

# Face it: The Impact of Gender on Social Media Images

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*Social websites like Facebook enable users to upload self-created digital images; it is therefore of interest to see how gender is performed in this domain. A panel used a literature review of pictorial features associated with gender traits, and a sample of Facebook pictures to assess gender stereotypes present in Facebook images. Traits emerging in greater prominence in pictures of males included active, dominant, and independent. Those prominent with female users included attractive and dependent. These findings generally conform to gender stereotypes found in prior research and extend the research regarding stereotypical gender traits displayed in professional media depictions to self-selected social media displays. They also extend the research on gender differences in impression management generally, in both interpersonal communication and social media, to include gender-specific traits that are part of young mens and women's impression management.*

*Keywords: Facebook; Gender Display; Impression Management; Role Theory; Social Media*

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The centrality of gender embodiment has animated recent debates in media studies about the relationship among gender representations in media, gendered bodies in virtual space, and gender as performance. With the emergence of social media websites, such as *Twitter*, *Facebook*, and *MySpace*, users have an online platform that allows them to communicate widely, to virtually manage others' impressions of them, and to even express gendered identities in cyberspace. With over 500 million active users as of 2011 (<http://www.facebook.com/press/info.php?statistics>), *Facebook* dominates the social media market. Offering a highly interactive platform, *Facebook* users can leave comments on their friends' *walls*, provide status updates and photos, and can even access one another wirelessly through *Facebook Mobile*. As of 2010, users spent over 700 billion minutes per month on *Facebook* (<http://www.facebook.com/press/info.php?statistics>), often updating their *Facebook* profiles to add relationships to their *friends* lists.

One well-known feature of *Facebook* is the user's profile picture, displayed in the upper left-hand corner of each user's homepage. Intended to be the first thing seen, it is arguably one of the most important features of the user's *Facebook* page. The profile picture offers friends, acquaintances and even potential employers a first-impression of the user's appearance and, perhaps, their character. Therefore, the content of users' *Facebook* profile pictures is an important object of study for researchers interested in how people practice impression management.

According to role theory, people follow unwritten social and cultural rules and norms as they behave "in ways that are different and predictable depending on their respective social identities and the situations they find themselves in" (Biddle, 1986, p. 68). Gender identity and gender roles are a significant part of everyday life and, according to Goffman, are actually constituted through social interaction (1976). Gender shapes how people make sense of themselves and their social relationships. However, as Wood notes, "What gender means depends heavily on cultural values and practices; a culture's definitions of masculinity and femininity shape expectations about how individual men and women should communicate; and how individuals communicate establishes gender that, in turn, influences cultural views" (Wood, 2009, p. 20). Gender display, as a continuous communication loop, is defined by society and expressed by individuals as they interact while shaping evolving societal expectations regarding gender.

In contemporary media and culture, women's and men's social desirability and gender have often been defined in terms of their bodies. For women, this has often involved comparing themselves to and even replicating the "thin ideal" (presented in modern mass media despite the looming specter of anorexia and bulimia), altering their bodies to heighten perceived sexuality or youthfulness (through cosmetic surgery, exercise or eating), or conforming to traditional definitions of femininity including qualities such as submissiveness or sentimentality (through dress, cosmetics, style, etc.). For men, gender-based definitions of success frequently revolve around presenting or developing their bodies as strong, youthful, active, and physically dominant. The evolution of social media (such as *Facebook*) and online digital gaming environments (such as massive, multiple online games [MMOs]) now offer venues where individuals

can consciously self-select and present virtual versions of themselves that can either conform with, challenge, or defy societal expectations and media presentations. Digital formats, on the one hand, represent exciting possibilities for individuals who can explore the freedom of presenting a physical self that might differ from the one they present or perform in everyday life or from socially-defined expectations. As Rettberg argues, “our fascination with creating digital self-portraits is indicative of our collective coming of age where we as a culture are discovering that we have voices online and can express ourselves rather than simply accepting the mass media’s views of the world” (2009, p. 453). On the other hand, digital formats may simply offer a chance to replicate cultural and mass media normative versions of the individual, specifically as they relate to gender. Since how people present and perform their bodies in virtual spaces offer specific impressions, many of which relate to gender, one objective of the current study is to examine how gender portrayals manifest themselves in self-selected social media displays. Specifically, can social media website content help us understand more about gender roles and the way people present themselves in the virtual social world? Do the ways they manage their images reinforce existing gendered stereotypes?

Because social networks such as *Facebook* are relatively recent phenomena, the content of self-presentation profile pictures has not been analyzed in great depth. Extant literature supports the idea of expected gender roles unique to males and females (Goffman, 1976; Lauzen, Dozier, & Horan, 2008; Wanta & Legett, 1989; Williams & Best, 1990) and the idea that society advocates these roles through various media (Bell & Milic, 2002; Hancock & Toma, 2009), with both males and females engaging in impression management in order to control their public image (Dominick, 1999; Jones, 1997; Leary, 1996). Witmer and Katzman (1997) argued that females may display more emotional graphics than males while communicating on the Internet. Extant literature, however, only reveals one study that has examined gender differences in self-selected portraits in self-posed photographs (Mills, 1984) and one study that has examined gender differences in *Facebook* profile pictures (Strano, 2008). Strano’s study, focusing exclusively on gender difference in impression management, found that women engage in management more than men (Strano, 2008).

