# Cultural Differences in Face-ism: Male Politicians Have Bigger Heads in More Gender-Equal Cultures

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## Abstract

Women are visually depicted with lower facial prominence than men, with consequences for perceptions of their competence. The current study examines the relationship between the size of this "face-ism" bias (i.e., individual or micro-level sexism) and a number of gender inequality indicators (i.e., institutional or macro-level sexism) at the cross-cultural level. In one of the largest known face-ism databases to date, the authors used politicians' official online photographs as stimuli ($N = 6,610$) to explore how face-ism (as an example of individual-level sexism) covaries with institutional sexism across 25 cultures. The authors found that the face-ism bias was greater in cultures with lower levels of institutional gender inequality, demonstrating that institutional equality does not necessarily imply equality on the individual level. The authors offer a number of potential speculations for this mismatch. For example, it may be due to "postfeminist" backlash that occurs in response to decreases in level of institutional sexism or it may be due to different comparative processes that occur in more versus less gender-equal cultures. Implications for female politicians cross-culturally are discussed. The findings of our study provide empirical evidence to demonstrate how macro-level structural equalities could be related to individual and micro-level sexism, and how different levels of sexism might not necessarily be indicative of each other.

Across different media, cultures, and centuries, women have been portrayed with lower facial prominence than men in visual representations (Archer, Iritani, Kimes, & Barrios, 1983; Copeland, 1989). This "face-ism" bias is assessed with an index of the ratio of the face to the total visible body. Differences in facial prominence are consequential. People rate a target person as more agentic (e.g., intelligent, ambitious, assertive, dominant) when depicted in a photograph with high rather than low facial prominence. Conversely, people rate a target person as more communal (e.g., warm, compassionate, likable) when depicted with low facial prominence (Archer et al., 1983; Levesque & Lowe, 1999; Schwarz & Kurz, 1989; Zuckerman, 1986). Because women are typically portrayed with more of their bodies, and because these portrayals have consequences that parallel gender stereotypes, face-ism (i.e., more facial prominence in men than women) can be seen as a subtle type of sexism.

### Facial Prominence in Politicians

In the present article, we examine the facial prominence of politicians across 25 cultures. We specifically chose to study politicians in order to examine the relationship between

subtle individual gender biases in which specific individuals experience a bias (i.e., micro-level psychological phenomena such as face-ism) and culture-level institutional indicators of sexism (i.e., macro-level international gender equality indices) among groups of comparable professionals worldwide. Current feminist scholarship calls for such examinations of "the effects of macro-level structural inequities on social and psychological processes" (Else-Quest & Grabe, 2012, p. 132), and in the current article we can address this aim by comparing macro-level societal indicators with micro-level psychological phenomena such as face-ism biases.

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In most cultures, being a political representative comes with power and a public image, and in almost all cultures, politics is still a male-dominated profession (Inter-Parliamentary Union, 2012). Thus, examining gender differences in politicians' online photographs across cultures can help us better understand potential macro-level factors that may be associated with subtle gender biases within professional contexts (e.g., face-ism). We will demonstrate that rising equality at the institutional or macro level does not always imply rising equality at the individual or micro level. Sometimes rising institutional equality is associated with increased bias directly experienced by individual women, an idea that will be elaborated in the current article.

For the first time in history, the 1984 U.S. presidential ballot (two major political parties) included a woman: Geraldine Ferraro ran for vice president with Walter Mondale. Challenging the pervasive facial prominence bias otherwise observed in the media, Sparks and Fehlner (1986) reported that Ferraro was portrayed with at least the same amount of facial prominence as her male counterparts. Additional analyses indicated no gender bias in pictures of government officials and journalists. The authors speculated that perhaps gender biases would disappear when both genders had equally powerful professions. The analyses of their study, however, were limited to only two news magazines and four politicians.

In contrast to Sparks and Fehlner's (1986) speculations, recent studies have found that face-ism can exist even when men and women are of the same occupational status, but that it really depends on the type of occupation considered. For example, one study examined magazine representations of men versus women in intellectual occupations (business people, scientists/educators, politicians) and found that men were depicted with higher facial prominence than women (Matthews, 2007). The author suggests that this may reflect a greater focus on the cerebral qualities of men relative to women when cerebral qualities are relevant (i.e., in intellectual occupations). In contrast, men were depicted with more body prominence (lower facial prominence) in more physical occupations such as athletics and entertainment, suggesting a bias that shifts to favor men across different types of occupations.

Because intellectual competence is so highly valued in politics (Todorov, Mandisodza, Goren, & Hall, 2005), male politicians may be presented with more facial prominence compared to female politicians. Indeed, recent research which measured the facial prominence of official website photographs of all political representatives across four cultures (United States, Canada, Australia, and Norway) found that men had higher facial prominence than women (Konrath & Schwarz, 2007). Szillis and Stahlberg (2007) replicated this finding in a parallel analysis of politicians in Germany. Finally, an analysis of politicians' photographs in periodicals during the 2008 U.S. presidential election found that Sarah Palin, the only female candidate, was depicted with less facial

prominence than any of her male counterparts (Price & King, 2010).

