

Look Me in the Eye if You're a Man

The Impact of Gender Cues on Impression Formation in Online Professional Profiles

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Keywords: Impression Formation, Visualization, Gender, Recruiting, Hyperpersonal Cues.

Abstract: Online profiles are becoming increasingly important in work contexts from recruiting to termination decisions. We conducted an experiment to investigate the effect of profile layout and more specifically gender cues on professional impression formation (n=202). The presence or absence of a photo had no impact on overall ratings or profile likability. Layout, however, interacted with gender of the profile owner in that male profiles were rated most positively with photo, female profiles without photo. Silhouette images providing only generic gender cues led to similarly low ratings for male and female profiles. Our study has implications for users managing their attractiveness on the job market as well as for HR professionals and organizations. It further extends our understanding of the gendered nature of professional online settings.

1 INTRODUCTION

In 2011, 56% of companies used the internet for recruitment; an additional 20% were planning to do so in the future (SHRM, 2011). This is a considerable increase compared to 2008 (34%; SHRM, 2008) and illustrates the growing importance of online information for HR decisions. The internet, and here especially social media services, have become an important source of information from recruitment to termination (Davidson, Maraist, and Bing, 2011).

New online environments provide users with a wide range of possibilities from text-only elements to the posting of photos, videos or even interactive content (e.g. gifts, hugs, virtual kisses, or gaming and event invitations). This raises the question what type of information users should post on their profiles and in what way to guarantee the best possible impressions in potential viewers.

In this paper we investigated the impact of visual gender cues in online profiles on impression formation in a professional context. Gender remains one of the most pervasive influences in work-related contexts. Studies in written (i.e., offline) CVs repeatedly demonstrate that gender information impacts the chances of being hired as well as the

proposed salary, and perceptions of competence (e.g., Moss-Racusin, Dovidio, Brescoll, Graham and Handelsman, 2012), and that visual cues play here a particularly biasing role (Cann, Siegfried and Pearce, 1981; Watkins and Johnston, 2000). Research on gender-cues for impression formation in online settings has so far focused predominantly on personal relationships such as the development of friendships or romantic relationships, while professional contexts have been largely ignored. Yet, the processes for choosing a friend or dating partner are likely to differ considerably from choosing a potential employee. Our study aims to increase our understanding of the gendered nature of professional online settings.

2 RELATED WORK

2.1 Online Profiles for Impression Management and Formation

Personal information online is often provided in profiles, a format similar to a traditional CV, usually containing a picture, current employment, education, professional history, and at times hobbies and personal endorsements by colleagues or friends.

Services such as LinkedIn, with its mission to help its members to “stay informed about your contacts and industry, find the people knowledge you need to achieve your goals” are specifically geared towards professionals. Other sites such as Facebook, MySpace or Twitter have a more personal mission, but are still routinely used by HR professionals (SHRM, 2011). Online profiles can thus have a considerable impact on our professional lives.

Users are well aware that they need to manage their self-representations to create the best impression possible and that online profiles are a potent way to influence impression formation. As such self-presentation is a strategic activity “to convey an impression to others, which it is in [a person’s] interests to convey” (Goffman, 1959, p. 4). In this sense, impression management can be understood as “the goal-directed activity of influencing the impressions that audiences form of some person, group, object, or event” (Schlenker and Britt, 1999, p. 560).

Due to the asynchronous and often (semi-) anonymous nature of online communication, users experience greater control over their self-presentation. For instance, they may choose especially favorable images and descriptions, include or consciously omit personal information such as age or relationship status or post comments and links indicating an interesting, ‘well-rounded’ personality (e.g., Zhao, Grasmuck, and Martin, 2008). By placing personal information in their profiles, users make explicit identity claims, which are used by viewers to construct a picture of their personality (Vazire and Gosling, 2004). Some even use the relative anonymity of the internet to create a whole new personality on the Web leading to questions of deception and identity construction in online communication and relationships (e.g. Stone, 1996; Turkle, 1995; Donath, 1999; Gibbs, Ellison and Heino, 2006). Yet, while users conduct impression management, it is questionable whether they are always aware of the impact of their design choices (Labrecque, Markos and Milne, 2011).

