



LinkedIn and recruitment: how profiles differ across occupations

LinkedIn and
recruitment

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Abstract

Purpose – The purpose of this paper is to identify the elements of a LinkedIn profile that hiring professionals focus on most, and then examine LinkedIn profiles in terms of these identified elements across different industries.

Design/methodology/approach – The methodology was comprised of two phases. In the first phase, researchers interviewed hiring professionals to determine their usage of LinkedIn. In the second phase, LinkedIn group member profiles from three industries – HR, sales/marketing and industrial/organizational (I/O) psychology – were compared on the 21 variables identified in Phase 1 ($n = 288$).

Findings – χ^2 and ANOVA tests showed significant differences with respect to ten of the LinkedIn variables in how people presented themselves across the three groups. There were also several gender differences found.

Research limitations/implications – A general limitation was the use of a qualitative research approach. A limitation of Phase 1 was that only a small sample of New York City-based hiring professionals was interviewed. Perhaps a wider, more diverse sample would have yielded different variables. In terms of Phase 2, it is possible that just utilizing the second connections of the researchers limited the generalizability of findings.

Practical implications – User unwillingness to fully complete the LinkedIn profile suggests that it may not have replaced the traditional resume yet. Sales/marketing professionals were more likely than HR and I/O psychology professionals to complete multiple aspects of a LinkedIn profile. Women were also less likely than men to provide personal information on their profiles.

Originality/value – Most of the empirical research on social networking sites has focussed on Facebook, a non-professional site. This is, from the knowledge, the first study that systematically examined the manner in which people present themselves on LinkedIn – the most popular professional site used by applicants and recruiters worldwide.

Keywords Workplace, Selection, Recruitment, Social media, Stereotypes, LinkedIn, Social networks, Hiring, Selection biases

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The use of social networking sites (SNWs) as a tool for gathering information about potential employees has proliferated in recent years. One report suggests that SNWs are among the most visited sites on the internet, just behind the major search engines (Ronn, 2007). These networking sites allow users to present their qualifications and pictures in a more dynamic way than the traditional resume format. Due to the public nature of these sites, recruiters are permitted to gain more information about applicants than ever before. Further, recruiters have access to vast quantities of potential applicants in a short amount of time. Various researchers have found that of the popular SNWs, the one most used for job recruiting purposes is LinkedIn (Ollington *et al.*, 2013; Kluemper, 2013; Karl and Peluchette, 2013). This finding also extends beyond the USA (Karl and Peluchette, 2013; Ollington *et al.*, 2013). While the utilization of social media as a sourcing and assessment tool continues to exponentially expand, the research regarding its use is lacking. The purpose of this exploratory study is to examine the way in which people present themselves via LinkedIn in the US workforce. Specifically we conducted a two-phase study. In Phase 1, we surveyed a small sample of New York-based hiring professionals who routinely use SNWs for



personnel decisions. The objective of these interviews was to identify the variables that they use in the evaluation of LinkedIn profiles. In the second phase, we coded LinkedIn profiles on these variables across three select occupations. We were interested in examining whether professionals from different occupations vary in the information provided on their profiles. We focus on LinkedIn because research has shown that this is the primary social media tool that recruiters use (Karl and Peluchette, 2013; Kluemper, 2013; Ollington *et al.*, 2013).

LinkedIn is a social media site used almost exclusively for building professional relations. It is a professional networking site that has become a widely recognized tool since its launch in 2003. According to its web site, as of June 13, 2013, professionals are joining LinkedIn at a rate of approximately two new members per second throughout 200 countries (LinkedIn Press Center (n.d.)). Further, it has representation of all Fortune 500 companies since its inception (LinkedIn Press Center (n.d.)). In a recent Society of Human Resource (HR) Management Survey, 95 percent of the 541 HRs professionals surveyed indicated that they used LinkedIn to recruit passive candidates who might not otherwise apply. Beyond LinkedIn, 58 percent reported that they looked at Facebook and 42 percent cited Twitter as a site they frequented for recruitment purposes (Karl and Peluchette, 2013). Further, Ollington *et al.* (2013) interviewed 25 recruitment specialists in New Zealand, and found that the most popular site used to search and attract job candidates was LinkedIn (90 percent).

Now that LinkedIn is gaining in popularity in the assessment space, to what extent are hiring professionals using them to make employability decisions? In an article written in *Forbes* magazine, the author suggests that many companies believe the LinkedIn profile has replaced the traditional resume (Schwabel, 2011). Taking a less extreme stance, Chamorro-Premuzic and Steinmetz (2013) assert that social media fills the void in traditional recruiting methods (e.g. resume screen, interview, etc.) because research has shown that it can capture well-known predictors of job success-IQ and personality. Thus, while some recruiters may use the LinkedIn profile wholly as a replacement of the resume, most use it as a means of support to the traditional recruiting process, in order to make better, more holistic decisions.

Although research on LinkedIn in particular is lacking, there have been studies conducted on Facebook (a popular SNW), which suggest great variability in how people present themselves Peluchette and Karl (2010) examined students' posting of information on Facebook and found that most participants believed their profile portrayed a friendly, hardworking, and intelligent person. Students that presented inappropriate information (e.g. comments regarding alcohol use, sexual activity, illegal drug use, etc.) did so because they aimed to create a social identity that is seen as cool, outrageous, and/or different. Results also indicated that students closer to graduation were more aware of the need for a professional online identity. This suggests that SNWs are used as a form of impression management and identity formation. For example, an undergraduate student might use her online profile as a mode for presenting herself in a way that is deemed as "cool" to her peers, and when she graduates she might alter it to appear more professional.

Individuals are responsible for how they digitally represent themselves on social media sites. Although a profile template is provided on Facebook with prompts for different kinds of personal information (e.g. quotations, political affiliation, music, education, etc.), users have considerable freedom to provide such information and to post any other information or pictures of their choice. The decision to post a photograph of oneself intoxicated with friends and allowing this to be visible to the

public is a conscious one. If these images are visible to a recruiter, the outcome is likely to impact the candidates' job prospects. Ivcevic and Ambady (2012) found that raters of Facebook profiles relied heavily on the profile photograph presented, followed by quotes, and then interests. This is unfortunate for many Facebook users, because a study by MacDonald *et al.* (2010) examined medical students' usage of Facebook, and found that half of these students had photographs displaying alcohol consumption. Thus, social networkers need to be particularly vigilant of the photographs they present of themselves, as well as other self-revealing information.

One of the consequences of not managing an online profile in a professional manner was highlighted by Taylor *et al.* (2010). They discovered that psychologists as well as their patients utilize SNWs to learn more about one another. Along a similar line, DiLillo and Gale's (2011) provocatively entitled article, "To Google, or Not to Google?" examined student therapists' opinions and behaviors regarding the use of these SNWs when searching for personal or professional information about their clients. Their focal hypothesis was that as students progressed in their program of education, their understanding of professional ethics would increase, and subsequently their use of "googling" or looking at networking sites would decrease. Contrary to the hypothesis, there were no significant correlations between age and acceptability of searching client information via the web. Most (98 percent) student therapists had reportedly "googled" a client, and 94 percent had searched using a networking site, even though the majority agreed it was unethical to do so.