## Implications of Facial Prominence for Female Leaders

Face-ism may have implications for the perceptions of women in leadership roles more generally. This point is becoming more important to consider in recent years because professionals increasingly have webpages describing their work, often including photographs of themselves. It is not clear whether it is best for professional women to show more or less facial prominence because there may be trade-offs associated with both strategies for women.

Female leaders are often subjected to prejudice due to the incongruity between their gender and stereotypical leadership roles (Eagly & Karau, 2002). Role congruity theory suggests that prejudice often arises from the fact that leadership roles are associated with stereotypically masculine (agentic), as opposed to feminine (communal), traits and behaviors (Eagly & Karau, 2002; Powell & Butterfield, 1989; Schein & Davidson, 1993). This stereotypical view of leadership places female leaders in a "double-bind" (Eagly & Karau, 2002; McGinley, 2009), with complex implications for facial prominence. On one hand, because leadership is associated with masculinity, acting or being seen as stereotypically feminine (e.g., warm, compassionate) could compromise women's professional advancement because they will be perceived as less agentic, which translates into lower competence evaluations (Eagly & Karau, 2002; McGinley, 2009). Thus, one might advise female leaders to present themselves as high in facial prominence in photographs in order to increase perceptions of their competence.

On the other hand, although women who conform to masculine leadership norms may be seen as more competent, they may simultaneously be derided for not fitting into their prescribed gender roles (Eagly, Makhijani, & Klonsky, 1992; Heilman, 2001; Rudman & Glick, 2001). Given the potential for negative professional consequences when displaying gender-incongruent behavior, one might advise female leaders to present themselves in more gender-congruent ways (e.g., with lower facial prominence in photographs). However, because there are links between masculine traits and perceptions of competence, being presented in a more stereotypically feminine manner could also have negative professional consequences (Eagly & Karau, 2002; McGinley, 2009). Hence, understanding this double-bind is fundamental to understanding how societal pressures might shape the visual depictions of male and female leaders online, whether political or otherwise.

## Face-ism Across Cultures

There has been some research on facial prominence across cultures, and this work has generally found that the face-ism bias exists cross-culturally, whether examining

newspaper images of many types of people (Archer et al., 1983) or website depictions of politicians (Konrath & Schwarz, 2007; Szillis & Stahlberg, 2007). Although face-ism exists across cultures within these past studies, the size of the face-ism bias has varied. However, the original researchers never explored potential factors that were associated with larger versus smaller face-ism biases in their cross-cultural samples.

In the current study, we examined cross-cultural variations in face-ism across 25 cultures, making it the largest known face-ism analysis to date. We were specifically interested in examining how institutional (macro-level) indicators of sexism were associated with an individual (micro level) form of sexism (Jaggar, 1974), namely, the size of the face-ism bias. Institutional sexism disadvantages individuals of one sex or the other systematically via macro-level processes and systems. Indicators of institutional sexism used in the present work are intended to gauge the degree to which sexism is widespread and embedded within a society (e.g., international gender equality indices, such as the Gender Empowerment Measure (GEM); the year that women were granted suffrage). Individual sexism, on the other hand, occurs when specific individuals experience discrimination based on their sex. We conceptualize face-ism as an individual form of sexism because an individual's photograph is being selected for display, and therefore the disadvantage associated with face-ism bias is affecting women at the micro or individual level. It is unclear how institutional gender inequality might be associated with this individual type of sexism.

On one hand, cultures with lower levels of institutional gender equality could have larger face-ism biases. In other words, there could be a match between institutional (macro-level) indicators of sexism (e.g., educational access, political rights) and individual (micro-level) indicators of sexism (e.g., face-ism). This idea seems intuitively appealing because as economic and political equality for women decrease in societies, it is reasonable to expect that subtle gender biases such as face-ism would increase. In fact, previous research has shown that sexist beliefs are positively correlated with institutional sexism across a wide variety of cultures (Brandt, 2011; Glick et al., 2000).

However, prior research does not consider links between macro-level inequality and face-ism, specifically. Archer, Iritani, Kimes, and Barrios's (1983) original study presents facial prominence scores from magazine images of people from a variety of occupations across 11 different cultures. Thus, in preparation for the current study, we did a reanalysis of their study and calculated the effect size (Cohen's *d*) of the gender difference in facial prominence for each culture using the *t* tests and degrees of freedom listed in the original article. Higher numbers represent a higher male bias in facial prominence. We correlated this effect size with two gender equality indices from the nearest available year (the Gender-Related Development Index [GDI] and the GEM, both of which represent greater institutional equality with higher numbers; see

page xxx for descriptions). Although there is no significant relationship between the face-ism effect size and either of these indicators (GDI: $r = -.46$, $p = .16$; GEM: $r = -.31$, $p = .42$), the negative relationship suggests that it is possible that institutional (macro-level) sexism and at least one type of individual (micro-level) sexism can cooccur.