In a related area of literature, self-presentation in computer-mediated communication (CMC), some studies suggest a great deal of “gender-swapping” on the Internet (Bruckman, 1993; Roberts & Parks, 1999; Witmer & Katzman, 1997) with some estimates as high as 60% (Roberts & Parks, 1999), and with males “gender-swapping” more than females (Bruckman, 1993; Suler, 1999). The fantastical and fantasy-based nature of many gaming environments, however, and the anonymous nature of most CMC in general might suggest that the freedom to reinvent oneself not only in terms of gender but also race, ethnicity, and other variables is much broader than in *Facebook* profile pictures. *Facebook* friends, who may know the person in real life, recognize a photograph as a self-selected presentation but, researchers argue, most likely do not assume that the profile picture reflects extensive alteration or photo retouching. The current study, therefore, makes a unique contribution by investigating whether self-selected *Facebook* profile pictures exhibit stereotypical gender roles consistent with traits emerging from existing research.

## Literature Review

### *Gender Roles*

Some researchers suggest that gender differences result from a variety of factors including socialization and biology; as such, gender roles are often manifested through communication and culture (Goffman, 1976; Lauzen et al., 2008; Wanta & Legett, 1989; Williams & Best, 1990; Wood, 2009). West and Zimmerman (1987) claim gendering is a routine interaction of everyday life. "Both gender role and gender display focus on behavioral aspects of being a man and a woman" (p. 127). They use Goffman's (1976) account of "gender display" to suggest gender is also constituted through interaction. Says Goffman, "If gender [can] be defined as the culturally established correlates of sex (whether in consequence of biology or learning), then gender display refers to conventionalized portrayals of these correlates" (1976, p. 69). Goffman cites sports as a framework to explain masculine tendencies, asserting that the male gender is categorically viewed as aggressive, strong, and competitive. In agreement, West and Zimmerman (1987) assert that "Doing gender is unavoidable . . . because of the social consequences of sex-category membership: [this includes] the allocation of power and resources not only in the domestic, economic, and political domains but also in the broad arena of interpersonal relations" (p. 145). As men and women tend to assume "proper" societal gender roles, associated behaviors are viewed as cultural markers that indicate norms of social interaction.

Williams and Best (1990) searched for gender stereotypes among respondents from 25 nations worldwide. Participants were presented with a list of 300 character traits and instructed to indicate whether the trait was "more frequently associated with men than with women," "more frequently associated with women than with men," or "not differentially associated with the two sexes." Table 1 presents results for the traits most commonly associated with men and women and indicates the traits isolated for this analysis.

### *Gender Roles in the Media*

Society often promotes gender role markers as social norms through photographs and other visual displays used in advertising. Wanta and Legett (1989) studied the media images of male and female athletes of the 1987 Wimbledon Tennis Tournament, concluding that men and women were depicted differently in terms of emotion, dominance, and power. Goffman (1976) accounts for these traits in his research of magazine and newspaper photography, finding women to be pictured in more submissive positions while men are depicted in more elevated positions. Based on Goffman's inquiries, Wanta and Legett (1989) hypothesized that female tennis players would be shown more often in positions implying helplessness than male tennis players.

Goffman's (1976) studies of power within photographs asserted that the more dominant a person's face was (i.e., the more full-front, direct-to-camera orientation of the face, and the greater the percentage of photo space taken up by the face), the more power was held and/or portrayed by the person pictured. Wanta and Legett used these ideas to predict that the photographs of female tennis players would focus

**Table 1** Gender Stereotypes across 25 Nations\*

Masculine Traits	Feminine Traits
Adventurous	Affectionate
Active**	Attractive**
Aggressive	Curious
Autocratic	Dependent**
Courageous	Dreamy
Daring	Emotional
Dominant**	Fearful
Enterprising	Gentle
Forceful	Independent
Independent**	Sensitive
Progressive	Sentimental**
Robust	Sexy**
Rude	Soft-hearted
Severe	Submissive**
Stern	Superstitious
Strong	Weak

\*The traits are alphabetized. \*\*The trait was used in the present study.

Source: Williams, J. E., & Best, D. L. (1990). *Measuring Sex Stereotypes: A Multination Study* (Cross-Cultural Research and Methodology Series 8) (Revised ed.). Newbury Park: Sage Publications, Inc.

more on the players' bodies, while male tennis players would have more concentrated images of their faces. However, the majority of Wanta and Legett's (1989) hypotheses remained unsubstantiated; their gender stereotypes were not confirmed. In fact, opposite portrayals often emerged. They concluded that the photographer was trying to break gender stereotypes. In contrast to the work of Wanta and Legett, the research conducted in the current study does not rely on images shot by professional photographers. Rather, the present analysis is based on self-selected and, almost exclusively, self-created *Facebook* profile pictures.

Gender roles, present in everyday interaction, are also enacted on television. Lauzen and colleagues (2008) examined gender roles enacted by men and women on television. Using a stratified random sample of 124 prime-time television series airing on six broadcast networks during the 2005–06 seasons, they looked at the rates at which men and women fell into categorically different social roles. Taking a category scheme developed by earlier research, Lauzen and colleagues defined social roles as the things "people do in daily life" (see Eagly & Steffan, 1984, p. 735). These roles vary from childcare and household chores to workplace activities. Through a content analysis, they found male characters on prime-time television were more likely to inhabit work roles, including blue collar, white collar, and extracurricular activities, while women were portrayed in more interpersonal roles involving romance, friendship, and family.