While the above studies suggested some ethical implications in searching online profiles, recruiters routinely use sites like LinkedIn to identify qualified applicants for a job (Karl and Peluchette, 2013). Specifically, LinkedIn allows applicants to purposefully present their professional credentials allowing them to be identified in possible job searches. A study by Caers and Castelyns (2011) investigated whether Belgian recruitment and selection (R&S) professionals use LinkedIn and Facebook during their R&S procedures and to what extent. The results indicated that both SNWs have become extra tools for recruiting applicants, to find additional information about them, and to decide who will be invited for an interview. This is alarming when you consider what users actually present on SNWs. In a study that measured pharmacy students' Facebook activity and e-professionalism opinions, a large proportion of the students presented information they would not want faculty members, future employers, or patients to see (Cain *et al.*, 2009). Unfortunately, many social networking users are unaware of the implications of their online activity. Another study examined the doctor residency selection process, where it was apparent that program directors visited internet resources beyond the medical licensing examination (Go *et al.*, 2012). However, applicants were generally unaware of the implications their online activity may have on their selection for residency. While applicants may feel that they can control what people see about them on Facebook, it has become apparent that this perception may not be completely true as online sites continually change their privacy settings policy (Bilton, 2012).

The studies cited confirm a distressing fact about the current digital age, that when a person applies for a job, or enters into any professional relationship with another person they will be researched online, even if it is ostensibly seen as an unethical practice to do so. This illuminates the need for management of one's online presence, because it influences others perceptions of you, and is likely predictive of overall job prospects.

While we have emphasized various drawbacks to using SNWs for employment purposes, research has shown that there are many benefits as well. Studies have

highlighted how observers can and do make correct inferences about applicants via these sites. Kluemper *et al.* (2012) proposed that personality inferences via SNWs could be extremely valuable for organizational employee selection. These researchers felt applicant personality should be of primary interest when it comes to selection decisions, as personality traits function as indicators of behavioral tendencies in the workplace. They reasoned that based on the realistic accuracy model, raters could accurately infer applicant personality. This theory states that “rating accuracy is enhanced when target information is conveyed in a rich, yet representative enough manner to project consistent behavioral tendencies and patterns.” Specifically, they hypothesized that SNWs have sufficient quality and quantity of personality-related information for observers to make accurate inferences of the Big Five personality traits. In fact, the researchers purported that objective raters, such as recruiters, are more accurate in rating online profiles than self- and peer-ratings, as these ratings are influenced from biases such as memory recall.

In the Kluemper *et al.* (2012) study, students who were active users of Facebook, allowed the researchers access to their profiles and these students also completed personality questionnaires. Then, evaluators with backgrounds in HRs and proficient in using Facebook rated the students’ profiles in terms of the Big Five personality traits as well hirability. Further, the researchers obtained job performance ratings from the students’ employers. The results showed that evaluator SNW ratings had high reliability and internal consistency, and displayed convergent validity with student self-ratings. Of most import, evaluator ratings correlated with student job performance and hirability, and accounted for significant variance in job performance beyond cognitive ability. Thus, the Kluemper *et al.* (2012) study was valuable in that it clearly demonstrated how personality inferences via social media sites could be judged accurately and related to job performance.

Kluemper and Rosen (2009) also discovered that trained raters are consistent in the way they rate social media profiles, and can reliably differentiate between high and low performers through these sites. Unsurprisingly, they found that raters who are more intelligent and emotionally stable were more effective at making these judgments. Davison *et al.* (2011a,b) enumerated several other advantages in using internet screening for selection decisions. One is the capacity to make person-organization (PO) fit judgments. Specifically, social media profiles can indicate whether an applicant’s values and personality “fit” well with the company culture. This was indeed supported by Roulin and Bangerter’s (2013) study. They discovered that recruiters regularly use SNWs, particularly LinkedIn and Facebook, to make organization fit judgments. Further, in align with Kluemper *et al.*’s (2012) study, they found that recruiters spontaneously made personality inferences when scanning these sites. Another avenue SNWs provide is the ability to detect counter productive work behaviors, such as applicants who reveal confidential information about employers or who slander employers and/or coworkers (Davison *et al.*, 2011a, b). The authors contend it is also possible to leverage these sites as a means of uncovering information that contradicts what is written on a resume or cover letter. Overall, recent literature suggests that the great advantage to SNW screening is that they contain richer information at the pre-screening phase than was ever available before, and that this approach takes little time and effort in relation to the information gained (Kluemper, 2013).

Most of the empirical social media research in the employee selection space has focussed on Facebook. This is perplexing considering Facebook is used primarily for social and leisurely purposes, as noted by Ollington *et al.* (2013). These authors

purported that using Facebook to search for candidates is a fruitless and laborious approach, and should only be used as a last resort. Roth *et al.* (2013) stipulated that web sites such as Facebook are recommended against for selection purposes because they produce larger volumes of job-irrelevant information in comparison to LinkedIn. Since applicants are aware that LinkedIn is used for work-related purposes, we purport that privacy issues are less of a concern as they are for other social media sites. In addition, Davison *et al.* (2011a, b) put forth the notion that information provided on LinkedIn may be more accurate than other web pages since peers and former work colleagues can verify one's entries. As such, it is imperative that we start to systematically examine LinkedIn, the most popular professional site used by applicants and employees worldwide. We contend that it is most valuable to study LinkedIn as opposed to the other popular social media sites as it "is more like an expanded resume and is used for the explicit purpose of connecting professionally, including that of recruitment and selection" (Kluemper, 2013, p. 9).

The prevailing wisdom is that organizations warn their recruiters against using SNWs for recruiting and screening candidates as they introduce unwanted biases such as race/ethnicity, gender, and national origin, thereby inviting legal risks (Roth *et al.*, 2013; Karl and Peluchette, 2013). Nevertheless, the reality is that the utilization of LinkedIn for hiring purposes is ubiquitous and experts believe it will unequivocally flourish (Ollington *et al.*, 2013; Kluemper, 2013). Hence, we were interested in answering two related questions with regards to LinkedIn: What are hiring professionals most interested in when looking at a LinkedIn profile? How do LinkedIn users present themselves on the site, and do they differ depending on occupations? To gain a better sense of the way in which hiring professionals are using LinkedIn, the researchers conducted an exploratory study in which they interviewed a targeted set of New York City-based hiring professionals who regularly use SNWs for recruitment and employee selection practices. The interviews served to establish the variables that are of primary interest to the recruiters. Then, the researchers coded actual LinkedIn profiles with respect to the identified variables across three occupations to understand the manner in which people choose to present themselves on the site.