The current study can extend on this prior work by (a) explicitly examining links between macro-level inequality indices and face-ism, (b) including a larger number and more diverse group of cultures, (c) holding occupation of target persons constant, considering the potential for occupational status to affect facial prominence (e.g., Dodd, Harcar, Foerch, & Anderson, 1989; Matthews, 2007), and (d) examining such trends three decades later, after many institutional-level advances for women worldwide. Importantly, it is also possible that cultures with greater institutional gender equality at the national level will have larger face-ism biases, which is a question that can be addressed in the current study. Although it might be more intuitive to think that the face-ism bias will be smaller in more institutionally gender-equal cultures, there could be a disconnection between more individual indicators of sexism, such as face-ism, and more institutional equality indicators. For example, some cultures could have relative low institutional (macro-level) sexism but prevalent day-to-day experiences of individual (micro-level) sexism.

The mismatch between macro-level and micro-level sexism could be driven by various mechanisms. First, more subtle gender biases (such as the face-ism bias) could take time to catch up to macro-level social changes. Furthermore, there could be backlash that occurs in response to decreases in levels of institutional sexism. Some feminist writers have described the current atmosphere in the West as "postfeminist," which does not imply that feminism has achieved all of its goals, but that people have become resistant and indifferent to feminist ideology in response to increasing economic equality for women (Faludi, 2006; McRobbie, 2009). "Society projects its fear onto a female form, it . . . cordon[s] off those fears by controlling women—pushing them to conform to comfortably nostalgic norms and shrinking them in the cultural imagination to a manageable size" (Faludi, 2006, p. 84). This imagery is striking considering that face-ism literally involves women being depicted with lower facial prominence compared to men.

Alternatively, some arguments in support of institutional gender equality may tolerate what appears on the surface to be gender biases. For example, cultural (or difference) feminism emphasizes inherent differences between men and women and argues for increasing the value of traditionally feminine activities and characteristics (Barrett, 1987). This line of reasoning sees sex and gender differences as a justification for increased rights for women (i.e., decreased institutional sexism); for example, it would suggest that our society should place high economic value on "women's work." However, it also allows for individual biases to emerge and

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even be justified because it emphasizes essential differences between men and women. In that way, biases like face-ism are not viewed as inherently problematic and could even be encouraged.

It is also possible for cultures to have relatively high institutional (macro-level) sexism but relatively low individual (micro-level) sexism. In those cultures, female political leaders could have high facial prominence precisely because they are breaking new ground in terms of gender equality in their country, as demonstrated by the Geraldine Ferraro example (Sparks & Fehlner, 1986). Observations in the study of racism and sexism in media offer a potential parallel on how institutional sexism may not directly translate to individual sexism. In particular, Jhally and Lewis (1992) discuss how media depictions of successful African Americans (e.g., the fictional television family *The Cosbys* from *The Cosby Show*, wherein a wealthy African American family is headed by a physician father and lawyer mother) in an institutionally racist culture could give White audiences the false impression that these images represent the prototypical African American experience. In other words, such seemingly positive images must be considered in the context of continuing institutional inequality. Because women continue to be grossly underrepresented in powerful leadership positions, such as political office worldwide, images of successful female exemplars can be misleading (e.g., Douglas, 2010). In the case of face-ism, therefore, the meaning of women who are represented with equal or slightly larger faces than men must be interpreted carefully within an otherwise institutionally unequal setting.

## The Current Study

Taken together, there is no clear pattern in prior research with respect to how face-ism, a type of individual sexism, is associated with more institutional-level types of sexism. We examined this question in the current study using the largest known face-ism database to date. Data from 25 cultures worldwide were collected and coded, for a total of 6,610 images of men and women of the same occupation from comparable sources (official government websites). We also obtained several national indicators of institutional sexism in order to examine the association between institutional sexism at the cross-cultural level and one indicator of individual/personal (micro-level indicator of) sexism, namely the face-ism bias. In doing so, we can contribute to theoretical dialogues about the relationship between different levels of sexism (Else-Quest & Grabe, 2012).

## Method

### Coding Facial Prominence in 25 Cultures

We retrieved headshot photographs of all major political representatives from official government webpages of 25 different cultures across six continents ($N = 6,610$; see Table 1).

For China, available data consisted of the top 143 political representatives for the 2005 term (accessed from an official political website: http://www.china.org.cn/english/PP-e/48915.htm). Means and standard deviations for facial prominence of German politicians were extracted from Szillis and Stahlberg (2007), who used identical coding methods to ours.