A first impression of a person often decides whether further contact is looked for and thus whether a relationship develops at all. Impression formation is thus an important step in the development of relationships (Goffman, 1959). People meeting exclusively online lack the clues available in face-to-face situations such as age, sex, ethnicity or physical appearance to form immediate impressions. In such ‘zero-history relationships’ online profiles often provide the information normally collected during a first personal meeting,

and allow viewers to form a – more or less detailed or truthful – impression about the person. Much as website quality is seen by potential buyers as a signal of product quality (Wells, Valacich and Hess, 2011), the layout of online profiles sends signals about a person’s attractiveness as potential friend, partner or employee. In this process, visual cues about a person obtain a particularly important role.

2.2 The Role of Visual Cues in Impression Formation

Theories such as social presence (Short, Williams and Christie, 1976) and media richness (Daft and Lengel, 1984, 1986) assume that relationship formation is hindered in online environments due to the lack of physical presence, which creates restricted, ‘one-dimensional’ pictures of a person. If a person is unknown, the lack of information leads to uncertainty and thus to a more negative picture of a person when compared to face-to-face encounters (Berger and Calabrese, 1975). In such situations, visual information can reduce uncertainty about an interaction partner. Visual cues such as age, gender, attractiveness or ethnicity are one of the most important aspects for impression formation and management, and as such critical for the initial evaluation of an interaction partner and the decision to pursue further acquaintance (Duck, 1982), be it online or offline. Using photos in online environments should thus lead to more positive impressions of interaction partners (e.g., Berger and Douglas, 1981).

The hyperpersonal communication model proposed by Walther (1996, 1997) makes exactly the opposite prediction. The hyperpersonal model suggests that anonymity – or more generally the lack of knowledge about a communication partner – may lead to exaggerated positive perceptions instead of negative ones. In online environments, senders can carefully select, which information they show about themselves or what they communicate and how. This selectiveness provides the counterpart with a (probably) highly positive picture of the person that is independent from (perhaps more negative) aspects the sender cannot control such as physical attractiveness. This leads to a more positive attitude in the viewer than might be the case in an offline encounter. These positive expectations, in consequence, will lead to more positive feedback and thus create a ‘self-fulfilling’ prophecy of positive impressions. In this way, the absence of information can actually lead to a more positive (hyperpersonal) impression of a person. Support for

this process was found by Hancock and Dunham (2001), who showed that, while the breadth of impressions in zero-history online encounters is lower compared to face-to-face situations, the intensity of impressions is higher. That is, interaction partners rate their counterpart in a more extreme way, if they only communicate with them over text.

While little debate exists that visual information is an important factor for impression formation, theoretical models make thus contradictory predictions about their effect: Media richness and uncertainty reduction theory predict a positive effect, while the hyperpersonal communication model suggests a more negative impact. Walther, Slovacek, and Tidwell (2001) suggested a possible way to solve this contradiction. Comparing short-term and long-term virtual groups, they demonstrated that the effect of visual information is moderated by the length of relationships. For partners, who did not know each other, the presence of a picture increased affection and social attraction, while the introduction of a picture at a later stage decreased mutual attraction. Relationships conducted under CMC conditions can over time become as personal and intense as face-to-face relationships (e.g., Tidwell and Walther, 2002; Wang, Moon, Kwon, Evans and Stefanone, 2010; Walther et al., 2001). The negative effects of computer-mediated communication are thus confined to interactions, in which communication partners have no former knowledge of each other (so-called 'zero-history' encounters).

