn profile. Additionally, the group that viewed a picture with the mock LinkedIn profile perceived higher user competence than the group that did not view a picture.

Discussion

The current study sought to investigate whether or not the use of a profile picture on LinkedIn affected judgments of perceived credibility and two dimensions of interpersonal attraction. Hypotheses were created based on the social presence and identity heuristic from Sundar's (2008) MAIN model, which indicate that differences should exist such that those with a profile picture are identified as both more credible and more attractive. Results indicated that both Hypothesis 1, LinkedIn profiles with a user's picture will be viewed as more credible than the LinkedIn profile without a user's picture, and Hypothesis 2, LinkedIn profiles with a

user's picture will be viewed as more (a) socially attractive and (b) task attractive than the LinkedIn profile without a user's picture, were only partially supported.

There was no difference between the conditions for the credibility dimensions of caring or character dimensions, or for task attractiveness. Instead, the credibility dimension of competence and social attraction were the only variables found to be statistically greater in the picture condition. The content of the LinkedIn profiles remained constant for both conditions, as research shows that participants formed judgments of perceived credibility based on the available cues (Metzger et al., 2010). Metzger and colleagues (2010) have reported that individuals will utilize heuristic judgments based on system-generated cues of credibility. These results are supported by Sundar's (2008) MAIN model and the cues for social presence and identity heuristics. The identity heuristic states that a user asserts his or her persona via technology, specifically here through the utilization of a picture; the social presence heuristic refers to more anthropomorphic characteristics of the medium, as opposed to the machine heuristic, which lead to a higher level of perceived competency (Sundar, 2008). The LinkedIn site cues the identity heuristic as users create a profile that represents themselves as individuals. By creating an individualized profile, the LinkedIn profile also cues the social presence heuristic by adding human characteristics to an otherwise impersonal medium.

Reflecting back to earlier discussion, these findings seem reasonable. The profile picture is a prominent feature on many social networking platforms, including LinkedIn. Because of the feature's prominence, its absence on LinkedIn may cue users to perceive the user unfamiliar with the technology and how to manage an online profile appropriately. Additionally, the profile picture itself is a communication tool, and if it is perceived as being used ineffectively or incompetently, this may have a direct effect on perceived attraction. This is somewhat consistent with the findings of this study, except that task attraction was not significantly different between the conditions. This may be due to more importance placed on textual information provided on the profile when making judgments of task attraction. Van Der Heide, D'Angelo, and Schumaker (2012) demonstrated that when textual and photographic cues were presented alone, textual cues were better predictors of impressions. However, when cues were presented together in the context of a Facebook profile, the data were consistent with a visual primacy. It is possible that certain subscales of interpersonal

attraction are affected differently based on available textual and photographic information. Future studies should seek to address this discrepancy and determine what SNS characteristics are more influential in determining task compared to social attraction.

The current study provides support for Sundar's (2008) MAIN model as the findings strengthen the model's assertion that people utilize certain heuristics, in this case social presence and identity, when making credibility judgments online. With its foundation in credibility heuristics, this study builds on existing literature of the effects of images on judgments of credibility (Nowak et al., 2009). As Bohnert and Ross (2009) found, professional and family oriented pictures were found as more proper and conscientious for the job. In conjunction with findings from the current study, it is important to consider the effects of including photos on social media. Results indicate that having pictures increases positive perceptions of a user, but it equally important to strategically manage what photos are being shared on what social outlets. There is a clear gap in the literature regarding research on images and their effects on user perceptions, but the results of this study extend the literature and provide direction for future work related to personal and professional online impression management.

Limitations & Future Directions

As with any study, there were limitations to this research, which may be addressed in future research. First, most participants were collected from a collegiate student body, which may currently have limited awareness of or utility for a professional networking site such as LinkedIn. This study only utilized data from participants that had a personal LinkedIn profile. This was done to ensure participants were aware that the profile has the option of a profile picture. Because LinkedIn has not achieved the popularity of some social media giants such as Facebook, soliciting only participants who had a LinkedIn account limited the sample size. Future research should seek to expand the number of participants as well the scope of participants to account for sample variance and to pull from a larger and more reliable set of data.

Future studies should examine whether age and ethnicity displayed in the profile pictures influence credibility judgments on the user. For the current study, the mock LinkedIn profile pictures were of Caucasian entry-level professionals. However, an older individual of

differing ethnic backgrounds depicted in the profile picture may be perceived differently. Differences in perceived credibility of varying age or ethnicity may demonstrate potential pitfalls for human resources and hiring teams when using LinkedIn and other similar social networking sites (Davidson, Maraist, & Bing, 2011; Davison, Maraist, Hamilton, & Bing, 2012). It would be beneficial to determine if racial or age-based biases play an increased role on LinkedIn where potential employers are exposed to the physical appearance of candidates prior to reviewing their qualifications. Many executive search and recruiting agencies admit to utilizing the LinkedIn network early in the hiring process to find and contact potential candidates (Thew, 2008). Additionally, further research may also extend to looking at the professionalism of the photo, answering the question of whether a professional headshot is preferable to a “selfie” related to perceived credibility and professional attractiveness.

Conclusion

The current study explores the impact of social presence of a picture on the perceived credibility of users’ LinkedIn profiles. Although limitations exist, this study makes a significant contribution to the current research on social media and perceptions of credibility. Currently, to our knowledge, no other studies have investigated LinkedIn and how users judge profiles’ credibility. Given the ever-present nature of social media and its steady growth (Boyd & Ellison, 2007), it is increasingly important to analyze how users of this medium make judgments about profiles. These judgments of credibility come at even higher stakes for users of social media, such as LinkedIn, where the profiles generated can have an impact on perceptions of competence and social attractiveness in business and networking opportunities. Since companies utilize the personal information on these social networking sites when making hiring decisions, the implications of risk are becoming a more prevalent concern (Kluemper & Rosen, 2009). The knowledge about which heuristics contribute to judgments of a social networking profile can mean the difference between made or missed opportunities.

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