

Nonverbal Displays of Self-Presentation and Sex Differences in
Profile Photographs on MySpace.com

Carolyn L. Kane
School of Communication
Cleveland State University
carolyn_lateulere@yahoo.com

Katheryn Maguire
Department of Communication
Wayne State University
kmaguire@wayne.edu

Kimberly Neuendorf
School of Communication
Cleveland State University
k.neuendorf@comcast.net

Paul Skalski
School of Communication
Cleveland State University
p.skalski@csuohio.edu

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Abstract

This study was designed to identify the ways in which people present themselves online in the social network environment of MySpace, and whether self-presentation differs by the sex of the user. Content analysis was conducted on a sample of 300 public profiles from MySpace.com. Results indicate significant relationships between intimidating behaviors and the intended audience, and intimidating behaviors and the user's sex. Additionally, there was a relationship between the user's sex and nonverbal behaviors displayed.

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Social network websites are becoming an increasingly popular form of computer-mediated communication (CMC), combining many of the features that once required membership to several websites and services, but are now available in a “one stop shop” at sites like MySpace and Facebook. These websites have exploded in popularity in recent years, with users numbering in the hundreds of millions (Kornblum, 2006; Newland, 2007). According to comScore (2008), visitors to social network websites have grown 34% in the past year to 530 million visits, which represent two out of every three internet users. In particular, MySpace.com recently ranked number three on the January 2009 Hitwise internet rankings, with a larger (US) market share of visits than Yahoo, MSN and YouTube (Hitwise, 2009). This immense popularity makes MySpace a particularly compelling social phenomenon for research.

Users of social networking websites take advantage of CMC to influence how others perceive them through their employment of text-based and visual presentation strategies. One aspect of self presentation involves how biological sex is “performed” to match, or challenge, societal constructions of gender. Danet (1996) refers to this sociological phenomenon, stating that from an early age, individuals try to signal that they are male or female, maintaining their self-presentation in accordance with their culture’s view of gender. Then again, CMC users may experiment with their gender identity in on-line interactions (Danet, 1998), possibly challenging gender stereotypes. According to Graddol and Swann (1989), people can “pull rank, express intimacy, or show respect [through talk]. If women and men carry out different kinds of activities in conversation, this will affect not only the local management of talk, but also how women and men are able to relate to one another” (p. 69). In this study, we examine how MySpace users

present themselves to other computer users through the photographs they include on their homepage as well as their profile description, and the extent to which these self presentations are associated with the user's sex. The purpose of this study is to compare the online presentation of self using nonverbal behaviors found in profile photographs to other types of self-presentation found in CMC and face-to-face interactions and the relationship to the sex of the user.

Literature Review

Computer-Mediated Communication and MySpace

Social networking sites are relatively new interfaces for CMC. Prior research on CMC has focused on text-based electronic mail and newsgroups, as they were the first popular forms of CMC to be widely researched (Culnan & Markus, 1987; Kiesler, 1987; Sproull & Kiesler, 1986), followed by internet-based forms of CMC like personal homepages (Dominick, 1999; Papacharissi, 2002), web logs (Bortree, 2005; Trammell & Keshelashvili, 2005), and online dating sites (Ellison, Heino & Gibbs, 2006; Gibbs, Ellison & Heino, 2006). Much of the early CMC research used a "cues filtered out approach" due to the absence of nonverbal cues available to users of email and other text-based media (Culnan & Markus, 1987; Kiesler, 1987; Sproull & Kiesler, 1986; Sussman & Sproull, 1999). According to this model, text based media are inappropriate for some social tasks because of the reduced social cues available in these types of mediated communication. Joseph Walther and Malcolm Parks (2002), however, noted that deep interpersonal relationships do form on the internet and stated that "the internet is a profoundly social medium" (p. 530). They found that online relationships developed at a slower pace than face-to-face (FtF) relationships, but they are no less personal. It is exactly the personal, interactive nature of MySpace that makes it unique among text-based CMC and stand-alone personal homepages.

Social network websites differ from text-only mediated communication largely through the ability to convey additional cues through photography and other personalization. Whereas Herring (2004) stated that users have not yet embraced the full potential of CMC to incorporate audio and visual messages in their on-line communication, social networking sites provide a way for users to take advantage of both text-based and visual communication. Qian and Scott (2007) surveyed 207 individuals who have a personal weblog, finding that nearly 70% of the respondents included a potentially identifying picture on their blog. They also found that 51% of the respondents wrote their personal blog for individuals they know offline, and 42% were worried about the negative consequences of blogging. Despite their capacity for communicating information about the author, photographs have not been systematically analyzed in previous studies examining self-presentation on personal homepages (Dominick, 1999; Papacharissi, 2002) or blogs (Trammell & Keshelashvili, 2005). Given the extent to which individuals include photographs in their CMC, and their concern about how they may be perceived, it is important to analyze the impression that the visuals may leave on the viewers of their social networking site.

