International Journal of Internet Science
2007, 2 (1), 3-11

International Journal of Internet Science

IJIS.NET

The Face-ism Effect in the Internet
Differences in Facial Prominence of Women and Men

Ursula Szillis, Dagmar Stahlberg

University of Mannheim, Germany

Abstract*:* Archer and colleagues (1983) showed that in a variety of media, such as journals, works of art, or amateur drawings, men are depicted with greater facial prominence than women, i.e., with more focus on the face. Additionally, they showed that people depicted with greater focus on the face are evaluated as being more intelligent, assertive, and ambitious than the same people depicted with more focus on the body. This phenomenon is called *face-ism*. More than twenty years later, two content analyses explore whether this difference in the portrayal of men and women is still alive and can also be found in new media, especially the Internet. Study 1 compares Internet photos of male and female university professors from twelve German universities. Study 2 examines Internet pictures of female and male members of the German parliament. Results of both studies show that male professors and male politicians are depicted with significantly greater facial prominence than female professors and female politicians. Additionally, younger female politicians are depicted with less facial prominence than older female politicians, whereas male politicians are depicted with higher facial prominence irrespective of their age. Results of both studies contrast with results of previous content analyses, which showed no sex differences concerning facial prominence when both men and women occupied high status positions. Implications of and suggested explanations for the observed differences are discussed.

Keywords: Face-ism, gender stereotypes, politicians, illustration, Internet

Introduction

For more than half a century, scientists have examined women's roles in the mass media. Starting in the early 1950s, Smythe (1953) and Head (1954) found that only about one third of all central figures in television programs were females. Studies conducted in the 1960s and 1970s showed no change in the representation of women in magazines: they were still portrayed less often (Gerbner, 1972) and in more stereotypically feminine roles, for example, in the family context (Belkaoui & Belkaoui, 1976; Sexton & Haberman, 1974). Studies during the following decade suggested that some minor change was occurring: for example, women became more visible overall (Bretl & Cantor, 1988; Sullivan & O'Connor, 1988). However, the development over the last three decades does not reflect profound changes regarding the representation of women in the media. Women are still portrayed in mostly stereotypical ways (e.g., as blondes) and in traditional roles (e.g., as housewives): gender-stereotypical depictions of women still prevail in television commercials (e.g., women advertising cleaning products; Furnham & Mak, 1999; Signorielli & Bacue, 1999), radio commercials (Furnham & Schofiled, 1986; Furnham & Thomson, 1999; Hurtz & Durkin, 2004), as well as in the print media (Gooden & Gooden, 2001; Peirce, 1990).

Address correspondence to Ursula Szillis, Department of Social Psychology, University of Mannheim, A5, 68131 Mannheim, Germany, szillis@uni-mannheim.de

Differences in facial prominence were one aspect of gender stereotyping analyzed by Archer, Iritani, Kimes, and Barrios (1983). They demonstrated that in mass media, as well as in paintings, men were portrayed with more facial prominence than women, i.e., with a greater focus on the face than the body. They conducted content analyses of American periodicals, artworks from different centuries, magazine photographs from eleven countries, and amateur drawings, and what they found supported their assumptions. Several content analyses by other authors replicated this finding of higher facial prominence in pictures of males compared to pictures of females (Copeland, 1989; Dodd, Harcar, Foerch, & Anderson, 1989; Sparks & Fehlner, 1986; Zuckerman, 1986). For example, Copeland (1989) looked at prime time television programs and confirmed the sex differences in facial prominence. Sparks and Fehlner (1986) examined news photographs and found that female politicians, government officials, as well as journalists did not differ in facial prominence from their male counterparts. However, women in occupations such as acting or entertainment were shown with substantially less facial prominence than men. Dodd and colleagues (1989) analyzed American magazine photos from several decades and showed that there was, overall, no decrease concerning sex differences in facial prominence. Consistent with Sparks and Fehlner (1986), they suggested that the social role of the portrayed person was a strong moderator of facial prominence. As expected, men were shown in more respectable social roles, for example as public officials, and with higher facial prominence than women, who were portrayed more often in social roles associated with sport or entertainment, for example, and with lower facial prominence.