In selecting the cultures to code for facial prominence, we considered a number of factors. First, we aimed to obtain data from cultures with broad ranges of percentages of female representatives. We also tried to obtain samples from all over the world, including every continent except Antarctica. Note that our ability to obtain data from non-English-speaking cultures was limited by the availability of bilingual members of our research team.

Although facial prominence data were collected between 2004 and 2010, all photos within a single culture were collected during a single day to ensure that no changes were made to the websites during the data collection period. Using the standard procedure (Archer et al., 1983), facial prominence was assessed as a ratio of two measures: (a) the distance (in mm) from the visible top of the head to the lowest part of the chin and (b) the total length (in mm) of the body shown in the photograph. An index value of 1.00 would indicate that the picture shows only the face, whereas .75 would indicate that the face takes up 75% of the total picture height. We used the mean and standard deviation of facial prominence scores for men and women in each culture to calculate Cohen's $d$ (Cohen, 1988), which is a standard way of quantifying the effect size of the gender differences in facial prominence within each culture. (see Table 1; these data are also presented visually on a global map, which is available electronically at pwq.sagepub.com.)

### Cross-National Indicators

We collected and entered institutional-level indicators of gender equality from the sources described below. The year of face-ism data collection was matched to the closest available indicator year (see Table 2 for exact years). The use of such indicators responds to a recent call that they be used more frequently in the field of psychology grounded in empirical research and feminist theoretical frameworks (Else-Quest & Grabe, 2012). In our study, we examined how such institutional-level indicators covary with individual-level experiences of sexism. We also found data for the indices listed below from sources other than the one cited in this section when they were not available from these particular sources. The corresponding citations are indicated in Table 2.

*Vital event indices.* These indices covered issues related to birth and death and included: (a) the population sex ratio, which is the number of men to women born within a population, with higher numbers indicating a greater potential for discriminatory abortion or infanticide practices (Central

**Table 1.** Mean Facial Prominence Scores for Each Culture and Continent

Data by Culture

| Culture | Total No. of Politicians | % Female | Average Male Facial Prominence (SD) | Average Female Facial Prominence (SD) | Cohen's d | Interpretation |
|---|---|---|---|---|---|---|
| Portugal | 180 | 3.6 | .7634 (.0567) | .7238 (.0470) | .76042 | Men > Women |
| Norway | 165 | 38.8 | .5549 (.0553) | .5217 (.0541) | .60697 | Men > Women |
| United States | 585 | 14.2 | .7829 (.0585) | .7509 (.0712) | .49110 | Men > Women |
| Canada | 406 | 23.6 | .5686 (.0607) | .5404 (.0629) | .45624 | Men > Women |
| Germany | 603 | 33.3 | .7100 (.0900) | .6700 (.0900) | .44444 | Men > Women |
| Australia | 221 | 25.8 | .7147 (.0959) | .6767 (.0787) | .43318 | Men > Women |
| India | 457 | 8.3 | .7641 (.1005) | .7193 (.1091) | .42708 | Men > Women |
| Costa Rica | 57 | 38.6 | .6954 (.0629) | .6653 (.0808) | .41572 | Men > Women |
| Israel | 118 | 14.4 | .7616 (.0775) | .7337 (.0705) | .37676 | Men > Women |
| Argentina | 328 | 38.4 | .7459 (.1240) | .7042 (.1035) | .36526 | Men > Women |
| Venezuela | 163 | 21.5 | .6687 (.1016) | .6369 (.0882) | .33420 | Men > Women |
| Chile | 158 | 12.7 | .7467 (.0914) | .7262 (.0392) | .29144 | Men > Women |
| Austria | 243 | 28.4 | .6786 (.0856) | .6555 (.0836) | .27303 | Men > Women |
| Nigeria | 461 | 7.2 | .7999 (.0844) | .7802 (.0633) | .26414 | Men > Women |
| Bulgaria | 240 | 21.7 | .7023 (.0530) | .6911 (.0590) | .19984 | Men > Women |
| Malaysia | 286 | 13.6 | .7171 (.0703) | .7047 (.0856) | .15832 | Men = Women |
| Poland | 560 | 20.9 | .6763 (.0741) | .6651 (.0793) | .14594 | Men = Women |
| China | 143 | 7.0 | .6202 (.0776) | .6151 (.0660) | .07082 | Men = Women |
| New Zealand | 118 | 31.4 | .6585 (.0875) | .6535 (.1056) | .05156 | Men = Women |
| Tanzania | 317 | 31.5 | .9316 (.0482) | .9306 (.0584) | .01868 | Men = Women |
| Taiwan | 272 | 19.9 | .6115 (.0735) | .6124 (.0673) | -.01277 | Men = Women |
| Hong Kong | 60 | 18.3 | .6355 (.0464) | .6418 (.0614) | -.11579 | Men = Women |
| Zimbabwe | 76 | 15.8 | .7988 (.1102) | .8212 (.1180) | -.19621 | Women > Men |
| South Korea | 290 | 14.8 | .6154 (.0686) | .6297 (.0700) | -.20634 | Women > Men |
| Rwanda | 103 | 55.3 | .6820 (.0956) | .7276 (.1044) | -.45565 | Women > Men |