MySpace allows users to interact with each other in a visually rich atmosphere, with tools designed to allow an online representation of self. One of the most prominent features on the page in the default setup is the user photograph, which is displayed in the upper left-hand corner of the page. As the viewer reads left to right from the top of the page, the photograph is the first thing that they will see. The profile picture will be the primary profile feature analyzed in this study because of its prominence on the page, and its capacity to communicate the author's self through nonverbal behaviors. Because on-line photographs have not been systematically studied, one of the challenges of the present study is to develop a framework in which photographs could be analyzed for self-presentation behaviors in the context of social network websites. The next

section reviews research on self presentation theory to help create such a framework.

Self Presentation Theory

One of the fundamental questions underlying development of this study asked how people present themselves on MySpace, and how their self presentation strategies are related to their biological sex. Goffman's (1959) self-presentation theory used dramatic metaphors to explain the way people presented themselves in different everyday situations. He theorized that people act as "performers" who strategically present certain impressions by accentuating some things about themselves and concealing others from the audience. In FtF interactions, performers can use "props" like dress, grooming, and sometimes furniture and surroundings to "set the stage" for their self-presentation performances. Nonverbal cues such as facial expressions, posture, and gestures are other tools that a performer may use in addition to speech to convey these impressions. Although the theory was originally developed to explain self-presentational behaviors in FtF interactions, it has since been applied to various interactional settings, including everyday situations (Nezlek & Leary, 2002) and driving (Basset, Cate & Dabbs, 2002), and CMC contexts including email (Gradis, 2003), personal websites (Dominick, 1999; Kim & Papacharissi, 2003; Papacharissi, 2002), web logs (Bortree, 2005; Trammell & Keshelashvili, 2005), and online personals (Ellison, Heino & Gibbs, 2006; Gibbs, Ellison & Heino, 2006).

Jones (1990) extended Goffman's theory by identifying common strategies for self-presentation. His work suggested five strategies, which have been summarized by Dominick (1999) and whose definitions have been used in further self-presentation research (e.g., Trammell & Keshelashvili, 2005). *Ingratiation* is defined as having the goal of being liked by others. Some common characteristics of ingratiation are saying positive things about others or

saying mildly negative things about oneself, statements of modesty, familiarity, and humor. *Competence* is described as having the goal of being perceived as skilled and qualified. Common characteristics include claims about abilities, accomplishments, performance, and qualifications. *Intimidation* is described as having power as a goal. Typical characteristics are threats, statements of anger, and potential unpleasantness. *Exemplification* is having the goal to be perceived as morally superior or possessing high moral standards. Characteristics include ideological commitment or militancy for a cause, self sacrifice, and self discipline. Finally, *supplication* is having the goal of nurturance or appearing helpless so that others will come to a person's aid. Characteristics of this self-presentational approach include entreaties for help and self-deprecation (Dominick, 1999, p. 648). Overall, ingratiation and competence have been found to be the most commonly used strategies in FtF situations (Jones, 1990).

Papacharissi (2002) describes personal homepages as ideally suited to self-presentation performances according to Goffman's theory, because "the expressions given off are either minimal, or carefully controlled, or both" (p. 644). Given the amount of information available about each presentation strategy from previous research, the concepts of ingratiation and competence may be explored confidently using nonverbal behaviors and visual elements as indicators in the current study. The remaining three strategies have not been investigated as thoroughly, perhaps because they are exhibited less frequently. The information available for the intimidation and supplication strategies indicates that there are some nonverbal behaviors associated with those two strategies (Jones, 1990). Nonverbal indicators are necessary for the purposes of this study to assess whether the strategies are present in the profile photographs. Exemplification, however, is primarily assessed using spoken indicators (Jones, 1990). Because the focus of the current study is the relationship between the profile photograph and the profile

information; measures of exemplification are not appropriate for the research being undertaken in this context. The remaining strategies (ingratiation, competence, intimidation and supplication) will be assessed in the profile photographs and profile information of MySpace users, particularly in terms of their association with their biological sex.

Sex Differences and CMC

There is a rich tradition of studying sex-based differences in CMC. Generally speaking, the research supports gender stereotypical behavior, where females use a more feminine language and style (e.g., intensifiers, self disclosure, references to emotions or relationships) and males use a more masculine style (e.g., aggressiveness, disagreement, humor), although similarities were also noted in the literature as well. For example, Guiller and Durndell (2007) used qualitative analysis to examine interactions between psychology students in a computer-mediated discussion group. They found that women employed more personal and emotional forms of language, such as disclosing personal information beyond opinions and feelings, while men tended to be more informative in nature. Gooden and Winefield (2006) found differences in the messages left by male and female visitors on cancer websites in that males tended to provide more informational support whereas females tended to provide more emotional support. On the other hand, Herring and Paolillo (2006) found little evidence to support gender differences in CMC, and instead attributed differences in language use to the type of blog being written (i.e., personal journal vs. filter blogs). Similarly, Huffaker and Calvert (2005) reported no gender differences in the use of emoticons, in references to other individuals, or the use of communal language in their examination of teenage weblogs, although they did find that males demonstrated more “sureness” than females.