What are the consequences of these differential depictions of men and women in the media? In an experimental study, Archer and colleagues (1983) showed that these sex differences affected interpersonal perception: persons presented with more facial prominence, i.e., a portrait picture, were judged to be more intelligent, assertive, and ambitious compared to the same persons portrayed with less facial prominence, i.e., a whole body picture. This effect was replicated for ambitiousness and intelligence by Schwarz and Kurz (1983), for ambitiousness and dominance by Zuckerman's research (Zuckerman, 1986; Zuckerman & Kieffer, 1994), and for a more positive general evaluation (e.g., warmth, sensitivity) by Levesque and Lowe (1999) and by Schwarz and Kurz (1989).

More than twenty years after the findings by Archer and colleagues (1983), several questions about the persistence of the sex differences emerge: First, do these discrepancies still exist in the 21st century? Although women still do not have the same power, status, and resources as men (Rhoodie, 1989), the occupational situation of women in many societies has improved over the last half-century (e.g., more employed women overall, Reskin & Padavic, 1994; specifically more women in major leadership positions, Carli & Eagly, 2001). It has been assumed that these changes would start a redefinition of gender roles over time in the direction of greater similarities between men and women (Eagly, Wood, & Diekman, 2000). When it comes to facial prominence, this development therefore raises the question whether sex differences still prevail.

If sex differences concerning facial prominence still exist in the print media, what about modern media such as the Internet? Just like television, information via the Internet can reach millions of people simultaneously. More than 1.114 billion people used the Internet worldwide in March 2007 (Internet World Stats, 2007). In Germany, there were more than 37 million Internet users in September 2006 (Arbeitsgemeinschaft Online Forschung, 2006). Given this ubiquitous presence of the Internet and its ever-growing importance in modern everyday life (increase of 208.7 percent between the years 2000 and 2007; Internet World Stats, 2007), it is surprising that to date few studies have analyzed the visual depiction of men and women in this medium (e.g., Milburn, Carney, & Ramirez, 1999). The few studies we are aware of – content analyses of computer clipart images (Beasley & Collins Standley, 2002), video games mentioned on a highly frequented Internet site (Ivory, 2006), and jokes about women in the Internet (Hinz, 2003) – have shown a gender-stereotypical portrayal of women, for example, women as attractive, permissive objects. These results suggest that sex differences concerning facial prominence can also be expected in the Internet.

Another question is whether differences in facial prominence between men and women exist when both occupy high status positions. According to social role theory (Eagly & Steffen, 1983), men and women in equal positions of power should not differ in facial prominence. In line with Eagly's (1987) social role theory, Dodd and colleagues (1989) as well as Sparks and Fehlner (1986) suggested that the social role of the portrayed person is a strong moderator of facial prominence. As mentioned before, they showed that pictures of women focused significantly more on their bodies when they occupied typically female social positions, but not when they occupied typically male social positions. However, although Dodd and colleagues (1989) as well as Sparks and Fehlner (1986) analyzed a number of pictures in their content analyses, the results are based on photographs from a small sample of only two magazines, Time and Newsweek, neither of which is designed primarily for business executives. Additionally, only a small proportion of the persons in high status positions were female: three percent of the portrayed public officials (Dodd et al., 1989), and twenty-five percent of the government officials (Sparks & Fehlner, 1986). Thus, a larger sample of sources, which provides a broader picture of the images of businesswomen, is needed to conclude that sex differences concerning facial prominence disappear

when women and men both occupy high status positions. To our knowledge, no previous research has analyzed the content of photos shown on Internet Web pages with respect to facial prominence.

The main purpose of the present study was therefore to analyze the illustrations of women and men in the Internet, i.e., to determine whether women are depicted with lower facial prominence than men also in the modern media. In addition, we intended to analyze Internet pictures of females and males who occupy high status positions. We chose the medium of the Internet for the following two reasons: First, to our knowledge there have been no studies regarding the face-ism effect in the Internet, and, second, we believed that Internet pictures should provide the hardest test for discovering differences between men and women because the Internet is a modern medium where changes in stereotypes might be detected very early compared to more traditional media. To that end, we searched out Web pages with portrayals of individuals who may be known for their intelligence, savvy, and status. In Study 1 we measured the face-ism index of male and female professors portrayed on Web pages of German universities. In Study 2 we examined sex differences in facial prominence for pictures shown on the homepage of the German parliament. The pictures of the German politicians consisted mostly of head shots (i.e., the variance of the pictures was very low). For both studies, we analyzed whether pictures of males contain a greater degree of facial prominence than pictures of females.