Similarly, in their content analysis of 827 Australian magazine advertisements from 1997–98 to determine the presence of stereotypical gender roles, Bell and Milic (2002) concluded that “Males were more frequently shown in ‘narrative’ ways (as actors) than females, and this is true of both groups and individuals. Women were more likely than men to ‘behave’ (or to express emotion)” (p. 215). Their findings suggest stereotypical gender traits of men and women consistent with those of Williams and Best (1990) and consistent with Goffman’s (1976) analysis of advertising which found that women were “more likely to be portrayed performing submissive or appeasing gestures such as head or body canting, bending one knee inward (‘bashful knee-bend’), smiling, clowning, and acting less seriously” and were “often portrayed as being under the physical care and protection of a man” (as cited in Bell and Milic, 2002, p. 205).

Ragan (1982) analyzed gender differences in 1,296 portrait photos from high school and university yearbooks, concluding there are gender differences; females smiled more than males, smiled more expansively than males, tilted their heads at greater angles than males, faced the camera less directly than males, and wore glasses less frequently than males. While this research identifies gender differences, it was limited by an influential factor: Photographers posed the subjects (Ragan, 1982). In hopes of accounting for this limitation, Mills (1984) conducted a study in which 34 men and 34 women were asked to present themselves as typical college students in pictures. Mills’ findings reinforced the suggestion that females smile more, and smile more expansively, than males.

Gender stereotypes also abound in video games. Female characters are represented as highly sexualized while male characters possess exaggerated strength, are hyper-masculine, aggressive, and, with the exception of showing hostility, lack emotion. They are also less likely to display helping or nurturing qualities (Robinson, Callister, Clark, & Phillips, 2008). One study found that the central role for male characters was “competitor” while females’ central roles were “victim,” “damsel in distress,” or “evil obstacle” for the hero to overcome (Heintz-Knowles et al., 2001). The findings of these video game content analyses have remained fairly consistent over time and have also been shown to be perceived by audiences (Robinson et al., 2008).

Based on the work from several decades of research on gender roles from the fields of advertising, television, photography, digital gaming studies, and cultural studies, it is apparent that masculinity often implies strength, ambition, and independence, whereas femininity implies physical attractiveness, reverence, and sentimentality (Wood, 2009). The rapid growth of digital media invites researchers interested in the cultural impact of gender to investigate this alternative outlet for self-presentation. This study provides a natural extension of such work in investigation of gender differences in self-selected *Facebook* profile pictures.

### *Self-Presentation*

Goffman (1959) argued that individuals were concerned with self-presentation during all social encounters. This is because, among other reasons, impressions impact the opinions of others regardless of an individual’s intentions. Burr (2002) claims

The other people making up our audience can, by their own conduct, either legitimate or reject our claim to be a certain kind of person, and Goffman (1959) argues that this is done by carefully monitoring the match or mismatch between what we 'give' (the things we say or do to create an impression) and what we 'give off' (the body language, our general demeanor—the communicative aspects of our conduct that are harder for us to control and manipulate). The creation and maintenance of impressions is therefore a two-way street (2002, p. 73).

Hence, for Goffman (1959), the "presentation of self in everyday life" and the roles maintained are pertinent to everyday interaction. People constantly play characters to avoid embarrassment and to "fit-in" with social norms. Gender role, then, focuses on the collectivity of logical, behavioral, cognitive, and emotional responses to social situations (Burr, 2002).

Most self-presentation studies have examined the concept only in face-to-face communication (Goffman, 1959; Leary 1996). Recent studies (Oh, 2004; Cho, 2006) about self-presentation in personal websites analyze only the styles and not gender display specifically. Similar to face-to-face contexts, individuals do make choices about gender-related impressions over the Internet. A number of studies, for example, have demonstrated extensive "gender-swapping" in "avatar" creation for online gaming and in text-based CMC (Bruckman, 1993; Roberts & Parks, 1999; Suler, 1999). In these virtual environments, physical identity markers are not apparent and, as a result, the self is more fluid and changeable (Gergen, 1991) and offers increased opportunities for strategic self-presentation (Walther, 1993; Walther, Anderson, & Park, 1994). Gender is often one of the variables that communicators can consciously shape in these mediated environments (Roberts & Parks, 1999; Bruckman, 1993; Wilbur, 1996). Some researchers have gone so far as to argue that the computer-mediated environment is a gender-bending world (Witmer & Katzman, 1997). Modern gaming environments, in particular, allow gamers to design or choose "avatars," their virtual self in the gaming world, that possess a variety of differing characteristics such as height, weight, age, gender, dress, and profession. In these environments, the avatar becomes "inextricably linked to their performance of self and engagement in [a virtual] community" (Taylor, 1999, p. 438).

Despite the above cited studies of "gender-swapping" and self-presentation in CMC, no researchers have examined the extent to which social media users ascribe to gender stereotypes in their presentation of self on the Internet. Samp, Wittenberg, and Gillett (2003) examined the extent to which "gender schematic" individuals (individuals with either strong masculine or feminine gender orientations versus androgynous orientations) and individuals who were high (versus low) self-monitoring engaged in gender-swapping on the Internet. The researchers in this study used self-report data from Internet users about their online gender-swapping behavior generally. The researchers in the current study, by contrast, provide a content analysis of actual Facebook profile pictures in terms of the presence or absence of gender stereotypes and do not focus on gender swapping.