There is also a tradition of finding sex differences in self presentation strategies, starting with Goffman's (1979) seminal work entitled *Gender Advertisements* (1979) where he extended his self-presentation theory to explain gender displays featured in advertising photographs of popular magazines. He posited that advertisements displayed "hyper-ritualizations" of social scenes, the majority of which served to subordinate females and reinforce the idea of male dominance. He identified several categories of behavior found in commercial photography: relative size, feminine touch, function ranking, family, ritualization of subordination and licensed withdrawal. Goffman's sampling technique and coding methodology have received some criticism (Belknap & Leonard, 1991); however subsequent studies reporting more reliable methodologies have continued to find support for his ideas over time (Belknap & Leonard, 1991; Kang, 1997).

Whereas there is no evidence that connects Goffman's (1979) gender portrayals in advertising to the type of personal photography found in MySpace profiles, his gender variables may possibly be found in amateur photography, such as that found on MySpace. In MySpace, the tools available to the performers (users) are html-based, but users are able to creatively customize their own setting. Photographs in users' profiles are able to convey not only their appearance, but also information about their personality through nonverbal cues and photographic technique or manipulation. Profile information and user-generated text approximate spoken information, while photographs and images approximate non-verbal communication and information about the setting. Replicating Goffman's gender advertisement analysis in the context of MySpace is beyond the scope of this study; however, his definitions of dominating and supplicating postures will be added to the measures from nonverbal communication research in this analysis to operationalize Jones' (1999) intimidation and

supplication strategies, respectively. To further connect Goffman's ideas of self-presentation and his ideas of gender portrayals in photography with the self presentation styles put forth by Jones (1999), the following research question is posed:

RQ1: Is there a relationship between a user's self-reported sex and the types of self-presentation exhibited on MySpace?

Dominick (1999) conducted a landmark study using content analysis to examine personal homepages from a self-presentation perspective. He identified common features of homepages and examined how people used self-presentation strategies to present themselves online.

Dominick used Jones' (1990) five self-presentation strategies to categorize home pages and measured levels of self-disclosure by the presence or absence of personal information. This study did note whether or not the homepages included a photograph of the author, but did not attempt to analyze the photograph itself. He found that ingratiation was the strategy used the most, followed by competence. These results are consistent with findings in FtF interactions. Although the majority of the sample contained pages authored by males, Dominick found sex differences in the amount of self-disclosure on the pages. Consistent with FtF interaction, females tended to disclose more personal information about themselves.

Similarly, Trammell and Keshelashvili (2005) examined "A-list" blogs from a listing of the most popular blogs. Building on Goffman's self-presentation theory, and using Jones' strategies for self-presentation, this researchers content analyzed blogs for self-disclosure and self-presentation strategies. They found that bloggers disclosed a moderate amount of personal information about themselves, and used the strategies of ingratiation and competence most frequently. The study found that the majority of the blogs were authored by males (70.8%), and that there were sex differences in the types of information presented in the blog. The results of

the study showed that female bloggers tended to write about more personal subject matter and men's blogs tended to be more informational in nature. The sex differences in self-disclosure found in blogging and online dating literature indicate that similar differences may be found in the context of MySpace.

Although CMC research has found that male users tend to write more text in task-related interactions (Guiller & Durndell, 2007; Sussman & Tyson, 2000; Yates, 2001), previous studies in online self-presentation have not examined the amount of information written in description of the self. Online self-presentation research has found that female users tend to disclose more personal and emotional information (Dominick, 1999; Trammell & Keshelashvili, 2005), which is more appropriate in the context of a social network website than in task-related interactions. Therefore, it is not known whether the amount of text written in a profile will follow the patterns established by CMC or if they will deviate from the results of CMC research because of the different environment in a social network website. Indeed, Herring and Paolillo (2006) found that both males and females used "female" preferential features (e.g., referring to others, relationships) in their personal blogs. To build upon and add to the findings of these previous studies, the following questions may be asked in relation to MySpace:

RQ2: Is there a relationship between MySpace user's self-reported sex and the amount of text written in the "About me" section and various "Interest" categories?

Nonverbal Displays and Sex

If written text in MySpace profiles may be considered analogous to speech, then the behaviors exhibited in photographic representations must be considered to analyze nonverbal information. As such, a critical way in which the profile photographs on MySpace can be analyzed is through the nonverbal behavior exhibited in the profile photograph. Mehrabian

(1972) defined nonverbal behavior as communication “actions distinct from speech” (p. 1). In an online context like MySpace, communication is a combination of still photography, text and emoticons or graphics. Online authors must supplement text with nonverbal cues that are usually present in FtF communication, and viewers must “fill in” information using the cues available in an online environment (Walther, 2006). A visually rich environment like MySpace offers users the ability to supplement text with photographs and graphics with which they may construct an identity for the audience.