Method

To analyze the salience of the head in the pictures of female and male university professors, we chose photos from Web pages of twelve randomly selected German universities for the first study. As female professors are underrepresented among professors in the natural sciences, we took only photographs from the social sciences (i.e., psychology, pedagogy, and sociology) to assure a reasonably high proportion of female professors. All 191 pictures of female and male university professors from the social sciences of the twelve universities that were available online in August 2003 were included in the first analysis. For the second content analysis, we used pictures of male and female politicians shown on the homepage of the German parliament. For this study, all 603 photographs of male and female members of the German parliament that were available from the Internet in September 2003 were included (Bundestag, 2003; see also: http://www.bundestag.de/htdocs_e/members/mdb/index.html). Although a selection bias cannot be completely excluded in Study 1, the analysis of all pictures of male and female parliament members in Study 2 makes a selection bias impossible.

Figure 1. Illustration of the measurement of the face-ism index by means of the picture of a female professor with an exemplary low index of .50, i.e., the bust-up picture on the left side, and an exemplary high index of .80, i.e., the close-up picture on the right side
Note. The face-ism index is the ratio of two measures: the numerator is the distance from the top of the head to the lowest point of the chin (see the dotted vertical lines); the denumerator is the distance from the top of the head to the lowest visible part of the body (see the continued vertical lines).

To analyze the facial prominence, the face-ism index was calculated for all photographs. According to the method used by Archer and colleagues (1983), the face-ism index is the ratio of two measures: the numerator is the distance from the top of the head to the lowest point of the chin (see the dotted vertical lines in Figure 1); the denumerator is the distance from the top of the head to the lowest visible part of the body (see the continued vertical lines in Figure 1). Both scores were measured with a standard ruler for every picture printed on a sheet

of paper. The index of the facial prominence can range from 0.00 (no face is shown at all) to 1.00 (only the face is shown). In some photographs, the top or bottom of an individual's head was hidden by hairstyle or hands on the chin. For this reason three students at Mannheim University, Germany, who where blind to the hypotheses of the studies, measured these scores independently. The averaged interrater reliability was .93.

Results

Study 1 – German University Professors

Overall, pictures of male and female professors ranged from three-quarter shots presenting the body from about the knees up to the head (index for females and males: 0.23), to close-up pictures showing only the face (highest index for females: 0.93, and for males: 1.00). Variance of the scores did not differ significantly for female and male targets, $F < 1$. More than three-quarters, 77%, $N = 147$, of all photographs found on the homepages were of male professors, 23%, $N = 44$, were of female professors. Male and female professors were equally distributed over all social sciences, χ^2: n.s. As expected, significant sex differences in facial prominence emerged. The data showed a significant tendency for male professors to be depicted with a more pronounced focus on their face than was the case for female professors. The mean face-ism index for images of men was .66, $SD = .15$, whereas the mean face-ism index for women was .59, $SD = .14$, $F(1, 189) = 8.08$, $p < .01$, $\eta^2 = 0.04$ (see Figure 2, left hand side). The effect size was $r = .24$, which has been defined as a small effect by Cohen (1988). If we look at the differences at the upper end of the distribution of the face-ism indices, upper 95th percentile, the proportion of female professors with very high facial prominence was much smaller (2%) than the proportion of male professors portrayed with very high facial prominence (7%).