Data by continent

| Continent | # Cultures | Average % Female | Average Male Facial Prominence (SD) | Average Female Facial Prominence (SD) | Average Cohen's d | Interpretation |
|---|---|---|---|---|---|---|
| North America | 2 | 18.9 | .6757 (.0596) | .6457 (.0671) | .47367 | Men > Women |
| Europe | 6 | 28.8 | .6809 (.0691) | .6545 (.0688) | .40511 | Men > Women |
| South America | 4 | 26.8 | .7142 (.0950) | .6832 (.0779) | .35166 | Men > Women |
| Australia-New Zealand | 2 | 29.2 | .6866 (.0917) | .6651 (.0922) | .24237 | Men > Women |
| Asia | 7 | 13.7 | .6751 (.0735) | .6652 (.0757) | .09973 | Men = Women |
| Africa | 4 | 24.4 | .8031 (.0858) | .8149 (.0860) | -.09260 | Men = Women |

**Table 2.** Year of Cross-National Indicator Collected for Each Culture

| | Argentina | Australia | Austria | Bulgaria | Canada | Chile | China | Costa Rica | Germany | Hong Kong | India | Israel | Malaysia | New Zealand | Nigeria | Norway | Poland | Portugal | Rwanda | South Korea | Taiwan | Tanzania | USA | Venezuela | Zimbabwe |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year of Face-ism Data Collection | 07 | 05 | 10 | 08 | 05 | 07 | 06 | 07 | 07 | 07 | 09 | 08 | 10 | 07 | 07 | 05 | 06 | 07 | 06 | 10 | 06 | 06 | 04 | 07 | 06 |
| **Vital Event Indices** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Population sex ratio at birth | 07 | 05 | 11 | 08 | 05 | 07 | 06 | 07 | 07 | 07 | 11 | 08 | 11 | 07 | 07 | 05 | 06 | 07 | 06 | 11 | 06 | 06 | 04 | 07 | 06 |
| Total fertility rate (births per woman) | 07 | 05 | 10 | 07 | 05 | 07 | 06 | 07 | 07 | 07 | 09 | 07 | 10 | 07 | 07 | 05 | 06 | 07 | 06 | 10 | 12[a] | 06 | 04 | 07 | 06 |
| Sex differences in life expectancy | 07 | 05 | 09[b] | 07 | 05 | 07 | 06 | 07 | 07 | 07 | 09 | 07 | 09[b] | 07 | 07 | 05 | 06 | 07 | 06 | 09[b] | 05[c] | 06 | 04 | 07 | 06 |
| **Educational and professional opportunities** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Female combined gross enrollment ratio | 07 | 05 | 09[b] | 07 | 05 | 07 | 06 | 07 | 07 | 07 | 09 | 07 | 09[b] | 07 | 07 | 05 | 06 | 07 | 06 | 09[b] | • | 06 | 04 | 07 | 06 |
| Sex differences in adult literacy rate | 07 | 03[a] | • | 07 | 03[a] | 07 | 06 | 07 | 03[a] | 07 | 09 | 07 | 09[b] | 03[a] | 07 | 03[a] | 03[a] | 07 | 06 | 02[a] | • | 06 | 03[a] | 07 | 07 |
| Female scientists and technical workers (%) | 07 | 05 | 09[b] | 07 | 05 | 07 | 07 | 07 | 07 | 07 | • | 07 | 09[b] | 07 | • | 05 | 06 | 07 | • | 09[b] | • | 06 | 04 | 07 | 06 |
| Female leaders (%) | 07 | 05 | 09[b] | 07 | 05 | 07 | 07 | 07 | 07 | 07 | • | 07 | 09[b] | 07 | • | 05 | 06 | 07 | • | 09[b] | • | 06 | 04 | 07 | 06 |
| **Political rights and opportunities** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Year women received the right to vote | 07 | 05 | 10 | 07 | 05 | 07 | 06 | 07 | 07 | • | 09 | 07 | 10 | 07 | 07 | 05 | 06 | 07 | 06 | 10 | • | 06 | 04 | 07 | 06 |
| Year women received right to stand for election | 07 | 05 | 10 | 07 | 05 | 07 | 06 | 07 | 07 | • | 09 | 07 | 10 | 07 | 07 | 05 | 06 | 07 | 06 | 10 | • | 06 | 04 | 07 | 06 |
| Seats in parliament (% held by women)[d] | 07 | 05 | 10 | 08 | 05 | 07 | 06 | 07 | 07 | 07 | 09 | 08 | 10 | 07 | 07 | 05 | 06 | 07 | 06 | 10 | 06 | 06 | 04 | 07 | 06 |
| **Other indicators** | | | | | | | | | | | | | | | | | | | | | | | | | |
| GEM | 07 | 05 | 09[b] | 07 | 05 | 07 | 07 | 07 | 07 | 05[e] | 06[f] | 07 | 09[b] | 07 | • | 05 | 06 | 07 | • | 09[b] | 04[e] | 06 | 04 | 07 | • |
| GDI | 07 | 05 | 09[b] | 07 | 05 | 07 | 06 | 07 | 07 | 07 | 09 | 07 | 09[b] | 07 | 07 | 05 | 06 | 07 | 06 | 09[b] | 04[e] | 06 | 04 | 07 | 06 |
| Development of gender stereotypes | • | • | • | • | 90 | 90 | • | • | 90 | • | 90 | • | 90 | 90 | 90 | 90 | • | • | • | • | 90 | • | 90 | 90 | • |
| **Covariates** | | | | | | | | | | | | | | | | | | | | | | | | | |
| GDP per capita | 07 | 05 | 09 | 07 | 05 | 07 | 06 | 07 | 07 | 07 | 09 | 07 | 09 | 07 | 07 | 05 | 06 | 07 | 06 | 09 | 09[a] | 06 | 04 | 07 | 06 |
| Gini Index | 07 | 05 | 10 | 07 | 05 | 07 | 06 | 07 | 07 | 07 | 09 | 07 | 10 | 07 | 07 | 05 | 06 | 07 | 06 | 10 | 00[a] | 06 | 04 | 07 | 06 |