Hancock and Toma's 2009 study of profile pictures on online dating websites created and posted with the intention of creating relationships comes closest to the focus of the current study. In line with Goffman's (1959) suggestion that self-presentation is

the process of packaging and editing the self in order to create a certain impression for an audience, Hancock and Toma (2009) examined the impact of gender on self-presentation and social desirability. They found that both women and men “edit” their profiles to create a better self-presentation through self-enhancement (Hancock & Toma, 2009). Some participate in “selective self-presentation,” an even more controlled act of impression management in which images are changed or distorted, often leading to further inaccuracy portrayed by the profile (Hancock & Toma, 2009).

Having the ability to “select” or specifically change or display particular points of interest, the users can greatly affect the impression made of them (Hancock & Toma, 2009). Both men and women on the online dating social network use “selective self-presentation” to their advantage to give the impression of being more desirable to their audiences. Hancock and Toma (2009) suggest men and women can control their self-presentation through social networks (i.e., online dating sites). Such sites comprise one segment of social networks; *Facebook* is another.

Realizing stereotypical gender roles are present in society, Dominick (1999) studied how men and women presented themselves on personal homepages. Dominick (1999) coded 500 randomly sampled personal homepages based on demographic and personal information, creative expressions, and photographs. He used Jones’ (1997) five strategies of image construction: *ingratiation* (statements of modesty, familiarity, and humor); *competence* (statements of abilities and achievements); *intimidation* (statements of anger and unpleasantness); *exemplification* (acts of moral superiority); and *supplication* (images of helplessness, while acting self-deprecating; Dominick, 1999). He concluded that females released more information than males while both males and females were equally likely to have photographs on their pages. Women’s photographs tended to be more sentimental in nature, while men’s more often were “joke images” and images that made them seem more competent and capable. He concluded that “A personal web page can be viewed as a carefully constructed self-presentation” (Dominick, 1999, p. 647).

Dominick asserted that the concept of impression construction exposes the different strategies men and women use to present themselves through images and information to gain a higher level of likeability, respect, and power in society (1999). Jones (1997) noted that individuals strive to be liked and accepted, resulting in social rewards such as friendship, social support, companionship, romance, and social status. Because smiling is associated with being liked and competent, Jones (1997) correlates gestures with the ingratiation and competence strategies of image construction. As *Facebook* was not founded until 2004, Dominick’s (1999) study is expanded upon in this study (<http://www.facebook.com/press/info.php?factsheet>).

Buffardi and Campbell (2008) studied whether photographs from a variety of social networks are self-promoting. They state, “Self-promoting connoted persuading others about one’s own positive traits” (p. 1307) and define physical attractiveness as the degree to which an individual appears self-promoting and vain in a photograph. While not examining gender differences in self-promotion per se, the researchers did examine “how sexy and modest . . . the individual in the main photo appeared to be” (Buffardi & Campbell, 2008, p. 1307).

Strano notes, “As the popularity of online social networking sites like *Facebook* grows, so do concerns about the impact of such sites on the impression management and relationship practices of today’s youth” (2008, para. 1). Using a qualitative study to observe the differences between women’s and men’s use of *Facebook* profiles, Strano found that women use their profile picture more than men for the purpose of impression management in order to be seen as attractive (2008). The researchers in the present analysis expand on the work of Buffardi and Campbell (2008) and Strano (2008) by investigating the frequency of eight specific gender traits in *Facebook* profile pictures. Based upon this review of literature, the researchers in this study will use the term “gender role” to mean the frequently associated character traits of men and women.

### Statement of Research Question

What is the impact of gender on the relative frequencies of the following traits—active, attractive, dependent, dominant, independent, sentimental, sexy, and submissive—in self-selected *Facebook* profile pictures?

The objective of this research may be stated in the form of the following null hypothesis:

*H<sub>0</sub>: There is no significant difference between the presentation of males and females in self-selected Facebook profile pictures on a set of traits found to be differentially associated with gender roles.*

### Methods

Five of the coauthors compiled a spreadsheet of all of their *Facebook* friends’ names. The names were then merged into a single list, and all duplicates were eliminated. The final list contained 3,295 names.

#### *Sample Selection*

A random sample of 300 *Facebook* subjects was assembled. Each researcher identified which subjects were their “*Facebook* friends,” allowing them to access the subjects’ profile pictures. Next, a slideshow presentation was created, which included each subjects’ most current profile picture, including the caption for the given image, when present, as well as comments and “likes.”

A list of gender stereotypes, comprised of the selected traits developed from the literature review was used to measure the extent to which profile pictures among male and female *Facebook* users were differentially associated with their gender.

#### *Final Creation of the Gender Traits*

Williams and Best (1990) identified the top five transnational gender stereotypes for both males and females (see Table 1). In conjunction with the literature review

conducted for this study, eight traits were selected for analysis based on the following findings:

Men are often portrayed in fairly active work roles, while women tend to be shown as more dependent on social roles involving romance, friendship, and family (Lauzen et al., 2008).