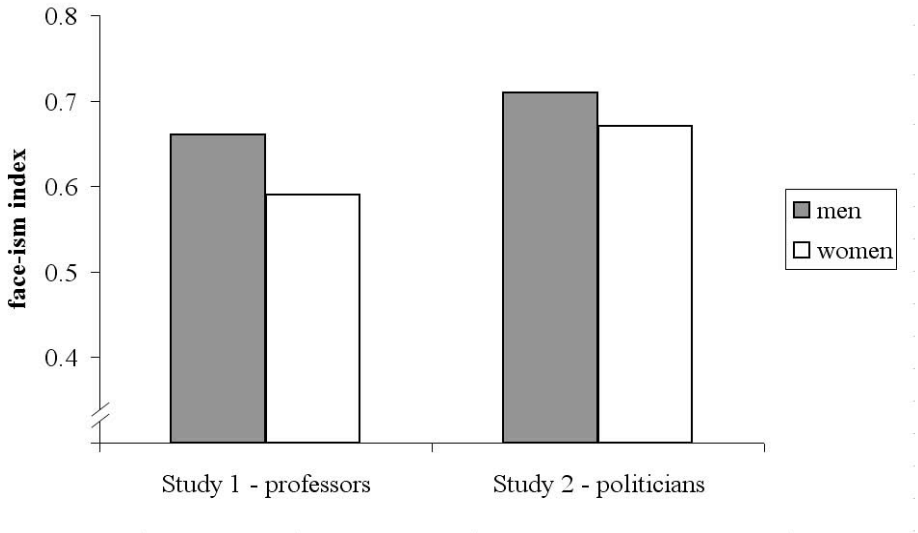

Figure 2. Face-ism index by sex of professors, left, and by parliament members, right.
Note. Means range between 0 and 1; larger numbers indicate higher facial prominence.

There was no significant main effect for the factor "faculty", i.e. psychology, pedagogy, and sociology, and no significant interaction with the factor "sex of target", F's < 1.

Study 2 – German Parliament Members

Pictures of male and female parliament members ranged from shots depicting the individuals from approximately the waist up to the head, 0.40, to close-up pictures, 1.00. Variance of the scores did not differ significantly for female and male targets, $F < 1$. Two thirds of the pictures of the German parliament sample depicted men, 67%, $N = 402$, one third women, 33%, $N = 201$. The proportion of male and female politicians was not equally distributed over all parties, χ^2 (3, N = 603) = 34.33; $p < .001$. The Green party had a high proportion of female politicians, 61%, whereas all other parties had only between 23% and 37% female politicians. As in the study of male and female professors, the pictures of female and male politicians showed a significant face-ism effect (see Figure 2, right hand side). For female members, the mean face-ism index was .67, $SD = .09$, whereas for male members the mean face-ism index was .71, $SD = 09$; $F(1, 601) = 14.24$, $p < .001$, $\eta^2 = .02$. Again, the effect was small, $r = .21$ (Cohen, 1988). The upper tail of the distribution of the face-ism indices indicate that in the upper 95th percentile, only 4% were female politicians whereas 7% were male politicians.

There was also a significant main effect for party affiliation, $F(3, 599) = 12.27$, $p < .001$, $\eta^2 = .06$. Members of the Christian Democratic Union and the Christian Social Union, CDU/CSU; $N = 247$, $M = .72$, $SD = .09$, as well as of the Green Party, $N = 57$, $M = .71$, $SD = .09$, had significantly higher face-ism indices than members of the Social Democratic Party, SPD; $N = 252$, $M = .68$, $SD = .09$, $t(497) = 5.58$, $p < .001$ and $t(307) = 2.70$, $p < .01$, respectively, and the German Liberal Party, FDP; $N = 47$, $M = .67$, $SD = .09$, $t(292) = 3.43$, $p < .01$ and $t(102) = 2.31$, $p < .05$, respectively. The interaction between sex of politicians and party affiliation was not significant, $F < 1$.

Additionally, to analyze whether age or occupational status of parliament members had an influence on the face-ism index, information about age and occupational status was added to the data post hoc in 2006. Nearly thirty percent of all members, $N = 148$, were not in the parliament anymore or had changed their previous picture. Consequently, only the data of the remaining 419 parliament members were analyzed. Data showed that female parliament members were significantly younger, $M = 50.97$, $SD = 8.37$, than male parliament members, $M = 53.13$, $SD = 9.10$, $F(1, 417) = 5.46$, $p < .05$, $\eta^2 = .01$. A median split on the age variable was used to categorize parliament members. A 2 (sex of target: male vs. female) x 2 (age of target: 54 years and younger vs. 55 years and older) factorial analysis of variance with face-ism index as the dependent variable showed – in addition to the already reported significant main effect for sex of target, $F(1, 415) = 15.55$, $p < .01$, $\eta^2 = .04$ – a significant interaction with age of target, $F(1, 415) = 7.13$, $p < .01$, $\eta^2 = .02$. Female parliament members 54 years old and younger were portrayed with significantly lower facial prominence, $M = .66$, $SD = .09$, than female parliament members 55 years and older, $M = .70$, $SD = .09$, $t(134) = 2.44$, $p < .01$ (see Figure 3). In contrast, the face-ism index of male parliament members was not affected by age, $t(281) = 1.28$, $p < .11$. The main effect for age of target was not significant, $F(1, 415) = 1.44$, $p =$ n.s.