In a work context, and more specifically in recruitment and selection decisions, zero-history encounters tend to be the norm. Not knowing a potential employee or colleague is a considerable source of uncertainty. In this case online profiles are usually viewed with the expectation of future professional interactions. We therefore expect that in this situation, additional personal information in the form of a photo will improve first impressions of a person. Professional profiles with photo should thus lead to more positive ratings than profiles without photo.

Hypothesis 1: Professional profiles with photo will be rated more positively than professional profiles without photo.

2.3 The Impact of Gender

People in online environments often rely on stereotypes to make decisions about a person, especially if little individuating information about a person is available (Chan and Mendelson, 2010).

Stereotypes reduce overload, but also augment an "information-impooverished environment" (Stangnor and Schaller, 1996, p. 21). Prototypes are formed based on own experiences or socio-cultural categories and can be activated by subtle cues such as user names.

One of the most pervasive bases for prototypes and stereotyping is gender. Contrary to early hopes of the equalizing effect of computer-mediated communication, gender remains an important factor also in online impression formation. Williams and Mendelson (2008), for instance, found that judgments on masculinity, femininity, and likability were identical for men and women, if the gender of the interaction partner was unknown. Knowledge of the other's gender, in contrast, led to gender-typical attributions of men as more masculine and women as more feminine. Viewers also base attributions of another's personality on gender cues in profiles (Vazire and Gosling, 2004). Stereotyping effects, and according reactions, can even be observed, when the gender of a person is only inferred through a gender-identifying name (Christofides, Islam and Desmarais, 2009) or a computer-based avatar (Lee, 2004).

The effect of gender cues for online impression formation is of great importance for professional contexts, in which gender-stereotyping is still pervasive despite decades of initiatives and tight regulations through equality laws (e.g., Marlow, Schneider and Nelson, 1997; Moss-Racusin et al., 2012; Vancouver and Ilgen, 1989). While gender information is hard to exclude from online profiles, especially in a professional context, the question remains how prevalent this information should be. The strongest cue to gender is a personal photo, whereas the presence of simply a name can be considered a weak clue.

Given the importance of gender cues on online impression formation and their biasing effect on perceptions of men and women (cp. William and Mendelson, 2008), we expect that the presence or absence of strong gender cues will influence the ratings of male versus female profiles also in professional profiles. We do not make specific assumptions of the direction of the effect.

Hypothesis 2: Presence or absence of a photo will impact the ratings of male profiles differently than female profiles.

Next to gender information photos also provide information about the look of the person – thus confounding the effect of gender cue strength with the degree of an individual's attractiveness. Physical

attractiveness of applicants has been shown as a continuous source for biases in work-related contexts, although the relationship remains complex. A meta-analysis by Hosoda, Stone-Romero and Coats (2003) suggests that higher attractiveness generally leads to more positive job-related outcomes. Indications are that this relationship holds also in non-Western cultures (Dion, Pak and Dion, 1990). Yet physical attractiveness can also have a negative impact. This reversal of a “beautiful is good” bias into the “beauty is beastly” effect (Heilman and Surawati, 1979) seems to be driven by task type. Higher physical attractiveness is counter-productive for individuals applying to or working in a position which is perceived as traditionally held by the opposite sex (Cash, Gillen and Burns, 1977; Heilman and Stopeck, 1985a, 1985b).

Online profiles (as well as traditional offline CVs) generally offer the possibility to do without a personal picture. In this case, however, online profiles often contain generic gender information by using a male or female silhouette (i.e., human outline). Replacing the photo with a silhouette eliminates individual features, while still indicating the gender of a person. In such situations gender information is emphasized, although de-individualized. Given the fact that gender information is a very powerful trigger for stereotypes, the question arises whether such generic gender cues play an (additional) role. If attractiveness of the profile owner is the main factor driving profile ratings, it may be expected that without the personal picture, the effects of profile gender would be less pronounced. We therefore also investigated the following research question:

How does generic (i.e., depersonalized) gender information impact impression formation in online profiles?