Nonverbal elements of self-presentation are an important part of Goffman’s (1959) self-presentation theory and Jones’ (1990) self-presentation strategies. Both works emphasize the importance of the nonverbal behavior (expressions, gestures, clothing and context) that accompanies verbal behavior in FtF interactions. In the context of MySpace, senders strategically select photographs with the intention that they will be received in a particular way. They project information through their nonverbal language, clothing and context which they intend to be received by people who view their profile. Previous research in the area of nonverbal communication (Ekman & Friesen, 1975; Tracy & Robins, 2003) suggests that many of these things can be depicted in photography and be subsequently decoded by viewers.

There are a number of nonverbal signals that are relevant to photographs on social networking sites. First, Knapp and Hall (2002) explain that perceivers tend to pay more attention to signals communicated in the face than in other communication channels. This concept is called *facial primacy*, which is defined as the tendency to give more weight to the expressions of the face. The idea of facial primacy may derive from the long-held belief that the “face reveals a great deal about a person’s personality or character” (Knapp & Hall, 2002, p. 306) and is a “tool for self presentation” (p. 335). Indeed, the profile photograph on MySpace is one of the first

things a viewer sees, and as such, is one of the primary sources of information about the person's character and personality in the viewer's estimation. If the face is smiling, for example, they person will likely be seen as happy, pleasant, non-threatening (Ekman & Friesen, 1975; Knapp & Hall, 2002; Mehrabian, 1971; Richmond & McCroskey, 2004) and has been associated with the ingratiation and competence self presentation strategies (Jones, 1990).

Second, elements of the hand and body also carry meaning. For instance, hands may be used as an expressive tool as well, most literally in the use of emblems. Emblems were identified by Ekman and Friesen (1972) as "nonverbal acts (a) which have a direct verbal translation usually consisting of a word or two, or a phrase (b) for which this precise meaning is known by most of all members of a group. . . (c) which are most often deliberately used" (p. 357). The meanings of most emblems are specific to a particular group or culture. For example, emblems such as "flicking off" someone by raising the middle finger, or flashing a "peace sign" with the index and middle fingers raised in a "v" are emblems that are readily recognizable to most people in the United States (Knapp & Hall, 2002). Body position and posture have also been widely identified by researchers as having meaning in different interactional situations. Mehrabian (1972) posited that attitudes such as evaluation and liking could be communicated by posture and position cues. These behaviors may be translated photographically into the MySpace context where the viewer may use these cues to make judgments about the user's character and personality. Therefore, they must be considered as a part of the user's photographic self-presentation.

Differences in nonverbal communication behaviors may be attributed to the subject's sex in addition to environmental factors. Hall and Friedman (1999) studied several sex and status differences exhibited in nonverbal behavior in a workplace. Consistent with previous literature,

their study found that women and men express different levels of nonverbal behavior, including smiling, gazing, nodding, expressiveness, self-touching, and gesturing. The results of the study showed that women were found to smile, nod, touch, and gaze more than men (Hall & Friedman, 1999). A study by Luxen (2005) used evolution theory to predict that men would show more dominant behaviors (closed posture, head shaking and discouraging gestures) in a demanding interaction and women would show more affiliative behaviors (nodding, laughing and open body position). The “demanding interaction” was an interview assessment in a job application situation. Luxen was able to find significant evidence that men displayed more dominant nonverbal behaviors, while women showed more affiliative behaviors. Then again, such differences may be less prevalent in an on-line environment particularly of the individuals want to present a gender identity contrary to their biological sex (Herring & Martinson, 2004). Based on the sex differences found in previous nonverbal literature, the following question may be addressed in regards to the nonverbal behavior found in the MySpace environment:

RQ3: Is there a relationship between a user’s self-identified sex and the types of nonverbal behavior exhibited in profile photographs on Myspace?

Method

Sampling

A random sample of 300 public MySpace profiles was selected using the site’s “browse” engine, sorting results by users with the most recent “login”. The browse engine yields 3000 profiles, from which every tenth profile was selected using a random starting point. Profiles that were obviously intended to advertise adult websites were excluded from the study. Without a comprehensive list of the MySpace population, this is the best available way to choose a random sample of MySpace profiles. Shelton and Skalski (2007) used a similar method to draw a

sample of Facebook profiles. The MySpace profiles were chosen using the broadest age range available due to the constraints of the engine, within 18-68 years of age. No other constraints were specified in the search. The profiles were archived using MHTML format, which saves all html, text and photos into a single file. MHTML is superior to the PDF format for saving html files, as it maintains the maximum integrity of the original file. The drawback to archiving pages this way is that dynamic content like streaming music, video, or java applications is lost. However, this method is adequate for the purposes of this study, in which the profile photo and text will be the focus of the analysis.

Procedure

The research method chosen for this study was content analysis, which is defined by Neuendorf (2002) as “the systematic, objective, quantitative analysis of message characteristics” (p. 1). This method was chosen because it is a method that is naturally suited to studying the visual and textual elements of a context like MySpace in a systematic way. Previous studies in online communication have used content analysis to address similar questions of self-presentation (Dominick, 1999; Papacharissi, 2002; Trammell & Keshelashvili, 2005). The current study developed many original measures to address the unique aspects of MySpace, including measures designed to analyze the profile photograph.