Some of the results of the interviews, which will be discussed in greater detail in the method section, are supported by previous literature. In accordance with Ivcevic and Ambady (2012), photograph, interests, and the completeness of a profile, were identified as focal variables. Neuberg and Fiske (1987) suggested that the appearance of an individual is most prominent when we first come into contact with them, which contributes heavily to immediate impression formation of that individual. However, the more information a candidate has on his or her profile (i.e. full descriptions of previous work experience), the more likely hiring professionals will gain an understanding of the candidate's personality and behavior and the less likely they are to be influenced by irrelevant characteristics such as the candidate's photograph. Further, in line with the inferred information model, which stipulates people make inferences of others depending on how much information they provide, incomplete profiles are viewed negatively (Johnson, 1989). As Roth *et al.* (2013) purported, LinkedIn users who do not have certain information could "lose points" as compared to those who do present such information.

According to Goffman's theory of identity management, our self-presentation is made up of those impressions we "give" through explicit verbal communication and implicit expressions "given off" through visual appearance. He stated people strategically "perform" identities that they believe others will approve. Thus, one's

hobbies/interests are an explicit indicator of impression management, because LinkedIn users can present personal and/or professional ones and include as many as they desire. Applicants may be aware that posting specific hobbies/interests can sway how attractive they are to recruiters because they may coincide with recruiters' own hobbies/interests. In fact, Guillory and Hancock (2012) discovered that LinkedIn users are often most deceptive regarding interests and hobbies.

As the modern work world moves away from the traditional resume format toward a digital resume, such as the LinkedIn profile, we need to be cognizant of the differences between the two formats (Kluemper, 2013). For example, spelling and grammar mistakes are believed to be more troubling on a LinkedIn profile, because in contrast to the stagnant nature of the paper resume, the LinkedIn profile is dynamic and constantly changing (Foss, 2012). If an error is identified, the LinkedIn user can readily fix it. The magnitude of spelling/grammatical errors on a LinkedIn profile is supported by another theory of impression management – the “positive-negative asymmetry effect” (Baumeister *et al.*, 2001). This effect argues that negative information is given greater emphasis in forming general impressions of others as opposed to positive information. As such, a possible reason recruiters may dismiss a candidate based on a single spelling error is because recruiters may believe this mistake is more diagnostic of underlying behavior as opposed to positive information on a LinkedIn profile.

Another relevant characteristic of the LinkedIn profile, which is absent in the resume, is the number of connections LinkedIn users have in their network. The number of connections a candidate has is of primary importance in certain careers (i.e. sales, marketing, public relations, recruiting, etc.), and cannot be determined from the traditional resume format (Gilham, 2011). Though this is an area that remains under-researched, it is reasonable to infer that number of connections is an indicator of applicant networking skills. Skills and expertise is a component on the LinkedIn profile, which helps pull up a user's profile when a keyword search is being executed (LinkedIn (n.d.)). This markedly differs from the resume format as candidates can insert as many skills as they desire, even if they lack them. Competitor job sites such as monster.com and careerbuilder.com use search tools that scan resumes for key words that enable recruiters to pull lists of professionals with the required skills (Amare and Manning, 2009). By allowing users to catalog their own skill set, LinkedIn is changing the way recruiters locate talent, and is shifting the responsibility onto the candidates to market themselves. It is logical then to predict that LinkedIn members who are not writing a comprehensive list of skills and expertise will be found less often than those members who do list them, putting them at a distinct disadvantage in the job hunt.

Lastly, an important variable identified by our interviewee sample is whether or not LinkedIn users present personal information about themselves. MacDonald *et al.* (2010) considered this in their study that examined the nature and extent of Facebook use by young medical graduates. They were particularly interested in the variable of availability of personal information on the Facebook page because patients may learn information about their doctors that compromises the professional relationship. Indeed, a large majority of the subjects presented personal information on their Facebook profiles such as age, political and religious views, sexual orientation, relationship status, home, current town, and employment. As an extension to the current study, we aimed to investigate whether the pervasiveness of personal information on Facebook is as prevalent on LinkedIn.

Although using LinkedIn for recruitment purposes is commonplace in today's workforce, there has been a dearth of research with respect to the elements of the

LinkedIn profile professionals are concerned with most, as well as the way LinkedIn users actually present themselves on this site. Thus, the current two-phased study accomplished this by first surveying a small sample of New York-based recruiters to determine how they use LinkedIn in their applicant searches, and then coding LinkedIn profiles from three distinct occupations on the variables identified as important in the first step. The lack of academic literature and theory in this domain necessitated an exploratory methodology. As such, the goal of our study was not to generalize, but rather learn the mechanics of how our targeted group of expert recruiters utilizes LinkedIn, as well as how our sample of LinkedIn subjects presents themselves on the site. We trust our initial foray into this field will produce future experimental research.

Method

Phase 1

In order to identify which variables are frequently used by recruiters, and which could be used to code LinkedIn profiles across three occupations, a convenience sample of New York-based hiring professionals was interviewed through the researchers' personal contacts. As Yin (2009) noted, interviews are recommended for exploratory research, particularly in such areas as the emergent social media space. The sample included three external recruiters, one internal recruiter, and a social media analyst/consultant. We pursued this particular sample of interviewees because of their expansive experience in using LinkedIn for personnel selection purposes. Since the literature on LinkedIn is scarce, but its usage is pervasive in practice, the purpose of these interviews was meant as an introductory step in understanding the workings of LinkedIn-profile screening. The interview was semi-structured so that while the same eight questions were asked of all interviewees, they were open-ended to allow for further probing. The interview was largely conversational in nature, so the interview template was not followed rigidly. For example, a response to question 5 might have been integrated in an interviewee's response to question 1, consequently omitting the need to answer question 5. The interview template can be seen in Appendix.

The first question asked, "What positions do you recruit for?" To which 80 percent of the recruiters mentioned sales/marketing, 60 percent said HRs-related positions, and 20 percent said finance positions. When asked, "Which websites do you utilize most to achieve this end?" 100 percent noted LinkedIn, and 60 percent mentioned that they looked at Facebook sometimes. 100 percent noted that they do not use certain web sites over others depending on the occupation, as they unanimously tend to use LinkedIn for employment-related matters. With regards to the question, "When looking at a LinkedIn profile, what are the top five sources of information you're looking to gather?" 100 percent mentioned they look for employment history, education, years of experience, and how the applicant presents him or herself on the site. 60 percent also stated that they look for how well-connected the applicant is and how the applicant "looks." One external recruiter noted, "I look to see how many connections the candidate has, because to me this represents how networking-savvy he or she is." The internal recruiter mentioned, "I can tell how professional the applicant is by looking at his/her profile picture. Are they put together? Are they dressed appropriately?"