3 METHODS

3.1 Design

To investigate the effects proposed in hypotheses 1 and 2, we compared professional profiles with and without photos. We further added a third condition introducing gender-indicating silhouette images to investigate our research question on generic gender cues. The study thus followed a 2x3 design testing *profile gender* (female or male) and three variations of *profile layout*: one with photo (strong gender cue condition), one without photo (weak gender cue

condition), and one with a gender-indicating silhouette images (generic gender cue condition). Photographs were taken from a research database (PICS, The Psychological Image Collection at Sterling). To reduce biasing effects due to the attractiveness of a person (cp. Hosoda et al., 2003), photos were chosen with people of average attractiveness. This was confirmed through ratings by nine individuals (scale 1-7; range 3.80-4.89). No significant difference was found in attractiveness of male and female photos ($t(8) = -.92, p = .39$).

3.2 Sample

Undergraduate and graduate adult learners were recruited through two online study panels at German universities in return for study credit and the chance to win a 25 Euro voucher from the online store Amazon. A total of 257 people participated. We excluded 51 participants, because they either did not provide any profile ratings (drop-outs after the introduction page or first profile, 46 participants) or answered with the same rating for all profiles (5 participants). This retained 202 participants. The majority of the students were female (77.2%). The average age was 30.7 years ($sd = 9.2$) indicating a mature sample.

3.3 Material and Procedure

We prepared two profiles for each combination of within-subject factors, i.e., for each layout variation two profiles were prepared for women and men, leading to a total of 12 profiles. All profiles were fictitious. Every profile provided the name of the person to enable identification of the person as either female or male, even if no photo was provided. It further provided information on the location of the person, his or her task, education, age, and areas of special expertise. To make the profiles more believable, we also included information on private interests. Figure 1 shows examples of profiles with and without picture as well as with male and female silhouettes.

Participants rated all twelve profiles. Each profile was presented on a separate page with the profile shown on top of the page and the survey questions directly below. The twelve profiles were randomized to avoid sequence effects. At the end of the survey, a separate page asked for demographic information (gender, age, field of education, and experience with virtual team work). Participants were given the following instruction before the rating:

You work in a company with branches in several German cities. For a new project a team needs to be created with members from several branches. The project work will primarily be done 'virtually', i.e., using electronic media such as e-mail, video-conferencing, etc. As part of the project team you can participate in the selection of the team members. Your task: On the next pages you will see personal profiles of twelve potential team members. Please consider them carefully and rate them according to a short survey. [German in original]



Figure 1: Examples for the three layout variations.

Measures. Each person in the profile was rated on 12 aspects using a 7-step semantic differential (i.e., agreeable/disagreeable, friendly/unfriendly, likable/dislikable, attractive/unattractive, sociable/unsociable, civil/uncivil, successful/unsuccessful, competent/incompetent, efficient/inefficient, reliable/unreliable, active/inactive, correct/incorrect). All 12 aspects loaded on the same factor. We therefore summarized the 12 aspects into one mean value for an *overall profile rating*. The reliability of the resulting scale was high with $\alpha = .98$. A separate item measured the overall *likability* of the profile ("The profile appeals to me") on a scale from '1: not at all' to '7: very much'. For the comparison of the layout and gender variations, we summarized each group of profiles (i.e., female with photo, male with photo, etc.) into a rating variable for both the overall profile rating and the likability evaluation.

Past research has shown that experience with virtual environments can influence the perception of online profiles (Nowak and Rauh, 2008). We therefore included experience with virtual team work as control variable (rated on a scale from '1: no experience' to '7: a lot of experience'). In addition, we collected information on rater gender and age (in years).

3.4 Results

Our hypotheses assumed a main effect for *layout* (H1) and an interaction effect for *layout* and *profile gender* (H2). We therefore conducted repeated-measures ANOVAs for the two within-factors *layout* and *profile gender* first for the overall profile rating, then for the likability of the profile. We report results using the conservative Greenhouse-Geisser correction to account for violations of sphericity.