To analyze whether occupational status had an influence on facial prominence, two female and two male raters who were blind to the hypotheses of the study rated the status of the parliament members on the basis of their occupation reported on the website on a 5-point scale ranging from low status, 1, to high status, 5. Cronbach's alpha was .85. Occupational status of female parliament members was rated as significantly lower than occupational status of male parliament members, $M = 3.70$ vs. $M = 4.04$, $t(418) = 4.62$, $p < .001$. A median split on the occupational status variable was used to categorize parliament members. A 2 (sex of target: male vs. female) x 2 (occupational status of target: lower/equal 4 vs. higher 4) factorial analysis of variance with face-ism index as the dependent variable showed no significant influence of status on facial prominence and also no significant interaction with sex of target, F's < 1.

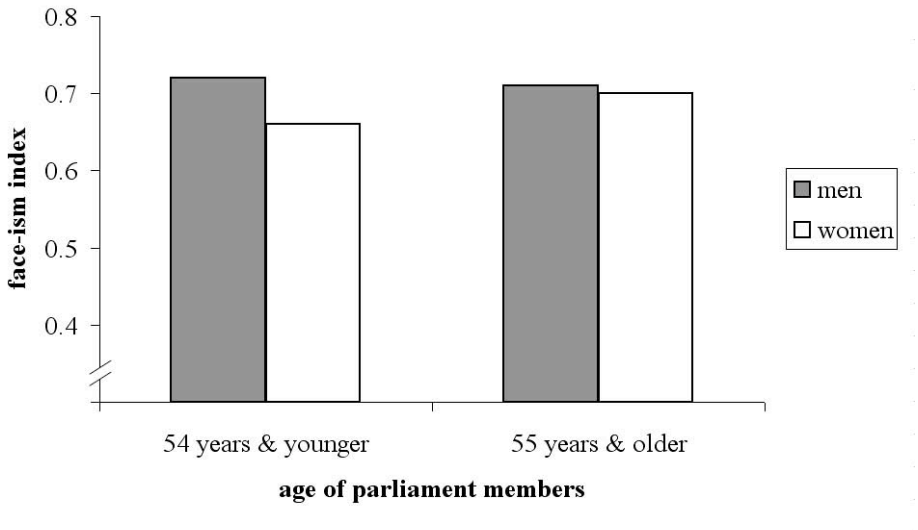

Figure 3. Face-ism index by sex and age of parliament members
Note. Means range between 0 and 1; larger numbers indicate higher facial prominence.

Discussion

As expected, both studies show a face-ism effect for sex: male professors from German universities and male politicians of the German parliament are shown with significantly more facial prominence than female professors and female politicians. Especially the difference between male and female politicians is intriguing, because most of the pictures used in this sample were head shots, i.e. pictures with low variance. Thus, both

content analyses show that even more than twenty years after the findings of Archer and colleagues (1983), men are still portrayed with more facial prominence than women.

These content analyses show not only that the face-ism effect is prevalent in the new media, but also that it occurs even in samples of individuals in high-ranking positions. Consequently, both studies indicate that there is a consistent asymmetry in the images of both sexes, showing that face-ism is still related to gender even if the social roles of women and men are held constant. Thus, our results contradict the results of Dodd and colleagues (1989) as well as Sparks and Fehlner (1986), who did not find significant differences for males and females in high-ranking positions and for politicians, respectively. One explanation for these contradictory results lies in cultural differences concerning the societal relevance of the status or the sex of a person. It is possible that in Germany the sex of a depicted person plays a more important role than status, while in North America the status of a person is the more influential factor (e.g., for female US participants in Schein, Mueller, Lituchy, & Liu, 1996). This explanation is supported in our second study by the significant influence of the target's sex but not of occupational status on the face-ism index. Future research will have to analyze whether these differences also exist in countries with similar or even more egalitarian attitudes regarding the sexes.