Nonverbal behaviors. This study used five groups of nonverbal. The Gaze and Eye Behavior group encompassed the direction of the subject’s gaze (straight, avoiding the lens, at camera out of the corner of the eyes, and looking up/down) and other behaviors of the eyes (normal open eyes, hooded eyelids, looking through the lashes, and rolling the eyes). The Mouth Behavior group was comprised of various behaviors of the mouth and tongue that were identifiable in the profile photographs (frowning, neutral mouth, smiling, puckered lips, tongue

out, and laughter). Head tilting was a single variable that identified whether or not the head was perpendicular to the shoulders. Body and Posture variables described the body position (sitting, standing, leaning, forward lean, kneeling, lounging, lying, and turned away from the camera slightly or completely) and posture (erect, normal, slumped, shoulders cocked) exhibited by the subject. The Hands and Fingers group described hand behaviors (relaxed, folded, fist, touching self (sexually and nonsexually), waving, tense, self-supporting, holding object, caressing object) and finger behaviors (“flicking off”, pointing, “peace sign”, “horns sign”).

Indexes of Self-Presentation Indicators. The photograph accompanying the profile was analyzed using measures drawn from guidelines in self-presentation theory and nonverbal analysis. Many of these measures have not been previously applied to photographs. In the current study, indexes were developed to identify behaviors associated with each self-presentation strategy and assess how strongly each user displayed these strategies using various indicators in an additive index for each strategy. To ensure content validity, it was necessary to include uncorrelated and mutually exclusive measures, thus rendering indicators of internal consistency inappropriate. The indexes were designed to include all measures observed to occur in pilot studies that may be associated with each strategy.

Indexes were constructed using measures of nonverbal behavior and photographic technique. Using self-presentation theory (Goffman, 1959; Jones, 1990) to guide the construction of the indexes, an index was devised for each self-presentation strategy found in pilot work for this study (ingratiation, competence, intimidation, and supplication). An index was not constructed for the exemplification strategy because of the limited nonverbal indicators available in existing self-presentation literature and the failure to find examples of exemplification in pilot work for this study. To construct the four indexes, the measures of each strategy were added

and totaled in each index. The measures included in the indexes were: (a) Ingratiation -- Shot type: ingratiation, Head tilting, Context: home, Gaze: straight, Mouth: smile, Laughter, Hand: relaxed, wave, Finger: crossed, peace sign, Arms: relaxed, Body: forward lean, posture: normal, cocked, (b) Competence -- Gaze: straight, Camera angle: competence, Context: work, Text: education, income, schools, Head tilt: none, Mouth: smile, Hand: relaxed, Arms: relaxed, Body: standing, Posture: erect, normal), (c) Intimidation -- Gaze: straight, Head tilt: none, Mouth: frown, Hand: fist, tense, flickoff, "horns", Arms: crossed, one crossed, hands in pockets, hands on hips, Posture: erect, and (d) supplication -- Camera angle: supplication, Gaze: not into lens, looking to the side, looking down, eyes closed, Hand: caress, self-touch, Body: leaning, kneeling, lounging, lying, turned slightly, turned away, Posture: slumped.

Intercoder Reliability

Neuendorf (2002) indicates that a reliability check should be conducted between or among content analysis coders using the coding scheme prior to the actual coding for the study. A pilot test was conducted using two coders, and the codebook was revised prior to the final coding. The coders were graduate students who were trained to recognize the variables within a MySpace profile. A final reliability check was conducted on 10% of the sampled profiles after the final coding was underway. The variables were checked for reliability using the data from the two coders and analyzed using standard reliability coefficients. The reliability coefficients were calculated by PRAM (Program for Reliability Assessment with Multiple Coders) for all variables (Neuendorf, 2002). This reliability check is necessary to ensure adequate intercoder reliability.

The nominal-level variables reached a minimum Cohen's kappa of .70 or higher, excepting three variables that did not occur in the reliability subsample. Only nine of the 53

ratio-level variables exhibited a Lin's concordance coefficient (Lin, 1989; Neuendorf, 2002) below .60. Three variables scored in the .15-.40 range. The remaining six variables received a score in the .40-.60 range. One remaining variable was coded as a rank ordinal variable. This variable reached an acceptable Spearman's rho of .737.

The overall intercoder reliability coefficients for the self-presentation indexes are shown in Table 1. The ingratiation index exhibited an adequate overall reliability for the index values (.909). All of the variables included in the ingratiation index for which a reasonable test could be conducted reached or exceeded the minimum .70 Cohen's kappa or .60 Lin's concordance standard. The competence index also reported adequate reliability coefficients for all the variables included in the composition of the index in addition to a high overall Lin's concordance for the indexed values (.857). The intimidation index exhibited a high overall Lin's concordance for the indexed values (.866); however, two variables (arms crossed and frowning) had an unacceptable Lin's concordance. The reliability for several additional variables was not calculated in this index because of low occurrence or failure to occur. The supplication index had an overall Lin's concordance reliability coefficient below the .60 standard (.532). Additionally, two variables (leaning body position, slumped posture) in the index did not reach a .60 Lin's concordance reliability coefficient. This index was cautiously retained for analysis but the results were tentatively interpreted.