Men usually choose to display “joke images” or images that appear more independent, while women display relatively sentimental, emotional images (Dominick, 1999).

Men are often pictured as dominant, in elevated positions, showing victory, while women are pictured in more helpless, submissive positions (Goffman, 1976).

Men act in comparatively “narrative ways” and women behave more submissively (Bell & Milic, 2002, p. 213).

Men and women display self-promoting and vain images to appear physically attractive and wear minimal clothing to appear sexy (Buffardi & Campbell, 2008).

#### *Creation of Codebook for Data Collection*

Based upon the foregoing rationale, eight gender stereotypes were isolated for analysis, including *active*, *attractive*, *dependent*, *dominant*, *independent*, *sentimental*, *sexy*, and *submissive*.

#### *Coding Procedures and Operational Definitions of Eight Gender Stereotypes*

A codebook was developed to clarify meaning and facilitate coder judgments as they assessed the degree to which each profile picture exhibited the gender stereotypes mentioned above. The codebook provided definitions of each term based on the literature review and a series of synonyms used for coder training.

Coders were shown a random sub-sample of twenty *Facebook* profile pictures and were provided with eight 5-point Likert scales marked *Not at all*, *Not very*, *Somewhat*, *Fairly*, or *Very*. Coders rated each picture in terms of the prominence of the eight gender stereotypes isolated for analysis. In this way, each profile picture was coded eight times. Coding instructions for the image traits were as follows:

**Active**—Please rate the persons featured in their profile picture in terms of their level of activity, including the extent to which you see them presented as daring, lively, inventive, or engaged. Examples of “active” might include (but are not limited to) images of the subject as socially interactive, in an outdoor setting, doing physical activity, etc. A person featured in a photo would not be considered active if he/she displays traits of being indifferent, disinterested, lazy, or idle.

**Attractive**—Please rate the person shown as “attractive” if you see them presented as beautiful, charming, good-looking, or gorgeous. Examples of “attractive” might include (but are not limited to) images of the subject as physically in shape, or well put together.

**Dependent**—Please rate the person shown as “dependent” if you see them presented as weak, helpless, clinging, humble, inferior, subordinate, or vulnerable. A subject would not be considered dependent if he or she appears to be independent, strong, or mature.

**Dominant**—Please rate the person shown as “dominant” if you see them presented as ruling, governing, controlling, a predominating figure, or as a figure that appears to have power and authority; this can be displayed by seeing the featured subject as in an elevated position.

**Independent**—Please rate the person shown as “independent” if you see them presented as liberated, free, self-governing, self-supporting, unconstrained, strong, or mature. A subject would not be considered independent if he or she appears to be subordinate or subservient. A photograph portraying independence may display a person who is alone in the photograph or has a confident stature or individuality.

**Sentimental**—Please rate the person shown as “sentimental” if you see them presented as emotional, understanding, gentle, romantic, affectionate, tender, comforting, and appearing to display gentle feelings, such as pity, affection, sympathy, fondness, caring, and compassion. Subjects would not be considered sentimental if they appear to be independent, strong, hard-hearted, unemotional, and thick-skinned. A photo showing an individual as being sentimental may include (but would not be limited to) persons showing emotion, loving, or cuddling with another. Images that include nostalgia or romance may also help to portray an individual as sentimental.

**Sexy**—Please rate persons as “sexy” if you see them presented as arousing, provocative, seductive, sensual, suggestive, or voluptuous, or displaying flirtatious facial expressions or body postures and/or wearing revealing clothing.

**Submissive**—Please rate persons shown as “submissive” if you see them presented as unresistingly or humbly obedient. Such images that show the main subject not holding the center of attention can display this within a photograph (i.e., the main subject is far away from the primary focus point). Submissive subjects may also be displayed through subtleness, passivity, lack of self-confidence, or the appearance of being meek, docile, tame, and/or subdued.

### *Reliability of Coder Judgments*

After developing the operational definitions, a panel of five experts in the fields of photography and the visual arts, art history, and media analysis were asked to code a sample of pictures. Panel members, using the eight operational definitions, viewed and rated the twenty images in the slideshow. As mentioned, 5-point Likert scales were used to rate the prominence of each trait for each *Facebook* profile picture. The panel assigned a value from 1 to 5 representing the prominence of each trait. In this way, five coders made eight judgments for each of 20 images, for a total of 800 judgments.

After coding, the highest and lowest scores for every scale were dropped, leaving 480 judgments for computing reliability, or 60 judgments for each of the eight traits (24 judgments on each profile picture). Using these data, a reliability score (see Table 2) was computed for each of the eight traits before coding the remaining 280 profile pictures.

For assessing reliability of coder judgments, the percentage of times that five independent coders came within one point of one another in assigning point values for each of the eight variables of interest (attractive, dominant, etc.) was computed for a random sub-sample of twenty Facebook profile pictures (see Table 2). Thus, ten pair-wise comparisons for each variable for each of the twenty Facebook pictures were made (coder 1 against coder 2; coder 1 against coder 3; coder 1 against coder 4; coder 1 against coder 5; coder 2 against coder 3, etc.). In this way, a total of 1,600 comparisons were made. Table 2 reports the results of this reliability check.