A second explanation for these findings can be found in the different social roles of women and men with high status. For example, female politicians occupy typically female positions such as ministers of family or health, whereas male politicians are more often finance or foreign ministers. Thus, future research will have to analyze the facial prominence of men and women in high status positions broken down by their occupational roles.

Both studies reported here consistently find a significant face-ism effect in photographs of men and women in positions of high status. However, effect sizes are small and the mean differences in facial prominence appear to be barely noticeable. Does this mean that these differences are not very likely to affect the perception of women and men or even the behavior regarding men and women? There are two reasons why this assumption should be rejected: First, biases can add up in multi-level selection processes. Studies concerning sex differences in motor activity level (Eaton & Enns, 1986), cognitive abilities (Hyde, 1981), and work performance (Martell, Lane, & Emrich, 1996) have demonstrated a cumulative effect. In a computer simulation about work performance, for example, Martell and colleagues (1996) proved that even very small sex differences can lead to discrimination against women. Their computer simulation added positively discriminating "bias points" to the performance scores of male incumbents, accounting for five percent and one percent of the variance, respectively. The simulation comprised a pyramid of eight selection levels, starting with five hundred incumbents at the bottom and ending with ten incumbents at the top of the organization. Results show that in both conditions, a very high percentage of high-level positions in the organization were filled by men at the end of the selection process, even when only small biases were taken into account at the beginning of the selection process. Applying these findings to our studies, more men than women are shown with a stronger focus on the head, for example, in pictures attached to a curriculum vitae. Thus, according to Archer and his colleagues (1983), who demonstrated that people who are depicted with more facial prominence are judged as more competent, it is possible that men are perceived as slightly more competent than women. Following the results of Martell and colleagues (1996), these overall small differences at the beginning of a selection process might impact the selection of men and women for top leadership positions.

A second reason to assume that these small differences can affect the perception of women as less competent is that different sex-stereotypic biases might accumulate. The depiction of women with more bodily prominence combined with, for example, stereotypical facial expressions such as smiling (LaFrance, Hecht, & Levy Paluck, 2003), or stereotypical clothes such as a sexy attire (i.e., exposing more skin, Beasly & Collins Standley, 2002), in conjunction with other biases like sexist language that makes women less visible (e.g., Stahlberg, Braun, Irmen, & Sczesny, 2007), might all add up to maintain gender stereotypes.

Future research also needs to analyze why women and men are depicted differently. One explanation suggested by Archer and colleagues (1983) concerns "widespread, deep-seated, and perhaps unconscious" (p. 728) gender-stereotypical differences in how women and men are portrayed, i.e., women's most important characteristics are located in the body, whereas men's characteristics are located in the head. Another explanation concerns specifically one characteristic of traditional male stereotypes – higher dominance. Men are portrayed with more focus on the head to emphasize power and dominance, whereas women are portrayed with more focus on the body to emphasize submissiveness (Zuckerman & Kieffer, 1994).

A third explanation might be differential information that can be inferred from the body (e.g., physical attractiveness) or from the clothing style (e.g., reflection of social status or profession). The body of a woman compared to the body of a man delivers more important information (e.g., waist-to-hip ratio) and a greater range of variety (e.g., trousers vs. skirts). This information can be transmitted via greater focus on the body and can be relevant when no further information about the depicted woman is available. The result in Study 2 concerning

target's age supports the explanation that information about physical attractiveness plays a more prominent role when evaluating women compared to men: especially younger female parliament members are portrayed with less facial prominence than older female parliament members, whereas for male parliament members age has no influence on the face-ism index.

Previous analyses of mass media images that found sex differences could attribute such representational differences to (gender-stereotypical) attitudes of the photographer or the editor of these journals or television programs (Copeland, 1989; Dodd et al., 1989). But in the case of our Internet studies, especially in Study 1, the depicted persons used not only professional, but also private pictures (e.g., showing them in a holiday scene). Thus, it cannot be ruled out that the depicted persons chose their picture by themselves. To address the question whether men and women as agents select different pictures for other persons, Adams, Copeland, Fish, and Hughes (1980) analyzed the effect of framing on the selection of photographs of political candidates. Participants had to rank several pictures of political candidates for their suitability, ranging from close-up pictures to full-length pictures. The authors showed no difference between male and female participants. Both sexes preferred close-up photographs of male and bust shots of female politicians. On the basis of these results it can be concluded that the face-ism effect is a socially learned phenomenon, which suggests that there is a stereotypical association of the head or the face with intellect or masculinity and the body with femininity. Nevertheless, further studies will have to analyze more specifically whether the chosen pictures are the result of a self- or other-initiated decision made consciously or unconsciously.