Insert Table 1 about here

Results

Sample Description

The demographic description of the sample is provided in Table 2. The sample consisted of a nearly equal number of pages authored by males (49%) and females (48.7%), while a limited number of page authors did not report their sex (2.3).

Insert Table 2 about here

A MANOVA was used to answer the first research question, which asked whether there was a relationship between the user's sex and the self-presentation indicators displayed in the profile. The descriptive statistics of the four indexes show large ranges in the values of each index: ingratiation (min. 0, max 65, M 4.49, SD 4.75), competence (min. 0, max 101, M 6.6, SD 7.23), intimidation (min. 0, max 42, M 2.22, SD 3.15), and supplication (min. 0, max 6, M .88, SD 1.13). The MANOVA was chosen to determine if the overall equation was significant because of a strong intercorrelation between the dependent variables. The overall MANOVA was found to be significant: Pillai's trace=.583, Wilk's λ =.417, Hotelling's trace=1.397, Roy's largest root=1.397, p <.001, and multivariate η^2 =.090. Subsequent ANOVA tests showed that a single dependent variable (intimidation index) was responsible for the significance of the overall equation, while the remaining dependent variables (ingratiation index, competence index, and supplication index) did not show significant relationships with the independent variable. The results of these tests indicated that there was a significant relationship between the intimidation index and the reported sex of the subject (Table 3). Further examination of the descriptive statistics indicates that males scored higher on the intimidation index (M =2.598, SD =2.57) than females (M =1.842, SD =3.65).

Insert Table 3 about here

The second question asked whether there was a relationship between the user's sex and the amount of text they had written in the "About me" and "Interests" sections of the profile. A MANOVA was chosen as an omnibus test because of a strong intercorrelation between the dependent variables (i.e., the four self-presentation indexes). The overall equation was found to be significant: Pillai's Trace=.059, Wilk's λ =.941, Hotelling's trace=.063, Roy's largest root=.063, p =.014, and multivariate η^2 =.059. Examination of the descriptive statistics illustrated in Table 4 reveals the relationships between males and females and the amount of text written in each section. In all sections, female users were found to write more text about each topic than male users. The amount of text in each section varied widely by profile, as evidenced by the large standard deviations associated with each of the variables. The sections that did not exhibit significant results show a similar trend in the amount of text written by each sex. Females consistently wrote more text in each section, although the "movies" section is nearly even. Individual ANOVA's found significant relationships between sex and the amount of text written in the "About me", "Television" and "Heroes" sections (Table 5). No significant relationships were found between the sex and the remaining categories.

Insert Tables 4 and 5 about here

The third research question asked whether a relationship exists between a user's sex and the types of nonverbal behavior exhibited in photographs. As expected, the nonverbal behaviors were found not to be strongly intercorrelated, therefore, univariate ANOVA's were conducted between each group of nonverbal behaviors and the sex variable. Four of the nonverbal behaviors were found to differ significantly between male and female users. The descriptive table (Table 6) shows that the variables gaze (corner of the eyes), head tilting (present) and smiling were found to be more prevalent in pictures displayed in female profiles. The variable

“erect posture” was found to be more prevalent in pictures displayed in male profiles. Table 7 illustrates the ANOVA results for the four nonverbal behaviors that were found to have a significant relationship with the reported sex of the user.

Insert Tables 6 and 7 about here

Discussion

The purpose of this study was to examine the indicators of self-presentation behaviors present in MySpace profiles and determine if these behaviors were consistent with previous self-presentation and nonverbal research. Additionally, this study sought to develop a measurement scheme with which personal profile photographs might be analyzed for self-presentational behaviors in an online context. In order to thoroughly examine the self-presentation behaviors and their relationships to the profiles three research questions were posed

The intimidation index was found to be the only self-presentation index that exhibited a significant relationship with the profile author’s sex. The results of the analysis serve to give more information about indicators of the intimidation strategy, which were found to be strongly associated with male authors. This finding supports Yates’ (2001) assertion that males often engage in aggressive behaviors and tactics of “exclusion and de-legitimation” (p. 32) in their CMC, as well as the gender stereotype that males communicate in ways that emphasize status, dominance, and control (Guiller & Durndell, 2007; Fox, Bukakto, Hallahan, & Crawford, 2007). Although it has not been widely studied in self-presentation literature, intimidating behaviors clearly appear in the context of MySpace, and these results suggest that further study is warranted. While previous studies (Dominick, 1999; Trammell & Keshelashvili, 2005) have indicated that there are sex differences in the use of the ingratiation and competence strategies, these differences were not found for the self-presentation indexes measured in this study.