The three layout variations resulted in disparate perceptions for the overall profile rating, $F(2,198) = 8.23, p < .001, \eta^2 = .04$, as well as likability, $F(2,198) = 8.69, p < .001, \eta^2 = .04$. This effect was driven by higher general ratings and higher likability of profiles with photos compared to silhouette profiles (pairwise comparison, $p < .001$). In contrast profiles with and without photos were rated equally on both outcomes measures. Hypothesis 1 was therefore not supported.

In support of hypothesis 2, we found a significant interaction between *layout* and *profile gender*, $F(2,198)_{\text{overall rating}} = 36.40, p < .001, \eta^2 = .16$; $F(2,198)_{\text{likability}} = 42.87, p < .001, \eta^2 = .18$. For both the general perception and likability, male profiles were rated more positively and more likable with photo, while female profiles were rated more positively and more likable without photo. Profiles with silhouette images were rated nearly identical for male and female profiles. The mean rating for women approached the rating for profiles with photos, the mean rating for men approached the rating for the non-photo layout (see Figure 2).

In line with past research (e.g., Oliphant and Alexander, 1982), we also found an influence of *rater gender* on overall attractiveness of the profiles. In our study women rated profiles more positively than men, $F(1,193) = 7.78, p < .01, \eta^2 = .04$ ($M_{\text{women}} = 5.09, M_{\text{men}} = 4.77$). *Rater gender* was not significant, however, for likability ratings, $F(1,189) = 2.34, ns$. *Age* or *experience* had no significant impact on profile perceptions for either dependent variable.

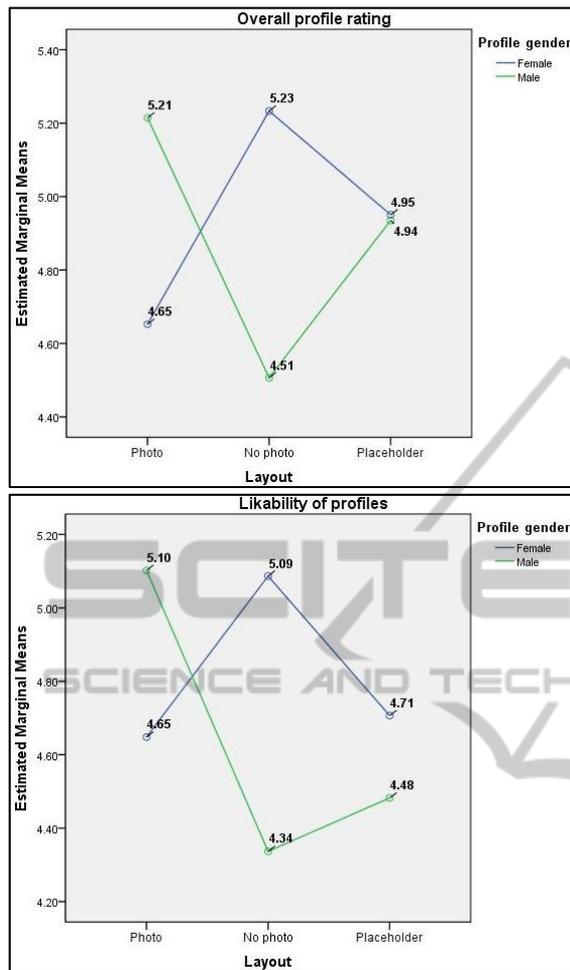


Figure 2: Interaction effect of layout and profile.

4 DISCUSSION

The goal of this study was to obtain a better understanding of online impression formation in professional settings. Our focus was here on online profiles, which often provide the first point of contact in virtual organizations or teams. Guided by uncertainty reduction theory (Berger and Calabrese, 1975) and the hyperpersonal communication model (Walther, 1996, 1997) we investigated how the strength of gender cues influences the perception of potential team members using an experimental setting. We found that visual gender cues in online profiles played a critical role in forming impressions of people that are unknown, but might become potential long-term cooperation partners.