In sum, and compared to earlier studies which analyzed the portrayals of men and women in the print media, the current findings demonstrate that although the Internet is a new medium, it is not free from historically-evolved societal views of gender. In addition, the present studies show the persistence of the face-ism phenomenon. The fact that the gender difference emerged even though both men and women occupied high status positions stresses the critical role of gender. Though the reported differences in depictions of women and men are small, the possibility exists that these differences directly or indirectly contribute to the maintenance of the stereotypical image of women as less competent than men.

References

Adams, R. C., Copeland, G. A., Fish, M. J. & Hughes, M. (1980). The effect of framing on selection of photographs of men and women. *Journalism Quarterly, 57*, 463-467.

Arbeitsgemeinschaft Online Forschung (2006). *Internet Facts 2006-III*. Received April 30, 2007, from http://www.agof.de/index.456.html

Archer, D., Iritani, B., Kimes, D. D., & Barrios, M. (1983). Face-ism: Five studies of sex differences in facial prominence. *Journal of Personality and Social Psychology, 45*, 725-735.

Beasley, B., & Collins Standley, T. C. (2002). Shirts vs. skins: Clothing as an indicator of gender role stereotyping in video games. *Mass Communication & Society, 5*, 279-293.

Belkaoui, A., & Belkaoui, J. M. (1976). A comparative analysis of the roles portrayed by women in print advertisements: 1958, 1970, 1972. *Journal of Marketing Research, 13*, 168-172.

Bretl, D. J., & Cantor, J. (1988). The portrayal of men and women in U.S. television commercials: A recent content analysis and trends over 15 years. *Sex Roles, 18* (9-10), 595-609.

Bundestag (2003). *Abgeordnete*. Received September 30, from *http://www.bundestag.de/mdb/mdb15/bio/index.html*

Carli, L. L., & Eagly, A. H. (2001). Gender, hierarchy, and leadership: An introduction. *Journal of Social Issues, 57*, 629-636.

Cohen, J. (1988). Statistical power analysis for the behavioral sciences (2nd ed.). Hillsdale, NJ: Lawrence Earlbaum Associates.

Copeland, G. A. (1989). Face-ism and primetime television. *Journal of Broadcasting & Electronic Media, 33*, 209-214.

Dodd, D. K., Harcar, V., Foerch, B. J., & Anderson, H. T. (1989). Face-ism and facial expressions of women in magazine photos. *The Psychological Record, 39*, 325-331.

Eaton, W. O., & Enns, L. R. (1986). Sex differences in human motor activity level. P*sychologcial Bulletin, 100*, 19-28.

Eagly, A. H. (1987). *Sex differences in social behavior: A social-role interpretation*. Hillsdale, NJ: Lawrence Erlbaum Associates.

Eagly, A. H., & Steffen, V. J. (1983). Gender stereotypes stem from the distribution of women and men into social roles. *Journal of Personality and Social Psychology, 46*, 735-754.

Eagly, A. H., Wood, W., & Diekman, A. (2000). Social role theory of sex differences and similarities: A current appraisal. In T. Eckes & H. M. Trautner (Eds.), *The developmental social psychology of gender* (pp. 123-174). Mahwah, NJ: Erlbaum.

Furnham, A., & Mak, T. (1999). Sex-role stereotyping in television commercials: A review and comparison of fourteen studies done on five continents over 25 years. *Sex Roles, 41*(5-6), 413-437.

Furnham, A., & Schofiled, S. (1986). Sex-role stereotyping in British radio advertisements. *British Journal of Social Psychology, 25*, 165-171.

Furnham, A., & Thomson, L. (1999). Gender role stereotyping in advertisements on two British radio stations. *Sex Roles, 40*, 153-165.