Sex differences were also found in the amount of text written in the content areas. The results of the analysis showed that females wrote significantly more in the “About me”, “Television” and “Heroes” sections of the profile, and consistently more in all sections that did not exhibit a significant relationship. While some self-presentation studies have found a difference in the types of information written about by males and females (Trammell & Keshelashvili, 2005), this study looked at the amount of text written by each sex. Although some CMC research (Guiller & Durndell, 2006; Sussman & Tyson, 2000; Yates, 2001) has found that men tend to write more, the situations were generally task-related, unlike the social nature of MySpace. Similar to the results of this study, Guiller and Durndell (2007) and Thomson and Murachver (2001) found that females wrote more than males in their examination of emails, particularly in terms of self disclosure. In the context of Myspace, the “About me” section is used by most users as a general “summary” of their personality, and authors often use this section to introduce themselves to the viewer. The two other significant categories, Television and Heroes, and the overall trend seen in the descriptive statistics, are reflective of an overall tendency for females to engage in self disclosure more often than males.

Finally, this study asked whether males and females exhibited different types of nonverbal behaviors in the photographs. Some of the results echo Goffman’s (1979) comments on the gender displays present in commercial photography. Although his ideas have been replicated in recent years, a link has not been established between gender displays in commercial photography and personal photography. It makes logical sense that personal portraits intended for public display would mimic trends found in popular commercial photography; however, further research is needed to establish this link. This study found that the “feminine” behaviors of smiling, head tilting, and looking indirectly at the camera were found to be associated with

female profiles. This is consistent with nonverbal research, which has established that women smile more than men (Richmond & McCroskey, 2004). Additionally, Goffman (1979) suggested that smiling and head canting behaviors were often exhibited by women in commercial photography so that they would appear more submissive and less threatening, a description not unlike the supplication strategy. The other behavior associated with female users was the gaze (corner of the eyes). Goffman theorized that women were often shown as withdrawing from the scene, which implies a “sort of submission to and trust in the source of the stimulus” (p. 62). The gaze variable and body variable are both related to turning away from the viewer, withdrawing from the circumstances. Based on Goffman’s (1979) descriptions of these behaviors, perhaps they should have been included in the supplication index employed in this study. It is possible that had they been included, sex differences might have emerged for supplication. Conversely, erect posture was found to be associated with male profiles. Erect posture, according to Goffman’s concepts, is related to appearing larger and more powerful in the photograph. The results of the current study suggest that further research linking Goffman’s (1979) work to MySpace profile photography, and personal photography in general, is warranted.

It is interesting to note that although there were sex differences in specific nonverbal behaviors, these differences did not necessarily translate to differences in self-presentation strategies which were based, in part, on these same behaviors. Samp, Wittenberg, and Gillett (2003) asserted that there is a strong desire for the public presentation of oneself to match societal expectations, in that males should present themselves in more “masculine” ways whereas females should present themselves in more “feminine” ways. More specifically, females are socialized to communicate in expressive, sometimes tentative ways to emphasize other people and/or relationships, and males are socialized to communicate in terse, unembellished and sometimes aggressive

ways that emphasize tasks or assert control (e.g., Baron, 2004; Fox et al., 2007; Guiller & Durndell, 2007).

Given that males have been found to use textual features to present themselves as “authoritative” in their on-line interactions (Guiller & Durndell, 2007), it makes sense that they would present themselves similarly in their MySpace photograph. An erect posture—the nonverbal behavior found to occur more often with males than females in this study—is a commonly associated nonverbal behavior with intimidation. Yet, it can also connote competence, another characteristic that males often try to communicate in their on-line interactions (e.g., Huffaker & Calvert, 2005); however, males and females did not differ in nonverbal displays of competence in this study. Similarly, smiles, indirect eye contact, and head tilt—all more commonly found in MySpace photographs of females in this study than photographs of males—connote warmth, friendliness, and approachability, all aspects of ingratiation. Despite the prevalence of these nonverbal displays among female users, there were no gender differences in this strategy. One possible reason for these seemingly contradictory findings is the nature of the context, in that social networking sites are a more personal form of CMC and as such, could lend itself more to social, as opposed to task competence. Indeed, Herring and Paolillo (2006) found that female preferential language features (i.e., those that reference interaction with others) were equally prevalent in diary blogs written by both males and females.

Limitations associated with the sampling method utilized in this study are related to the search engine provided by the MySpace site. The programming of the engine is not public, therefore it is not known whether the engine has a built-in bias. The engine is also limited by the mandatory “sort by” options available to the researcher. This study selected “last login” as the sorting option to ensure that the profiles were actively maintained, however, it is possible that there are systematic differences between the results generated by “last login” and “recently

updated” sorting preferences. It is most likely impossible to generate a truly random sample of MySpace pages using the available search options. More information is therefore needed on the programming of the search engine before researchers can be sure of drawing a truly random sample of MySpace profiles. Furthermore, MySpace is constantly changing environment, which means that it is constantly undergoing small revisions, which makes any study difficult to plan and execute. These types of changes are normal within the MySpace environment, but they create challenges for researchers who are attempting to measure concepts within its site.