Question 5 and 6 were combined as one because the respondents' roles were occupation specific, and therefore they were not required to utilize LinkedIn for non-occupation-specific reasons. Question 5 asked, "When looking at a LinkedIn profile, what general features will immediately turn you on to a candidate? Turn you off?" The following were identified as variables of unanimous agreement (100 percent)

among the interviewees (variables italicized): presence of spelling and/or grammar mistakes is considered an initial means of readily dismissing the candidate. Interestingly, all of the interviewees immediately mentioned this upon being asked this question. One of the external recruiters was particularly emphatic about this, "Spelling and grammatical errors are a big 'no-no' on a LinkedIn profile. They literally make my skin crawl. You can edit your LinkedIn profile wherever you are and at any moment, so it always confuses me when I see those errors." Recruiters search for presence and type of e-mail address on the profile – meaning, they look for an e-mail address in order to connect with the applicant, and if the e-mail address is deemed unprofessional (i.e. *crzygrl@aol.com*), it is viewed negatively. This finding is supported by prior research by Back *et al.* (2008), where raters reliably judged e-mail-address-owners as professional or not. Recruiters look for hobbies and/or interests that will allow them to connect with the applicant. The internal recruiter noted, "I love skiing. If I see a candidate belongs to skiing groups or has anything on their profile related to skiing, I'm not going to lie, I would be pretty excited." They consider presence of a photograph essential, in that lack of one is considered questionable. The social media analysts/consultant quipped, "In today's digital age, it tells you something about the individual if she doesn't have a profile picture. Employers don't like this. They wonder what she's trying to hide." If present, the type of photograph should be professional. An external recruiter noted, "I see a lot of 'artsy' profile pictures. Maybe this is a younger-generation thing, but in my opinion this is all about presentation. If they want to be taken seriously, they should have a professional picture." Recruiters like to see sufficient amount of information on the profile (i.e. too little information is perceived negatively). Again, the social media analyst/consultant purported this implies a certain level of knowledge and awareness of the current digital age, "If you want to appear attractive to an employer, it behooves you to write as much as you can on your LinkedIn profile. Don't neglect to complete the major areas or you may not be considered at all." They typically look for presence of a four-year college education. Lastly, they were all interested in viewing the number of years of experience the applicant has.

Further, there was also high, although not unanimous, agreement in terms of the following variables: number of connections (80 percent); number of recommendations of them (i.e. recommendations that are written by others for them; 80 percent); number of recommendations of others (i.e. recommendations they have written for others; 80 percent); working in a fortune 500 company (60 percent); presence of status updates (60 percent); amount of personal information (e.g. marital status, birthday, personal blog; 60 percent); indication of an Ivy League education (40 percent); and number of skills and expertise (40 percent). In terms of recommendations, one of the external recruiters noted that this is something she looks at because she can "tell if an individual is genuinely receiving and giving recommendations, or of it is more of a tit-for-tat situation: you write me a recommendation, and I'll write you one in return." In terms of personal information, the internal recruiter explained, "I'm wary of when people put their birthday or marital status or residence on their profile. To me that's a sign of not understanding what LinkedIn is for." When pressed further by the researcher, she elaborated, "LinkedIn is for networking in the professional world. It is not meant for personal networking, such as Facebook. So do you really want a potential employer seeing your birth date, if that might bias his decision-making?"

For the purposes of the current study, the researchers added race and gender due to their potentially biasing nature. As understood from the cognitive psychology

literature, people often make judgments about others based on information they process unconsciously. According to Dijksterhuis (2004, p. 587), “unconscious thought leads to clearer, more polarized, and more integrated representations in memory.” Race and gender are two widely researched variables that have been found to unconsciously impact decision making, particularly in the realm of personnel selection (Cohen and Bunker, 1975; Neuberg and Fiske, 1987). In terms of gender, Harvie *et al.* (1998) examined gender-based biases in occupational hiring decisions. They discovered gender-based biases were apparent, with a positive bias toward the male applicant. These biases are particularly relevant in our study because while the typical resume in the USA does not include a photograph, LinkedIn profiles often include a photograph providing cues about race and gender; variables that might result in the making of discriminatory decisions. Thus, we coded profiles on race and gender and examined the variability in information presented. Overall, 21 variables were identified.

Phase 2

After identifying these 21 LinkedIn variables, the researchers created a coding scheme to examine the variability of LinkedIn profiles according to occupation (see Table I). The three occupations included were sales/marketing, HRs, and industrial/organizational (I/O) psychologists. We compared the organizational charts of five global firms including:

Variable name	Definitions
Gender	Male = 1; female = 2; do not know = 0
Race	White = 1; non-white = 2; do not know = 0
Types of company	Fortune 500 = 1 (1 year or more); not anywhere on profile = 2
Recommendations of them	Total number
Recommendations of others	Total number
Spelling/grammar mistakes	Yes = 1; no = 2
E-mail address	Yes = 1; no = 2
E-mail address	Prof. = 1; not prof. = 2; n/a = 0
Hobbies personal (interests)	Listed = 1; not listed = 2
Hobbies professional (interests)	Listed = 1; not listed = 2
No. of connections	< 500 = 1; 500 + = 2
Photograph	Present = 1; not present = 2
Type of photograph	Passport = 1; non-passport = 2; n/a = 0
Status updates	Present = 1; not present = 2
Information on profile	Complete = 1; incomplete = 2. (Complete = descriptions of all work experiences and an understanding of their full education)
Achievements	Present = 1; not present = 2 (if they list any achievements in the “honors” section)
Personal information	Present = 1; not present = 2 (marital status, personal blogs, age, twitter, etc.)
Education	Bachelors = 1; no bachelors = 2
Education	Ivy = 1; not ivy = 2; n/a = 0
Years of work experience	< 10 = 1; 10 + = 2
Skills and expertise	Present = 1; not present = 2

Table I.
Coding scheme
used in Phase 2

IBM, Apple, Goldman Sachs, Facebook, and BP, and concluded that they all had HRs and sales/marketing departments in common. These groups clearly fill a significant portion of the labor market. Most importantly, as mentioned above, the recruiter sample noted in response to our first question that the groups they search for most on LinkedIn are sales/marketing and HR. Thus, we selected both groups as LinkedIn research subjects because the variables identified from the interviews represent, to a large extent, the recruiters' feelings of those particular groups. We targeted I/O psychologists because we felt that they were a group that understood and conducted research on the topic of impression management in selection (Barrick *et al.*, 2009) and therefore would be a sample very conscious of the information they choose to provide.

Once the coding scheme was established, calibration between the two researchers was established through several tests. Samples of 25 LinkedIn users were collected randomly for the first two tests and samples of five were collected randomly for three subsequent turns. Each time the researchers rated the same users and compared their ratings afterward. When any differences were found, the researchers adjusted the coding description and repeated the exercise. By the fifth sample, almost all of the data collected from the two researchers matched, where calibration had reached 98 percent. As the pilot studies progressed, the researchers worked to ensure the coding was as objective and simplified as possible. "Photo" was originally coded as professional or non-professional, but was later changed to "Passport" (meaning the person is facing forward as a passport photograph would be taken) or "Non-Passport." The variable "Work Experience" was re-coded multiple times as calculation of exact years a LinkedIn user worked was difficult to identify. To simplify this, the researchers categorized this as either less than ten years of experience or more than ten years. Experience at Fortune 500 companies was defined as at least one year at a Fortune 500 company anywhere on the profile. Finally, it was agreed the variable "info on profile" would be coded as "complete" if descriptions of all educational and work experiences were present. In summary, through calibration we made the coding system as simplistic as possible so that there was little room for subjectivity. Even though we might have lost relevant information this way, we felt high reliability was more important.