Gerbner, G. (1972). Violence in television drama: Trends and symbolic functions. In G. S. Comstock & E. A. Rubinstein (Eds.), *Television and Social Behavior. (1): Media content and control* (pp. 28-187). Washington: U.S. Government Printing Office.

Gooden, A. M., & Gooden, M. A. (2001). Gender representation in notable children's picture books: 1995-1999. *Sex Roles, 45*(1-2), 89-101.

Head, S. W. (1954). Content analysis of television dramatic programms. *Quarterly of Film, Radio and Television, 9*, 175-194.

Hinz, A. (2003). Frauen- und Männerbilder in Witzen. Eine qualitative Inhaltsanalyse [The pictures of women and men in jokes. A qualitative analysis]. *Zeitschrift für Sozialpsychologie, 34*, 37-45.

Hurtz, W., & Durkin, K. (2004). The effects of gender-stereotyped radio commercials. J*ournal of Applied Social Psychology, 34*, 1974-1992.

Hyde, J. S. (1981). How large are cognitive gender differences? *American Psychologist, 36*, 892-901.

Internet World Stats (2007). *World Internet usage and population statistics*. Received April 30, 2007 from http://www.internetworldstats.com/stats.htm

Ivory, J. D. (2006). Still a man's game: Gender representation in online reviews of video games. *Mass Communication & Society, 9*, 103-114.

LaFrance, M., Hecht, M. A., & Levy Paluck, E. (2003). The contingent smile: A metaanalysis of sex differences in smiling. *Psychological Bulletin, 129*, 305-334.

Levesque, M. J., & Lowe, A. (1999). Face-ism as a determinant of interpersonal perceptions: The influence of context on facial prominence effects. *Sex Roles, 41*(3-4), 241-259.

Martell, R. F., Lane, D. M., & Emrich, C. (1996). Male-female differences: A computer simulation. *American Psychologist, 51*, 157-158.

Milburn, S. S., Carney, D. R., & Ramirez, A. M. (1999). Even in modern media, the picture is still the same: A content analysis of clipart images. *Sex Roles, 44*(5-6), 277-294.

Peirce, K. (1990). A feminist theoretical perspective on the socialization of teenage girls through Seventeen Magazine. *Sex Roles, 23*(9-10), 491-500.

Reskin, B. F., & Padavic, I. (1994). *Women and men at work*. Thousand Oaks, CA: Pine Forge Press.

Rhoodie, E. M. (1989). *Discrimination against women: A global survey of the economic, educational, social and political status of women*. Jefferson, NC; McFarland.

Schein, V. E., Mueller, R., Lituchy, T., & Liu, J. (1996). Think manager – think male: a global phenomenon? *Journal of Organizational Behavior, 17*, 33-41.

Schwarz, N., & Kurz, E. (1989). What's in a picture? The impact of face-ism on trait attribution. *European Journal of Social Psychology, 19*, 311-316.

Sexton, D. E., & Haberman, P. (1974). Women in magazine advertisements. *Journal of Advertising Research, 14*, 41-46.

Signorielli, N., & Bacue, A. (1999). Recognition and respect: A content analysis of prime time television characters across three decades. *Sex Roles, 40*(7-8), 527-544.

Smythe, D. W. (1953). *Three years of New York television, 1951-1953*. Urbana, Illinois: National Association of Educational Broadcasters.

Sparks, G. G., & Fehlner, C. L. (1986). Faces in the news: Gender comparisons of magazine photographs. *Journal of Communication, Autumn*, 70-79.

Stahlberg, D., Braun, F., Irmen, L., & Sczesny, S. (2007). Representation of the sexes in language. In K. Fiedler (Ed.), *Social communication. A volume in the series Frontiers of Social Psychology* (pp 163-187). Series Editors: A. W. Kruglanski & J. P. Forgas. New York: Psychology Press.

Sullivan, G. L., & O'Connor, P. J. (1988). Women's role portrayals in magazine advertising: 1958-1983. *Sex Roles, 18*(3-4), 181-188.

Zuckerman, M. (1986). On the meaning of implications of facial prominence. *Journal of Nonverbal Behavior, 10*, 215-229.

Zuckerman, M., & Kieffer, S. C. (1994). Race differences in face-ism: Does facial prominence imply dominance? *Journal of Personality and Social Psychology, 66*, 86-92.