Further research may refine the self-presentation indexes to create measures to analyze the content of the text. The development of additional measures will strengthen the indexes and allow researchers to compare the self-presentation behaviors depicted in the photograph and the self-presentation behaviors present in the text. Further analysis may want to include the video, music and photo album features present in the profiles.

This study is another piece in the self-presentation literature as it applies to online CMC. It is important to continue testing existing theories in the constantly-changing atmosphere of mobile and online communications in order to verify their relevancy in an age where everything and everyone appears to be “wired”. These evolving technologies are diffusing at a remarkable rate, and show no signs of slowing down. Mobile and online communications continue to seamlessly blend into many people’s lives, changing the way they interact and maintain relationships. The current study is a step towards understanding how people present themselves the socially-centered mediated environment of a social network website.

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Table 1

Lin's Concordance Reliability Coefficients for Self-Presentation Indexes

Index	Lin's Concordance
Ingratiation	.909
Competence	.857
Intimidation	.866
Supplication	.532

Table 2*Demographic Characteristics of the Sample*

	<i>N</i>	<i>Percent</i>	<i>Valid Percent</i>
Sex			
Male	147	49	50.2
Female	146	48.7	49.8
No info	7	2.3	
Age			
18- 24	158	52.7	54.1
25-30	74	24.7	19.9
31-40	43	14.3	14.1
41-50	14	4.7	4.1
51-60	3	.9	.7
No info	8	2.7	
Race			
Asian	2	.7	1.0
African Descent	22	7.3	11.2
East Indian	2	.7	1.0
Latino/Hispanic	29	9.7	14.8
Native American	3	1	1.5
Pacific Islander	3	1	1.5
White/Caucasian	124	41.3	63.3
Other	11	3.7	5.6
No info	104	34.7	

Table 3*Analysis of Variance for Sex and the Intimidation Index*

Source	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Intimidation Index				
Between Groups	1	41.884	4.193	.041
Within Groups	291	9.989		

n = 292

Table 4*Descriptive Statistics for Amount of Text Written by Male/Female Authors by Profile Category*

Profile section	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
	<u>Males (n=147)</u>		<u>Females (n=146)</u>	
About Me	83.60	146.708	128.11	195.545
Television	7.01	9.475	14.95	33.443
Heroes	11.07	40.723	25.27	72.454
Interests*	19.73	35.981	35.56	110.504
Music*	17.98	39.951	23.89	45.637
Movies*	15.59	27.409	15.75	27.812
Book*	8.24	31.610	12.86	27.915

*Significant difference at $p \leq .05$ (see Table 5)

Table 5

Analyses of Variance for Sex and the Amount of Text Written in the Profile

Source	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
About me				
Between Groups	1	144591.194	4.844	.029
Within Groups	291	29851.829		
Television				
Between Groups	1	4616.086	7.663	.006
Within Groups	291	602.353		
Heroes				
Between Groups	1	14753.930	4.279	.039
Within Groups	291	3447.790		

n = 293

Table 6*Descriptive Statistics for Sex and Nonverbal Behaviors*

Nonverbal behavior	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
	<u>Males</u>		<u>Females</u>	
<u>Gaze/Eye Behavior</u> ¹	<i>n</i> =138		<i>n</i> =133	
Gaze – corner of eyes	.30	.518	.50	.598
<u>Head Tilt</u>	<i>n</i> =139		<i>n</i> =143	
Head tilting	.55	.499	.74	.440
<u>Mouth Behaviors</u> ²	<i>n</i> =138		<i>n</i> =133	
Smiling	.67	.899	1.02	1.052
<u>Body/Posture</u> ³	<i>n</i> =138		<i>n</i> =133	
Posture – Erect	.14	.392	.05	.242

NOTE: All four sex comparisons displayed in this table are statistically significant at $p < .05$. Variables in each category that are not significantly different by sex include:

¹Gaze/Eye Behavior: Straight, Not into lens, looking left or right, looking down, looking up, normal eyes, bedroom eyes, looking through lashes, eye roll, eyes closed.

²Mouth Behavior: Frowning, neutral, puckered, tongue, laughter

³Body/Posture: Standing, leaning, leaning forward, sitting, kneeling, lounging, lying, turned slightly away, average posture, cocked shoulders, slumped shoulders

Table7*Analyses of Variance for Nonverbal Behaviors and the Reported Sex of the User*

Source	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Gaze- corner of eyes				
Between Groups	1	2.686	8.594	.004
Within Groups	269	.313		
Head tilting				
Between Groups	1	1.928	8.073	.005
Within Groups	280	.239		
Smiling				
Between Groups	1	8.219	8.615	.004
Within Groups	269	.954		
Posture – Erect				
Between Groups	1	.675	6.296	.013
Within Groups	269	.107		