Totally, 300 LinkedIn users' profiles were analyzed (100 per occupation). We created a sample of convenience via joining three groups of HR and sales/marketing groups, and two groups of I/O psychologists. By sampling from just one HR, sales/marketing, and I/O professional group on LinkedIn, there was a strong likelihood of a systematic bias forming as the web site orders the list of members displayed around the researcher's network. Avoiding any "first connections" (people the researchers knew), only second connections (people connected to people the researchers knew) were used as a sample, and lists of participants were mapped to avoid duplication. In total, we collected 100 second connections from each profession. Each researcher rated 50 members in each of the three occupations. Data input errors were found that reduced one group to 96 subjects, so it was decided to reduce the other two groups at random by four members.

Results

Frequencies for the entire sample (see Table II) and by occupation were calculated (see Table III). χ^2 -tests were conducted to determine whether there were significant differences between occupations in terms of the categorical variables. A significantly

Variable	Frequency ($n = 288$)	LinkedIn and recruitment
<i>Gender</i>		
Males	153 (53.1%)	
Females	131 (45.5%)	
<i>Race</i>		
White	204 (70.8%)	
Non-white	30 (10.4%)	593
<i>Type of company</i>		
Fortune 500	101 (35.1%)	
Not Fortune 500	183 (63.5%)	
<i>Spelling/grammar</i>		
Mistakes	97 (33.7%)	
No mistakes	190 (66.0%)	
<i>E-mail address</i>		
Present	82 (28.5%)	
Professional	76 (26.6%)	
Unprofessional	7 (2.4%)	
<i>Hobbies/interests</i>		
Personal listed	56 (19.4%)	
Professional listed	67 (23.3%)	
<i>Number of connections</i>		
500 +	93 (32.3%)	
Less than 500	195 (67.7%)	
<i>Photograph</i>		
Present	241 (83.7%)	
Passport	186 (64.6%)	
Not passport	54 (18.8%)	
<i>Status updates</i>		
Present	19 (6.6%)	
<i>Information on profile</i>		
Complete	90 (31.3%)	
<i>Achievements</i>		
Present	89 (30.9%)	
<i>Personal information</i>		
Present	129 (44.8%)	
<i>Education</i>		
Bachelors	245 (85.1%)	
Ivy league	12 (4.2%)	
<i>Years of work experience</i>		
Less than 10	73 (25.3%)	
More than 10	214 (74.3%)	
<i>Skills and expertise</i>		
Present	177 (61.5%)	

Table II.
Frequencies for the entire sample

greater proportion of sales/marketing professionals were males as compared to the HR and I/O psychologist professionals $\chi^2(4, n = 288) = 13.36, p = 0.01$. HR employees and I/O psychologists were more likely to be in fortune 500 companies than sales/marketing professionals, $\chi^2(2, n = 284) = 22.7, p = 0.00$. I/O psychologists were the least likely to commit spelling or grammatical mistakes, $\chi^2(2, n = 287) = 8.77, p = 0.012$. Sales/marketing LinkedIn users were the most likely to have their e-mail addresses on their profiles, $\chi^2(2, n = 288) = 78.70, p = 0.00$, and to have unprofessional ones, $\chi^2(4, n = 288) = 78.33, p = 0.00$. HR and sales/marketing LinkedIn users were most

ER 36,5	Variable	HR (<i>n</i> = 96)	Sales/marketing (<i>n</i> = 96)	I/O (<i>n</i> = 96)
594	<i>Gender</i>			
	Males	45 (46.9%)	65 (67.7%)	43 (44.8%)
	Females	49 (51%)	31 (32.3%)	51 (53.1%)
	<i>Race</i>			
	White	67 (69.8%)	69 (72%)	68 (71%)
	Non-white	12 (12.5%)	7 (7.3%)	11 (11.5%)
	<i>Type of company</i>			
	Fortune 500	41 (44.1%)	16 (16.7%)	44 (46.3%)
	Not Fortune 500	52 (60%)	80 (83%)	51 (53.7%)
	<i>Spelling/grammar</i>			
	Mistakes	42 (44%)	32 (33.3%)	23 (24%)
	No Mistakes	53 (55.8%)	64 (66.7%)	73 (76%)
	<i>E-mail address</i>			
	Present	20 (20.8%)	58 (60.4%)	4 (4.2%)
	Professional	20 (20.8%)	52 (54.2%)	4 (4.2%)
	Unprofessional	1 (1%)	6 (6.3%)	0 (0%)
	<i>Hobbies/interests</i>			
	Personal listed	18 (18.8%)	23 (24%)	15 (15.6%)
	Professional listed	26 (27.1%)	27 (28.1%)	14 (14.6%)
	<i>Number of connections</i>			
	500 +	74 (77.1%)	87 (90.6%)	34 (35.4%)
	Less than 500	22 (22.9%)	9 (9.4%)	62 (64.6%)
	<i>Photograph</i>			
	Present	81 (84.4%)	81 (84.4%)	79 (82.3%)
	Passport	65 (67.7%)	59 (61.5%)	62 (64.6%)
	Not passport	16 (16.7%)	22 (22.9%)	16 (16.7%)
	<i>Status updates</i>			
	Present	7 (7.3%)	9 (9.4%)	3 (3.1%)
	<i>Information on profile</i>			
	Complete	31 (32.3%)	30 (31.3%)	29 (30.2%)
	<i>Achievements</i>			
	Present	33 (34.7%)	29 (30.2%)	27 (28.1%)
	<i>Personal information</i>			
	Present	45 (46.9%)	61 (63.5%)	23 (24%)
	<i>Education</i>			
	Bachelors	82 (85.4%)	80 (83.3%)	83 (86.5%)
	Ivy league	6 (6.3%)	3 (3.1%)	3 (3.1%)
	<i>Years of work experience</i>			
	Less than 10	20 (20.8%)	20 (21.1%)	33 (43.4%)
	More than 10	76 (79.2%)	75 (78.9%)	63 (65.6%)
	<i>Skills and expertise</i>			
	Present	57 (59.4%)	61 (63.5%)	59 (61.5%)

Table III.
Frequencies by industry

likely to present their professional interests, $\chi^2(2, n = 288) = 6.11, p = 0.047$. A significantly greater proportion of sales/marketing and HR LinkedIn users had 500 + connections as compared to I/O psychologists, $\chi^2(2, n = 288) = 72.70, p = 0.00$. Sales/marketing LinkedIn users were most likely to post personal information on their profiles, whereas HR and I/O psychologists LinkedIn users were not as keen to post such information, $\chi^2(4, n = 288) = 32.84, p = 0.00^2$. Lastly, HR and sales/marketing LinkedIn users were more likely to have ten years of experience (or more) listed on their profiles, $\chi^2(4, n = 288) = 78.33, p = 0.00$.

The χ^2 -tests that were conducted on race, personal interests, presence of a photograph, type of photograph, status updates, amount of information, achievements, indication of a bachelors degree, indication of an ivy league education, personal interests, and skills and expertise, did not yield statistically significant results.