### *Operational Definitions of Gender*

**Male**—Defined for each *Facebook* profile picture by having coders determine if the subject was of male gender by first recognizing biological makeup manifested in physical appearance. That is, coders were asked to code ambiguous cases as “can’t tell” (no such cases arose). In addition, hairstyles, clothing, and fashion accessories were examined to help coders decide whether a subject in a profile picture was male or female. Males tended to have short hair and were more likely to wear such clothing items as suits, shirts, jeans, baggy shorts, ties, and hats.

**Female**—Defined for each *Facebook* profile picture by having coders determine if the subject was of female gender by first recognizing biological makeup through physical appearance. That is, coders were asked to code ambiguous cases as “can’t tell” (no such cases arose). In addition, hairstyles, clothing, and fashion accessories were examined to help coders decide whether a subject in a profile picture was male

**Table 2** Reliability Assessment Based on the Percentage of Times that Five Independent Coders Came within One Point of One Another when Assessing Eight Traits Present in a Random Subsample of 20 *Facebook* Profile Pictures

Variable	Reliability
Active	.775
Attractive	.790
Dependent	.735
Dominant	.795
Independent	.645
Sentimental	.655
Sexy	.775
Submissive	.875

The results of the reliability check as reported in Table 2 were deemed acceptable and coding was completed by the research team for all images. All discrepancies were then resolved by discussion and debate.

or female. Females tended to have longer hair and wear tighter clothing (i.e., skirts, jeans, dresses, tops), as well as makeup, high heels, jewelry, etc.

### *Validity*

In assessing validity, several factors appear relevant. First, the expert panel, whose background from the related fields of art history, photography and the visual arts, and media studies, reported that they felt comfortable and capable with coding, which yielded reliable results. Second, the results of this study concurred with past research, including findings built on data from several cross-cultural studies; findings therefore appear to have both face and content validity. In addition, the remaining coding done by pairs of researchers continued to yield reliable results when cross-checked between coding teams. Such consistency, when taken as a whole, enables strong arguments for both measurement and construct validity.

### *Data Analysis*

Data analysis was designed to assess the impact of gender on the relative frequencies of traits, including *active*, *attractive*, *dependent*, *dominant*, *independent*, *sentimental*, *sexy*, and *submissive*, in self-selected *Facebook* profile pictures. To determine the nature of the relationship of these traits to gender, the variables representing the constructs of gender and the eight traits isolated for analysis were identified, defined, measured, and compared.

The scores associated with each of the variables of interest for the 300 *Facebook* profile pictures were recorded on a spreadsheet. Likert scores, treated as interval measures, were used to compute descriptive statistics—mean, median, mode, standard deviation, and variance—by gender of the subjects featured in their profile pictures. Finally, independent sample *t*-tests were calculated with the confidence level of 95%, to determine if there were significant differences in the presence of these traits (dependent variables) based on the *Facebook* users' gender (independent variable). The Levene's Test for Equality of Variance was used to decide whether equal variances or unequal variances were assumed.

## **Results**

Overall, 125 individuals (41.7% of the sample) were identified as male, and 175 (58.3%) were identified as female ( $N = 300$ ). The results for the eight gender traits are indicated below.

### *Relative Frequency of the Trait Active*

Table 3 reports the means, standard deviations, difference scores, and *p*-values associated with each trait by gender assessed in this study.

An independent sample *t*-test was conducted to evaluate the hypothesis that there is no significant difference in the relative frequency of the trait *active* in self-selected

**Table 3** Means, Standard Deviations, Difference Scores, and *p*-Values Associated with Each Trait by Gender for all Facebook Profile Pictures (*N* = 300)

Trait	Men ( <i>n</i> = 125)		Women ( <i>n</i> = 175)		Difference	<i>p</i> -Value
	Mean	S.D.	Mean	S.D.		
Active	2.47	1.50	1.87	1.19	0.60	.000
Attractive	2.86	1.38	3.50	1.24	2.26	.000
Dependent	1.70	1.07	2.64	1.37	0.94	.000
Dominant	3.17	1.26	2.69	1.22	0.48	.001
Independent	3.52	1.33	2.49	1.48	1.03	.000
Sentimental	2.01	1.33	2.40	1.42	0.39	.015
Sexy	1.86	1.19	2.11	1.20	0.25	.075
Submissive	1.82	1.04	1.99	1.04	0.17	.164

*Facebook* profile pictures of males and females. Subjects featured in profile pictures of males were rated more *active* than females (as Table 3 shows, on the trait *active*, profile pictures of males averaged a mean score of 2.47 versus 1.87 for those of females, for a difference of .6 in favor of profile pictures belonging to male *Facebook* members), and the difference was statistically significant at the .05 level of probability. Therefore, the null hypothesis regarding the variable *active* was rejected ( $t = 3.698$ ,  $p = .000$ ).

#### *Relative Values for the Trait Attractive*

An independent-sample *t*-test was conducted to evaluate the hypothesis that there is no significant difference in the relative frequency of the trait *attractive* in self-selected *Facebook* profile pictures of males and females. Subjects featured in profile pictures of females were rated more *attractive* than those of males (see Table 3), and the difference was statistically significant at the .05 level of probability. Therefore, the null hypothesis regarding the variable *attractive* was rejected ( $t = -4.155$ ,  $p = .000$ ).