*Note.* GDI = Gender-Related Development Index; GDP = gross domestic product; GEM = Gender Empowerment Measure.
Year of indicator data collection is listed in the table above, if available. A black dot indicates that data are not available for this particular indicator and country. All data were collected from the annual United Nations Human Development Report unless otherwise indicated as below:
[a]Central Intelligence Agency (2010).
[b]Because the United Nations Human Development Report changed their gender-related measures in 2010, we used 2009 data.
[c]http://eng.stat.gov.tw/public/data/dgbas03/bs2/gender/Images%20of%20Women.pdf.
[d]We calculated data from our samples.
[e]http://www.women.gov.hk/.
[f]http://wcd.nic.in/publication/gdigemSummary%20Report/GDIGEMSummary.pdf.

Intelligence Agency, 2010); (b) the total fertility rate, which is defined as the average number of children born to women within a culture (United Nations Development Programme [UNDP], 2011); and (c) sex differences in life expectancy, which are calculated in terms of the number of years a newborn girl would live longer than a newborn boy (UNDP, 2011).

*Educational and professional opportunities.* These indices included (a) the female combined gross enrollment ratio, which is the total female enrollment in all levels of education in terms of the percentage of the school-aged female population (UNDP, 2011); (b) sex differences in the adult literacy rate, which represents the percentage of adult women (15 or older) who are literate among the total female population, relative to men (higher numbers indicate higher female literacy; UNDP, 2011); (c) female scientists and technical workers, which represents women's share of physical, mathematical, and engineering science professional positions, life science and health professional positions, and teaching professional positions (UNDP, 2011); and (d) female leaders, which represents the percentage of legislators, senior government officials, corporate managers, directors and chief executives, and other department and general managers who are women (UNDP, 2011).

*Political rights and opportunities.* These indices included (a) the year women received the right to vote on a universal and equal basis (UNDP, 2011); (b) the year women received the right to stand for election (UNDP, 2011); and (c) the percentage of all seats held by women in parliament (both lower or single houses, and, if applicable, upper houses or senates; UNDP, 2011).

*Other indices.* Other indices included (a) the GEM, which measures gender equality across three dimensions—economic participation and decision making, political participation and decision making, and power over economic resources (higher numbers indicate more opportunities for women; UNDP, 2011); (b) the GDI, which measures a culture's achievement in the three basic human development dimensions—a long and healthy life, knowledge and education, and decent standard of living, adjusted to account for inequalities between men and women (higher numbers indicate better outcomes for women; UNDP, 2011); and (c) the development of gender stereotypes, which represents the percent change in knowledge of gender stereotypes from ages 5 to 8. In some cultures, children more rapidly learn gender stereotypes between these years as compared to other cultures (Williams & Best, 1990).

*Aggregate Gender Equality Index.* In addition to examining individual variables, we calculated an aggregate gender equality variable that incorporated all of the gender equality indices. *Z* scores were computed for each gender equality variable (reverse-scoring as needed so that higher scores always indicated greater gender equality) and then averaged to form the aggregate gender equality variable.