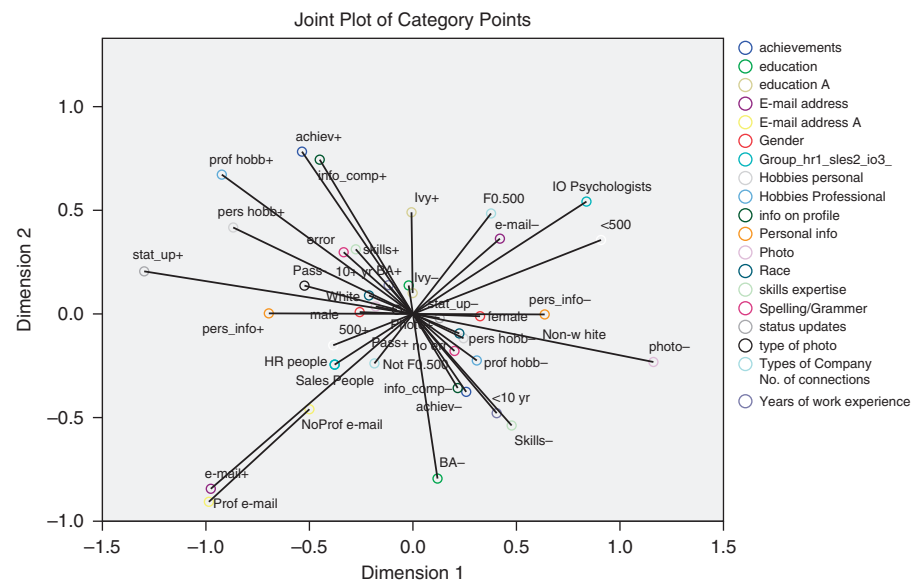
Based on a reviewer's recommendation, we conducted additional analyses on all the categorical variables to synthesize the results of the χ^2 s. A statistical procedure known as multiple correspondence analysis (otherwise known as Homals analysis) revealed two underlying factors (see Table IV). An inspection of the data demonstrated that

Variable	Dimension 1	Variable	Dimension 2
Status updates present	1.298	Professional e-mail	0.906
Photo not present	1.162	E-mail present	0.844
Professional e-mail	0.986	Undergraduate not listed	0.794
E-mail present	0.976	Achievements listed	0.783
Professional hobbies listed	0.923	Complete profile info	0.744
< 500 connections	0.909	Professional hobbies listed	0.672
Personal hobbies listed	0.868	I/O psych.	0.542
I/O psych.	0.838	Skills not listed	0.538
Personal info	0.696	Ivy League	0.49
No personal info	0.636	Fortune 500	0.485
Achievements listed	0.536	< 10 years experience	0.479
Non-passport photo	0.524	Unprofessional e-mail	0.46
Unprofessional e-mail	0.5	Personal hobbies listed	0.417
Skills not listed	0.477	Achievements not listed	0.376
Complete profile info	0.45	E-mail not present	0.363
E-mail not present	0.42	Incomplete profile info	0.358
< 10 years experience	0.405	< 500 connections	0.357
500 + connections	0.385	Skills listed	0.312
HR	0.378	Spelling/grammar errors	0.298
Sales/marketing	0.378	HR	0.245
Fortune 500	0.377	Sales/marketing	0.245
Spelling/grammar errors	0.334	Not Fortune 500	0.239
Female	0.324	Photo not present	0.232
Professional hobbies not listed	0.308	Professional hobbies not listed	0.225
Skills listed	0.276	Status updates present	0.205
Achievements not listed	0.257	No spelling/grammar errors	0.179
Male	0.257	500 + connections	0.151
Personal hobbies not listed	0.244	10 + years experience	0.139
Non-white	0.224	Undergraduate listed	0.137
Incomplete profile info	0.216	Non-passport photo	0.137
White	0.212	Personal hobbies not listed	0.117
No spelling/grammar errors	0.201	No Ivy League	0.101
Not Fortune 500	0.186	Non-white	0.094
Photo present	0.18	White	0.089
Status updates not present	0.129	Photo present	0.036
Undergraduate not listed	0.119	Status updates not present	0.02
10 + years experience	0.117	Passport photo	0.02
Passport photo	0.077	Female	0.011
Undergraduate listed	0.021	Male	0.009
Ivy League	0.007	Personal info	0.003
No Ivy League	0.001	No personal info	0.002

Note: Variables are listed in descending order by dimension loading

Table IV.
Homals analysis
factor loading

while I/O psychologists are under one factor, sales/marketing and HR people are categorized under the second factor (see Figure 1). In light of the χ^2 -tests, these findings are not surprising. It appears I/O psychologists are less LinkedIn savvy, yet more cautious and meticulous, than their sales/marketing and HR counterparts. Additionally, an analysis of variance was conducted on “recommendations of them” and “recommendations of others” to determine whether these variables differ according to occupation. “Recommendations of them” was found to be significantly different according to occupation, $F(2,285) = 13.51, p = 0.00$. *Post hoc* comparisons using the Tukey HSD test indicated that the mean recommendation score for I/O Psychologists ($M = 3.24, SD = 4.34$) was significantly lower than the means scores of sales/marketing LinkedIn users ($M = 7.96, SD = 7.89$) and HR LinkedIn users ($M = 9.42, SD = 11.86$). “Recommendations of others” was also found to be significantly different according to occupation, $F(2,285) = 9.60, p = 0.00$. Once again, *post hoc*



Notes: <500/500+, less than/more than 500 connections; info_comp+/info_comp-, complete /incomplete profile information; Ivy+/Ivy-, Ivy League/Not Ivy League; e-mail+/e-mail-, e-mail present/e-mail not present; photo+/photo-, photo present/photo not present; stat_up+/stat_up-, status updates present/not present; F.500/Not F.500, in a fortune 500 company/not in a Fortune 500 company; Prof e-mail/no prof e-mail, professional e-mail listed/unprofessional e-mail listed; BA+/BA-, undergraduate degree listed/not listed; Pass+/Pass-, passport photo present/non-passport photo present; pers hobb+/pers hobb-, personal hobbies listed/personal hobbies not listed; pers_info+/pers_info-, personal information on profile/no personal information on profile; achiev+/achiev-, achievements listed/achievements not listed; prof hobb+/prof hobb-, professional hobbies listed/professional hobbies not listed; skills+/skills-, skills listed/skills not listed; <10 yr/10+ yr, <10 years experience/10+ years experience; error/no err, spelling/grammar errors/no spelling/grammar errors

Figure 1.
Variable principal
normalization

comparisons using the Tukey HSD test indicated that the mean recommendations of others score for I/O psychologists ($M = 3.00$, $SD = 3.26$) was significantly lower than the mean scores for the sales/marketing LinkedIn users ($M = 6.40$, $SD = 6.82$) and HR LinkedIn users ($M = 6.98$, $SD = 9.02$).