In our study we attempted to differentiate between effects of individual features of a person and the generalized effect of gender in visual cues.

Overall, our findings suggest that gender in itself has a stereotyping effect: For female profiles the gender-marked silhouettes were rated in a similar way as female profiles with photos. For male profiles, the silhouette condition led to ratings similar to the non-photo condition.

This study addresses the theoretical question of how profile layout, and more specifically visual cues in zero-history relationships with a possible long-term focus impact online impression formation. It thus extends considerations of impression formation in zero-history encounters into a work-related setting. It further adds the issues of gender stereotyping to impression formation with professional online profiles. The presence or absence of a photo had no significant influence on profile ratings. At first glance, the similarity in ratings of profiles with and without photos seems surprising and contradicts uncertainty reduction theory as well as the hyperpersonal model. The similarity could be explained, however, by the strong interaction effect between layout and profile gender: men were consistently rated more positively with photo, while women were rated more positively without photo. The opposing trends for female and male profile thus masked the effect of layout. The use of gender-marked silhouettes led to similar ratings for men and women, albeit on the low side.

The photo, silhouette and no-photo conditions can be seen as a sequence of elimination of identifying cues. While for men elimination of identifying visual cues was negative, for women the complete elimination of personal as well as generic gender cues resulted in the most positive ratings. Results for male profiles thus mirror findings expected under uncertainty reduction theory (Berger and Calabrese, 1975), i.e., the more identifying information is available about a man, the more positively he is perceived.

Male profiles with a silhouette were rated as negatively as profiles without photo, i.e., emphasizing gender had no additional (positive or negative) impact on the overall evaluation of male profiles. This suggests that the male gender may still be considered a 'default' value that has little impact on judgments, instead of a defining characteristic of a person. For women, a visual reminder of gender resulted in similarly negative perceptions of the profile as the fully identifying photo. Our results for female profiles thus follow predictions of the hyperpersonal model for computer-mediated communication (Walther, 1996, 1997).

A possible explanation for the clear negative effect of visual cues (generic and identifying) on

female profiles may be the activation of attractiveness stereotypes. In their study on the willingness to initiate friendship, Wang et al. (2010) found that attractive and unattractive photos yielded converse effects in male and female raters: women were less willing to befriend attractive women and unattractive men, while men were less willing to befriend unattractive women and attractive men. In the no photo condition, male raters were significantly more positive towards the female profile than the male profile, whereas women did not differentiate between the sexes. Our data did not yield a similar interaction effect between layout, profile gender and rater gender. A possible explanation is that attractiveness is still a higher priority for women than for men – not only for personal or romantic relationships, but also in professional contexts. Attractiveness of photos, for instance, influences the likelihood of being chosen in hiring decisions (Marlow et al., 1996). This bias is especially strong – and negative – for unattractive women. The external rating of the pictures indicated an average attractiveness of the people depicted. Perceptions of average attractiveness may thus have played a role in the lower ratings for women in the photo condition. Still, attractiveness cannot explain that female profiles scored as badly in the generic gender condition with silhouette images as in the photo condition. The silhouette images provided anonymity for the individual, but still conveyed gender information. This suggests that even generic indicators of gender may trigger gender-stereotypes. This is in line with findings on gender-marked avatars and gender-based representations of computer programs (Lee, 2003, 2004).

4.1 Practical Implications

The gap between the private and the professional in online environments is continuously shrinking – as indicated by the increasing use of social media networks by HR professionals (Davidson et al., 2011; SHRM, 2011). Our study provides valuable pointers for individuals how to adapt their profile for most positive effect, but also tells a cautionary tale for HR professionals. Professionally-tinted networks such as LinkedIn allow the creation of personalized profiles. Although a fixed template is provided, a person can still decide which information to put online (e.g., photo or no photo, level of detail on education and work history, description of personal interests). Our study suggests that individual choices on layout and in particular the type of visual cues may considerably influence the likelihood to be

approached as expert or potential employee (Caers and Castelyns, 2011).