#### *Relative Values for the Trait Dependent*

Similarly, at the .05 level of probability, there was a statistically significant difference between males and females on the trait *dependent* in self-selected *Facebook* pictures. As Table 3 indicates, females were rated .94 points higher than males on this trait ( $t = -.442$ ,  $p = .000$ ).

#### *Values for the Trait Dominant*

Table 3 reveals that for the trait *dominant*, there was also a significant difference between male and female subjects; at the .05 level of probability, images of males were rated higher than those of females (3.17 for males versus 2.69 for females ( $t = -3.325$ ,  $p = .001$ )).

#### *Values for the Trait Independent*

Table 3 also shows images of males were rated higher than images of females on the trait *independent* (3.52 versus 2.49, respectively), with a statistically significant difference on this variable ( $t = -6.209$ ,  $p = .000$ ).

#### *Values for the Trait Sentimental*

On the trait *sentimental*, images of males were rated lower than those of females (2.01 for males versus 2.40 for females, for a difference score of .39). At the .05 level of probability, this difference was statistically significant ( $t = -2.418$ ,  $p = .015$ ).

#### *Values for the Trait Sexy*

An independent sample  $t$ -test was conducted to evaluate the hypothesis that there was no significant difference in the relative frequency of the trait *sexy* in self-selected *Facebook* profile pictures of males and females. On this variable, images of females were rated higher than those of males (2.11 versus 1.86, respectively), but this outcome was not statistically significant ( $t = -1.787$ ,  $p = .075$ ).

#### *Values for the Trait Submissive*

Finally, a similar  $t$ -test was conducted to evaluate the hypothesis that there was no difference in the occurrence of the trait *submissive* in self-selected *Facebook* profile pictures of males and females. In this case, images of females were rated higher than those of males (1.99 versus 1.82, respectively), but again, this outcome was not statistically significant ( $p \geq .05$ ,  $t = -1.396$ ,  $p = .164$ ).

### **Discussion and Conclusions**

The set of 300 self-selected *Facebook* profile pictures show marked differences in terms of how males and females present themselves across a number of traits selected to represent gender stereotypes, including *active*, *attractive*, *dependent*, *dominant*, *independent*, and *sentimental*. No significant differences were found in the traits *sexy* and *submissive*.

Prior research (Williams & Best, 1990) suggests the traits *active*, *independent*, and *dominant* are usually more prominent with males, while *attractive*, *dependent*, *sentimental*, *sexy*, and *submissive* are generally more often tied to females. Therefore, it was expected that *Facebook* profile pictures associated with male subjects would rate higher for the trait *active* as compared to females; this expectation was supported. Images of males often featured subjects in athletic gear, playing a sport, or in outdoor settings. Perhaps males wear athletic clothes in outdoor settings to express robust health and strength; perhaps it is a way to guard against appearing passive and meek.

In general, past research suggests that attractiveness is perceived as a more feminine trait (William & Best, 1990). This is not surprising in light of cultural norms

that convey to females from an early age that appearance is important, and that by appearing attractive, they can attain social approval. Social attractiveness and being seen as pretty are clearly ideals normally associated with femininity. Thus, it was expected that *Facebook* profile pictures associated with female subjects would rate higher for the trait of *attractive*; this expectation was supported. Since *Facebook* is a social networking site, where the profile picture serves as a first impression, the significant difference could be attributed to a goal by females to conform to stereotypical expectations of attractiveness, especially among the twenty-somethings that comprised the majority of the sample used in this study.

Dependence is also perceived as a more feminine trait. Therefore, the researchers expected females to rate higher for the trait of *dependence* as compared to males. In the process of image rating, researchers observed females appearing in images with others more often than males, frequently in close proximity with others (i.e., embracing). This expectation was also supported, with a statistically significant average female score of nearly a full point higher on a 5-point scale than that scored for images associated with males. This is the largest separation for all of the traits analyzed in this study. Could this outcome result because males more often than females regard the acts of seeking help and support from others as signs of weakness?

In contrast, *dominance* may be perceived as a more masculine trait (William & Best, 1990). Thus, the researchers expected males to rate higher on this trait compared to females. This expectation was supported. While rating, researchers noticed more males appearing in the center of the picture, being the main focus, or in positions of confidence or victory compared to those of female images. According to Wanta and Legett (1989), dominance is also perceived when subjects are located in an elevated position relative to others.

Generally, independence is perceived as a more masculine trait (William & Best, 1990). Therefore, the researchers expected males to rate higher for the trait of *independent* as compared to females. This expected outcome was also confirmed by the data, perhaps suggesting that males may believe that appearing with fewer people in the frame conveys independence and self-reliance, and therefore promotes a more masculine image.

Typically, it is regarded that sentimentality is perceived as a more feminine trait (William & Best, 1990). That is, it may be socially more acceptable for females to be in touch with their emotions and display them in public settings. Therefore, the researchers expected females to rate higher for the trait of *sentimentality* as compared to males. However, after conducting the research study, this expectation was not supported. Surprisingly, there was a statistically significant average male score higher than that which accrued for images associated with female subjects. Could such an outcome be attributed to the idea that male twenty-somethings are trying to appeal to females on *Facebook*? Perhaps by displaying a sensitive side, men hope to present themselves more positively towards women.