We conducted an exploratory analysis on gender to see if there were differences between males and females. Of all the variables tested, four showed significant differences based on gender. An analysis of variance was conducted on "recommendations of others," which showed significant differences between males and females, $F(2, 282) = 12.78$, $p = 0.00$, with males more likely to give recommendations of others ($M = 6.93$, $SD = 8.39$) than females ($M = 3.90$, $SD = 4.46$). The same was found for "recommendations of them," $F(2, 282) = 9.04$, $p = 0.00$, with males more likely to have recommendations made of them ($M = 7.92$, $SD = 10.65$), than females ($M = 5.82$, $SD = 6.46$). Further, χ^2 -tests showed that females were far less likely than males to list their personal and professional interests, $\chi^2(1, n = 284) = 10.5$, $p = 0.001$, and $\chi^2(1, n = 284) = 7.9$, $p = 0.005$, respectively. We were unable to conduct an analysis on race because our sample of non-whites was limited.

Discussion

The current exploratory study was one of the first to systematically examine LinkedIn with regards to employment R&S. Our goals were to identify the elements of LinkedIn that hiring professionals focus on when making personnel decisions, and to examine how LinkedIn users present themselves with regards to those variables. In this preliminary study, we were predominantly concerned with the generation of ideas that can be tested in future experimental research. Hence, our sample of hiring professionals was small, and we only looked at three specific occupations on LinkedIn. Nevertheless, we targeted this group of recruiters because of their extensive and regular usage of LinkedIn for personnel selection practices, and found consistencies in the way they use the site. We were also interested in exploring those three occupations exclusively because two of them are largely sourced for via LinkedIn (HR and sales/marketing) and the other group is well-versed in the topic of impression management (I/O psychologists). We found a number of interesting findings regarding our sample of LinkedIn users as a whole, as well as numerous discrepancies between the three occupations and genders.

Overall, the data suggested the following about LinkedIn users: spelling/grammatical mistakes were not common; most profiles did not have complete information; users were unlikely to show their e-mail address, but if they did it was likely to be professional; users were unlikely to present interests; most users had <500 connections; most users had a photograph and they were most often passport photographs; most users presented a bachelors degree; and most had more than ten years of work experience. These findings indicate that LinkedIn users are utilizing the site in accordance with recruiter expectations, albeit with a few exceptions.

Our interview findings indicated that hiring professionals focus on a host of variables ranging from number of connections to recommendations to spelling mistakes when using LinkedIn for recruitment purposes. Although empirical research with regards to LinkedIn is scarce (thus limiting support for our findings), interestingly, a highly similar, yet unpublished, study with comparable findings was recently conducted by Damaschke (2012). They discovered that there are a total of ten different LinkedIn variables which can be considered indicators of seven general competencies (e.g. communicative, flexible, assertive). These variables greatly overlapped with the variables identified in our study

While Damaschke's (2012) study was not occupation specific, the current researchers coded LinkedIn users' profiles according to three disparate occupations – sales/marketing, HR, and I/O psychology – and found a number of interesting results. I/O psychology professionals are far less likely to make spelling or grammatical errors than HR or sales/marketing professionals. According to our interviews, this was perceived as a variable of primary importance when screening LinkedIn profiles. However, factoring in the educational level of I/O psychology professionals, it is surprising that 24 percent of them had errors on their LinkedIn profiles. Even more surprising was that 44 percent of HR professionals, an occupation that emphasizes meticulousness, displayed spelling/grammar errors. Sales/marketing professionals are more likely to present their e-mail addresses, which makes sense as displaying an e-mail address allows the user to be contacted faster by potential clients. On the other hand, I/O psychology professionals tend to not display an e-mail address at all (just 4 percent of our sample did). Along similar lines, I/O psychologists rarely ask for recommendations or provide recommendations. They also refrain from providing their professional interests, and are less likely to be connected to 500 people (the LinkedIn imposed visible maximum limit). Only 35 percent of I/O psychologists have more than 500 connections, as compared to 77 percent for HR and 91 percent sales/marketing. Therefore, this study supports previous research that found I/O psychologists do not market themselves optimally, and lack effective business skills (Fink *et al.*, 2010).

A large percentage of sales/marketing professionals (64 percent) provided personal information on their LinkedIn profiles. This is understandable as a prominent Sales rule of thumb is “sell yourself first” (Brody, 1998). This message is intended to build trust between the salesperson and the customer. The idea is that as long as the salesperson is trusted by the potential customer, then the product they represent is valuable. Personal information provided on the LinkedIn profile may not seem professional in most occupations, but in sales it does allow a virtual bridge to be made between the person viewing the profile and the user being viewed. Yet, there is a fine line between revealing too much and too little personal information. In fact, we did find that a moderate percentage of our entire sample across occupations (45 percent) displayed personal information. This is worthy of note because it is expected that users would refrain from displaying information that is unrelated to work on a professional site. I/O psychologists are most likely to avoid this (only 24 percent) but it may actually be fruitful for them to provide minimal personal information as previous research shows that recruiters make PO fit inferences via SNWs (Kluemper *et al.*, 2012; Roulin and Bangerter, 2013), which is predictive of job offers (Higgins and Judge, 2004). Meaning, if an I/O psychologist searching for a job has scarce personal information on her LinkedIn profile, a recruiter might believe that she would not “fit” well with the organization and consequently not invite her for an interview.

Totally, 84 percent of our entire sample presented photographs. This supports the results of our interview phase, where we found that hiring professionals view it as unfavorable when LinkedIn users choose not to present a photograph, given the current digital age. However, we note that a small, albeit substantial enough, percentage of our sample had photographs that are considered unprofessional (19 percent). One interpretation of this is that some LinkedIn users still do not fully comprehend the potential ramifications of how they present themselves via SNWs. Perhaps as LinkedIn matures, LinkedIn users will become more aware of the need to present themselves more thoughtfully.

All groups were low on status updates, presumably because it is one of the newest functions on LinkedIn, and most users are unfamiliar with it. The purpose of status updates is the same as the function utilized on Facebook – sharing the things that interest you, or that will be helpful to the people you know – but with a more professional twist (Johnson, 2010). We did find that a small percentage of sales/marketing professionals (9 percent) frequently posted status updates. However, all occupations, including I/O psychology and HR professionals, would likely benefit from this type of personal branding.

As noted above, we explored whether there are differences in how men and women present themselves on LinkedIn. Specifically, men were more likely than women to receive and give recommendations, and to display their personal and professional interests. Since we found that sales/marketing professionals were more likely utilize these functions than the two other occupations, perhaps the male dominance of our sales/marketing sample lead to these results, rather than the occupation itself. Future studies should further explore gender effects on LinkedIn to gain a better understanding of these findings.

It appears that these three groups lie on a spectrum; with sales/marketing being on one end, I/O psychology being on the opposite end, and HR somewhere in the middle (veering toward the sales/marketing end). It is clear that the sales/marketing professionals are the most networking-savvy of the three, because they: connect with as many people as possible, provide multiple methods for people to contact them, reveal personal information to people they do not know, and are generally active users of LinkedIn. HR and I/O professionals seem cautious of keeping their profiles professional, and hesitate to provide personal information. In job search activities, these professionals may suffer a disadvantage over other applicants who provided more information.