*Covariates.* We included gross domestic product (GDP) per capita (in U.S. dollars) as a covariate to examine whether our effects could be explained by the possibility that more institutionally sexist cultures had lower GDPs (UNDP, 2011). We also included the Gini Index, which measures the extent to which the income distribution among people in a culture deviates from equality, ranging from 0 (*perfect economic equality*) to 100 (*most extreme inequality*), to examine whether our effects could be explained by more general inequality present within more institutionally sexist cultures (UNDP, 2011).

## Results

Mean facial prominence scores for each culture are presented in Table 1. The total number of politicians coded across 25 cultures was 6,610 (see Table 1 for the sample size for each culture). The effect size of the gender difference in facial prominence (Cohen's *d*) was correlated with each indicator to examine characteristics associated with cultures that had the largest male biases in facial prominence. There was no relationship between the face-ism effect size and the average facial prominence score within a culture (independent of gender), $r(25) = -.09$, $p = .69$. In other words, cultures that exhibited more gender bias in facial prominence did not necessarily have politicians with larger facial prominence overall, averaged across gender.

### Vital Event Indices

As can be seen from Table 3, no significant relationships emerged between the size of the face-ism bias and indicators covering vital events. This result remained when controlling for GDP or the Gini (in separate partial correlations because of the small number of cultures sampled).

### Educational and Professional Opportunities

Within the domain of educational and professional activities, there was evidence that male biases in facial prominence were largest in cultures with more educated and professional women (see Table 3). However, there was no significant relationship between the face-ism effect size and sex differences in literacy. Controlling for GDP or the Gini left these patterns relatively intact.

### Political Rights and Opportunities

No significant relationships emerged between the size of the face-ism bias and indicators covering political rights and opportunities. This result remained when controlling for GDP or the Gini.

**Table 3.** Relationships Between Facial Prominence (FP; Overall and Separately by Gender) and Various National Indicators

| National Indicators | r | Controlling for GDP | Controlling for General Inequality (Gini) | Male FP (β) | Female FP (β) | k |
|---|---|---|---|---|---|---|
| Vital Event Indices | | | | | | |
|   Population sex ratio at birth | .066 | .047 | .069 | — | — | 25 |
|   Total fertility rate (births per woman) | −.314 | −.183 | −.324 | — | — | 25 |
|   Sex differences in life expectancy (higher numbers indicate higher female lifespan) | .309 | .224 | .320 | — | — | 25 |
| Educational and professional opportunities | | | | | | |
|   Female combined gross enrollment ratio | .484* | .355† | .505* | 1.26* | −1.80** | 24 |
|   Sex differences in adult literacy rate (higher numbers indicate higher female literacy) | .235 | .048 | .234 | — | — | 23 |
|   Female scientists and technical workers (%) | .538* | .506* | .526* | 2.40** | −2.83** | 21 |
|   Female leaders (%) | .500* | .464* | .488* | 2.81** | −2.57** | 21 |
| Political rights and opportunities | | | | | | |
|   Year women received the right to vote | −.012 | .230 | −.035 | — | — | 23 |
|   Year women received right to stand for election | −.244 | −.029 | −.255 | — | — | 23 |
|   Seats in parliament (% held by women) | .035 | −.023 | .052 | — | — | 25 |
| Other indicators | | | | | | |
|   GEM | .391† | .447* | .441* | 1.50 | −1.84† | 22 |
|   GDI | .447* | .354† | .460* | 1.20* | −1.85** | 25 |
|   Development of gender stereotypes (higher numbers indicate faster gender stereotype acquisition in children) | .688* | .669* | .721* | 3.89* | −4.02* | 11 |
| Aggregate Gender Equality Index | .466* | .378† | .494** | 1.35* | −1.84** | 25 |

*Note.* GDI = Gender-Related Development Index; GEM = Gender Empowerment Measure.
Larger effect sizes mean that men have more facial prominence than women. Separate male versus female facial prominence analyses were conducted only for marginal or significant results.
†$p < .10$. *$p < .05$. **$p < .01$.

## Other Indices

Male biases in facial prominence were larger in cultures with higher GDI scores and marginally larger in cultures with higher GEM scores (see Table 3). We also correlated the percent change in knowledge of gender stereotypes in children aged 5 to 8 with differences in facial prominence; male biases in facial prominence were largest in cultures in which children more rapidly learned gender stereotypes between these years. Again, controlling for GDP or the Gini left these patterns relatively intact.

## Aggregate Gender Equality Index

Some of the nonsignificant effects presented in Table 3 would likely reach statistical significance if more cultures were added to the data set, which makes it important to consider the Aggregate Gender Equality Index as a more reliable indicator of potential patterns between macro-level and micro-level indicators of sexism. When examining the relationship between the Aggregate Gender Equality Index and the size of the face-ism effect, we find that more institutional gender equality overall in a culture was associated with more gender inequality on this individual measure of sexism, $r(25) = .47$, $p = .02$. These effects remain quite similar when covarying out cultures' GDPs or Ginis.