Our finding that gender-marked silhouette images led to similar results as photos for women suggesting that at least part of the results can be attributed to gender, not attractiveness. This underlines the importance of stereotyping also in professional online contexts.

In practical terms our study suggests that the rules of personal branding (Labrecque et al., 2011) for men and women may differ considerably, starting with the inclusion of personal photos, silhouette images, or the choice to stay anonymous. When choosing a photo, it seems that women have to take greater care with the choice of their photo than men (i.e., choose more attractive pictures) to reach the same result.

Our study also has implications for organizations and online service providers. From studies on traditional CVs we know that layout can be an important predictor of how capable a candidate is perceived and thus his or her chance of being shortlisted for hiring decisions (Arnulf, Tegner and Larsson, 2010). Our results suggest that layouts in online profiles may have similar impacts. Online services often force users to adhere to pre-specified layouts. Such standard templates, which prescribe specific layouts such as the presence or absence of personal photos may, however, systematically disadvantage certain groups. Service providers should therefore consider allowing higher flexibility in profile templates. In the same regard hiring organizations should be sensitive how their requirements for the presentation of information may impact the chances of (potential) employees (Brown and Vaughn, 2011).

4.2 Limitations and Future Work

While we think that our study provides valuable new pointers for theory and practice, we are also aware of several limitations. Firstly, in our study we considered overall judgments and likability of the profiles, not selection decisions. In as far as liking and actual selection may be based on disparate criteria it is possible that these two processes may lead to different results. Further studies should thus include actual choices. Moreover, our sample consisted of students not HR professionals or actual team members. Although we chose adult students with prior working experience, their judgments may differ from people with a clear HR role. Future studies should thus consider professionals as well as investigate in what way job role affects online

impression formation.

A related question concerns the impact of task type on the effect of online profiles, especially considering the consistent gender effect in our study. The gender-type of task (i.e., tasks that are seen as either typically 'feminine' or 'masculine') impacts how competent attractive or unattractive people are perceived for this job, in that attractiveness is in fact negative for gender-untypical jobs (Heilman and Saruwatari, 1979). The instruction in our study was kept very generic and can thus be considered as gender neutral. Further investigations of layout conditions for disparate task types could yield important insights into interaction between job content and gender-based online impression formation.

Our profiles also included information on hobbies and personal interests. We cannot exclude that this information impacted attractiveness ratings in an uncontrolled way, for instance, in case of gender-typical or untypical hobbies. However, personal information is not uncommon in online profiles (e.g., in the form of group memberships, private statements, or endorsements) or in related services (e.g., on the Facebook of a LinkedIn user). How private information in relation to visual gender cues in online profiles shapes online impression formation remains an interesting question, also in light of user profiles in multiple online services.

Another interesting aspect may be the role of gender for organizational impression formation. Diversity cues such as race on recruitment websites influence job seeker's perceptions of an organization's attractiveness (Walker, Feild, Bernerth and Becton, 2012). Based on our findings, we suspect that visual presentations of gender might have a similarly strong effect on initial impression formations also for organizations. Considering the growing trend of presenting organizations and products as 'personas', taking a broader view of gendered online impression formation may help predict positive or negative reactions in target groups.

In step with the growing importance of cyberspace for personal and work life, online profiles are becoming increasingly elaborate spaces for self-presentation – including, for instance, logos, interest groups, links to music bands and videos, newest statistics of favorite online games, polls, information on friends and colleagues as well as professional recommendation. This opens new, flexible, and elaborate possibilities for online presentation, which together are likely to have complex effects on online impression formation. In

particular, in work-related contexts the possibility to include external endorsements and recommendations may have a profound impact, similar to ratings in online shops such as Amazon. While our study provides pointers on the effects of layout differences and gender, future studies are needed that include a more comprehensive view on online profiles.

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