One practical implication of our study is whether recruiters should in fact be using LinkedIn for R&S, which is undoubtedly pervasive in today's business world (Ollington *et al.*, 2013). Based on our data it is apparent that LinkedIn has not yet replaced the traditional resume, which problematizes using it as a sole source for selection decision making. LinkedIn users are reluctant to fully complete their profile, which makes it necessary for recruiters to look at resumes as well. Further, only 10 percent of the 288 individual's sampled for this study were non-white, leading us to conclude that LinkedIn usage may not be as widespread as the site claims. Given the infrequency of the non-white profile there is the danger that non-whites would stand out in any search of candidates leading to the potential of discrimination in hiring decisions (Tversky and Kahneman, 1973). It is also possible that since the two researchers who conducted the sampling are white, it led to the sample of second connections being predominantly white. In that regard this study has strong external validity, because the race of recruiters would also impact their filtered search results. Evidently, and as prior literature supports, a limitation of using LinkedIn as a recruitment tool is that it could potentially lead to charges of discrimination (Brown and Vaughn, 2011; Davison *et al.*, 2011a, b; Kluemper and Rosen, 2009; Kluemper *et al.*, 2012; Roth *et al.*, 2013).

Another implication of our study is aimed toward applicants using LinkedIn, who could follow our findings as a means of presenting themselves as most attractive to potential employers. The question of whether companies should use LinkedIn for employee selection notwithstanding, the fact remains they are, so it behooves applicants to present themselves in the best possible light. Specifically, one could

consult Table I, our coding scheme, as a means of determining whether to update one's profile. For example, our sample found spelling and grammatical errors as inexcusable. This is logical as LinkedIn profiles could be altered at any time and place, especially with the advent of smart phones. Thus, applicants should routinely conduct spelling and grammar checks on their profiles. Another important area is the photograph. Applicants might feel that posting one's photograph is unnecessary, as all relevant information is indicated on the profile. However, the opportunity to post one's photograph is one of the things that differentiate the LinkedIn profile from the traditional resume format, so recruiters do want to see it. Further, applicants should be conscious that the type of photograph they present is relatively professional. For example, during their coding work, the researchers often saw photographs that were artsy or did not show the applicant's face at all. Overall, we feel that if applicants are cognizant of the variables identified in Table I, it may be beneficial for them when in search for a job.

The scarce research and literature with regards to LinkedIn in the selection space necessitated our current study to be exploratory in nature, thus some methodological drawbacks were unavoidable. One area to redress is our primarily qualitative approach; in Phase 1 only a small sample of New York City-based hiring professionals was interviewed. While we aimed to specifically interview hiring professionals who are active users of social media, we only included five in our sample. Perhaps a wider, more diverse sample would have yielded different variables. In fact, a more quantitative, in-depth survey of recruiters is being planned for future research to substantiate our findings, where the sample will include recruiters from various geographies and industries, as well as ones that practice both internally and externally. Further, although we provided initial support for the elements of a LinkedIn profile that hiring professionals look at most, we cannot determine from the current study whether these variables would in fact impact selection decisions. We recommend that future research manipulate the variables of interest on the LinkedIn profile, while holding the other variables constant, and have actual hiring professionals rate the desirability of candidates. This way, it would be accurate to extrapolate the LinkedIn variables that most impact selection decision making.

An additional limitation of our study is that in terms of Phase 2 of our study, it is possible that just utilizing the second connections of the researchers limited the randomness of the sample. However, as mentioned earlier, that is likely to be the way a recruiter searches for target applicants. It is also unclear if the coding definitions the researchers used have external validity. For example, the researchers defined a professional photograph as being a "passport photo." Nevertheless it might be that if a LinkedIn user is not faced head-on in his or her photograph, a recruiter would still deem it as professional. Future research should further examine both of these issues.

With regards to future research directions, a logical extension of the current study is to identify the broader competencies that these variables represent. As an example, 500+ connections, listing one's personal interests, and a complete profile might be indicators of extraversion. Thus, a suggestion for future research is to investigate the competencies that recruiters search for, and then determine which LinkedIn variables represent those competencies. For example, a burgeoning competency that recruiters believe is vital, and is commonly searched for via SNWs, is PO (Roulin and Bangerter, 2013). If recruiters routinely make personality inferences via SNWs (Kluemper *et al.*, 2012), then it is quite reasonable that they also make "fit" inferences, which is a manifestation of personality (Kristof-Brown, 2000). In fact, this is what specifically

differentiates the LinkedIn profile from the traditional resume. As Kluemper (2013) noted, recruiters will eventually prefer to scan LinkedIn profiles over resumes due to the richer, personality-related data available. However, this has not yet been studied empirically. As Davison *et al.* (2011a,b) contended much of the prior research has examined the reverse process whereby the applicant determines how well she “fits” with an organization based on the organization’s web site. With the advent of LinkedIn as a recruitment tool, it behooves us to consider whether recruiters make “fit” inferences when looking at a LinkedIn profile.

An additional area of potential research relates to our findings that men are more likely than women to display personal and professional interests, as well as give and receive recommendations. Future researchers could survey LinkedIn users to better understand their perceptions of the value of each LinkedIn section, and why they felt it important to write more or less in those sections. Results may show that men value personal information and recommendations on LinkedIn profiles significantly higher than women do. It is not clear what the practical implications are in terms of presence or absence of these variables on a profile, but from a theoretical perspective, the inferred information model states that people make inferences of others depending on how much information they provide (Johnson, 1989) such that LinkedIn users who provide more information are viewed better than those who provide less. Hence, future research may reveal that female job applicants would benefit from providing such information.

In conclusion, it is clear LinkedIn is a widely used form of professional social networking, and will continue to grow as a selection tool in the workforce. However, this study revealed that utilizing LinkedIn instead of the traditional resume might be problematic. Across the three occupations studied, users were reluctant to fully complete their profiles. Further, the vast majority of the sample was white, thus using LinkedIn as a selection device might lead to legal issues. Similarly, LinkedIn has non-work-related components that could bias decision making (e.g. photograph, personal interests, personal information). On a final note, we emphasize that using LinkedIn as a selection tool is a rapidly burgeoning practice, though it is severely under-researched. We hope our exploratory study will lay the groundwork for future experimental research in this particular domain.

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Appendix

Interview template

1. What positions do you recruit for?
2. Which web sites do you utilize most to achieve this end?
3. Do you use certain web sites over others depending on the occupation? Why?
4. When looking at a LinkedIn profile, what are the top 5 sources of information you're looking to gather?
5. When looking at a LinkedIn profile, what general features (non-occupation specific) will immediately turn you on to a candidate? Turn you off?
7. Same question as #5 but occupation specific, anything that would automatically turn you on to a candidate? Turn you off?
7. What does it mean to you when you do not find a LinkedIn or Facebook profile of a candidate accessible on the web?
8. What other personal information would you like to see about a candidate on LinkedIn? Why?

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