Generally, it is regarded that submissiveness is perceived as a more feminine trait (William & Best, 1990). In gender roles, it is more common for women to assume a more passive communication style. From this, the researchers expected females to rate

higher for the trait of *submissive* as compared to males. Wanta and Legett (1989) suggest submissiveness is displayed through showing helplessness and appearing weak or easily dominated. After conducting the research study, this expectation was not supported. Perhaps nowadays it is more socially acceptable for men to have more feminine tendencies without negative criticism. Generally, sexiness is perceived as a more feminine trait (William & Best, 1990). Therefore, the researchers expected females to rate higher for the trait of *sexy* as compared to males. However, this expectation was not supported. In Buffardi and Campbell's (2008) coding of social networking photographs, they recognized that with the public nature of *Facebook*, females might not feel comfortable overtly displaying their physical charms in such a public setting. Perhaps safety issues are at work; perhaps females in the twenty-something demographic may feel that dressing with alluring outfits may convey the idea that they might be labeled not as sexy, but as promiscuous, a negative connotation that many may wish to avoid. Another explanation for failure to find significance may be due to expert coders interpreting "sexy" as meaning "sexy to you." Although this was the term used by William and Best (1990) to summarize survey data on this typically perceived gender trait, age differences and the coder's own sexual orientation may have been intervening variables, posing a problem for coders who might not find the individuals in the profile picture sexy to *them* per se, whether they would rate profile pictures of individuals of the opposite or same sex as "sexy." Perhaps in future research related to profile pictures, another term (e.g., "sexual") might not so clearly imply a specific audience for the trait.

According to the assumptions of objectification theory, it should be expected that women, more so than men, will be sexually expressive in their social network profiles because they perceive sexuality as a means of status in society. Valkenburg, Schouten, and Peter (2005) echo this prediction, concluding that women often gender stereotype in their online presentation of self. The results of this study, however, did not support this theory.

Masculinity ideology theory postulates that men internalize cultural standards for masculinity, adapting their behavior and attitudes to cultural masculine norms (Chu, Porche, & Tolman, 2005). Some of these masculine standards in American society are independence, toughness, and sexual virility. As men and boys are exposed to media depictions of masculinity, particularly sexually powerful and promiscuous role models, they are more likely to see such behavior as the definitive ideal for their gender, and adopt such practices. Researchers have found that higher levels of media usage and engagement did increase the degree of traditional masculine ideology found in men (Chu et al., 2005). The results of the current study add support to this theory.

Based on the majority of these findings, the research hypotheses posited in this study were supported in six out of eight cases. These findings generally conform to gender stereotypes found in prior research. This finding is significant because it extends the research regarding stereotypical gender traits displayed in professional media depictions to self-selected social media displays. It also extends the research on gender differences in impression management generally, in both interpersonal communication and social media, to include gender-specific traits that are part of young men's and women's impression management.

Judith Butler, in her seminal work *Gender Trouble* (1990), views gender as a fluid social construct that potentially changes with context, cultures, and time periods. Gender is best seen as a way of doing the body in performance. However, it is not simply a matter of choosing to perform gender; she argues that people perform gender everyday whether consciously or not. The types of unconscious performances that are normative in Western culture and media, however, support hegemonic ideals. Butler therefore calls for conscious performance, or “gender trouble” as a way of subverting normalized notions of gender identity. Since the mass media is the central site where normative or potentially non-normative definitions of gender operate, Butler calls for and admires the type of gender trouble invited by cultural icons like Madonna, famous for her reflexive, fluid, and often disruptive constructions of gender and sexuality. The kind of performance of gender that Butler calls for was not found in self-selected profile pictures in the current research study. Twenty-somethings may be replicating in their *Facebook* profile pictures the stereotypical gender traits they experience in professionally produced media images and in culture. Given the explosion in popularity of social networking sites such as *Facebook* and the significant role they play in managing social relations and shaping impression management and gender identities, these platforms should increasingly become the focus of communication researchers’ attention.

### Limitations and Future Research Directions

Several limitations of this study should be mentioned. First, because the sampling frame was the aggregated friend list of five college-aged females, the sample for this study, though large, was not representative of the universe of *Facebook* users. The majority of the pictures were of youthful twenty-somethings; in the future, a broader age range of users should be included.

Second, the researchers lacked racial diversity; all are Caucasians. This limitation may have contributed to some coding bias, and may have reduced the diversity of the subject sample.

Finally, researchers in future studies may do well to expand the number of traits isolated for analysis, thus deepening our understanding of gender stereotypes in self-selected images used for impression management in the online world.

Social media use has become a major part of people’s lives; it is a global phenomenon, as the political upheavals across the Arab world from Tunisia to Egypt and Libya amply demonstrate. Because it is so new, few studies exist analyzing the profile pictures that people choose. By conducting a study comparing the profile pictures of men and women, the researchers may see differences in how men and women portray themselves in pictures that *they both create and exhibit through their own choice*.

*Facebook* gives people the opportunity to present themselves to the public in any way they wish, whether it be as attractive, independent, active, etc. As social media become more prominent, further research can be done to help bring about more generalizations and draw more conclusions regarding *Facebook* and social media in general. Future research should investigate the use of *Facebook* for social purposes versus professional/political reasons (i.e., to gain publicity for a particular business

or product). Other possible research could include a qualitative study of why people choose a certain *Facebook* picture and what they feel it represents about them.

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