## More Male Heads or More Female Bodies?

We examined whether the larger male biases in facial prominence were driven by increases in men' or decreases in women' facial prominence scores in cultures with greater institutional-level gender equality. In order to do so, we regressed male and female facial prominence scores simultaneously onto each marginal or significant indicator variable (see Table 3). In every situation, the size of the facial prominence bias was driven by both increases in male facial prominence *and* decreases in female facial prominence, although the effects did not reach significance for the GEM. As cultures became more institutionally gender equal, male politicians were depicted with more of their faces, while at the same time female politicians were depicted with relatively more of their bodies. In other words, there is greater evidence for individual or micro-level sexism in cultures where we might least expect it, and this is driven by both men' and women' photographs.

## Discussion

We examined whether there would be a match or a disconnect between the size of the face-ism bias and institutional or macro-level indicators of sexism across cultures. Across 25 cultures, we found that male biases in facial prominence were greater in cultures that had higher institutional gender

equality, even when controlling for GDP and general economic inequality (Gini).

## The Paradox of Gender Equality and Gender Bias

It is paradoxical that there would be more focus on women's bodies and more focus on men's faces in more institutionally gender equal cultures, considering the consequences of the face-ism bias. Equally paradoxical is the reverse pattern of the appearance of more individual equality (i.e., smaller face-ism biases) in cultures that have relatively less institutional gender equality. However, neither one of these ideas is novel within feminist scholarship. Marecek (2012) recently noted that national indicators of gender equality are not always consistent with localized experiences. As we mentioned in the introduction, cultural (or difference) feminism provides a context wherein institutional gender equality could occur alongside individual forms of sexism. Furthermore, "postfeminism" may have inevitable antifeminist "backlashes" as women gain in prominence and power (Faludi, 2006; McRobbie, 2009). Our finding that face-ism is larger in more gender-equal cultures may be a reflection of this phenomenon. Moreover, scholars have commented on how images of women and other underrepresented groups that at first seem equal and powerful can be misleading when considered in a context of structural (institutional) inequality. These images could signal the beginning of desires for social change, but they may also create false expectations and standards given the institutional barriers to success for members of these groups (Douglas, 2010; Jhally & Lewis, 1992). Considering this point, we must be careful to note that high facial prominence may not have the same meanings (i.e., greater competence) across cultures, but it may be important to interpret within the backdrop of opportunities available to members of underrepresented groups within a given culture.

How exactly might these paradoxical findings come about? Without more data we can only speculate; however, we offer a number of potential explanations below, noting that these differences likely originate from both the "outside in"—that is, other people (photographers, web editors, publicists, etc.) are creating and manipulating the images of politicians—and from the "inside out"—that is, the politicians themselves likely approve which specific images to include. Therefore, the photographs may be products of sociocultural attitudes with respect to gender roles for all of the above parties. However, keep in mind that people are generally not conscious about how facial prominence can influence people's perceptions; thus, the online depiction is most likely to be unaffected by conscious processes.

*"Outside in" processes.* Potential "outside in" processes are driven by photographers, web editors, and the public relations staff of the politicians. Previous research has demonstrated that women's political success can be shaped by the staff and party leaders surrounding them; for example, female candidates in Great Britain were more likely to be selected to run for political positions that were difficult to win, which could contribute to the perception that women are not able to win political elections (Ryan, Haslam, & Kulich, 2010). Although the individual characteristics of the staff supporting the politicians in the current study are unknown, what is known is their culture's level of institutional gender equality or inequality. Therefore, it would be reasonable to infer that their influences on the online visual depictions are affected by these respective cultural attitudes. In other words, there could be cultural values that drive them to portray the politicians with more or less facial prominence. However, the specific mechanisms or motivations are yet to be explored.

Previous research has shown that men and women in more developed and gender equal cultures are seen as having more differentiation in their personality traits (McCrae et al., 2005). For example, in more developed cultures, women are perceived by observers to be more agreeable than men, whereas in less developed cultures the two genders are seen as more similar in agreeableness (McCrae et al., 2005). The difference in facial prominence between the sexes could be a reflection of this phenomenon. That is, the photographers, web editors, and the public relations staff of the politicians could be responding to the differing (actual or perceived) personalities between male and female politicians, thus trying to match the online image to the individual.

Another "outside in" process might be related to actual gender role beliefs that that photographers, web editors, and public relations staff hold. Diekman and Schneider (2010) have applied social role theory to gender differences in politics, asserting that beliefs about gender roles contribute to stereotypic expectations, traits and goals, and power and resources in the political arena, which then contribute to the gender differences observed in politics. Interestingly, cross-cultural research has found that men and women are perceived as more different from each other in their stereotypical psychological characteristics in more developed and gender-equal cultures. That is, the stereotypes associated with each gender diverge more in richer and more institutionally gender-equal cultures (Williams & Best, 1990). It is not surprising then that two groups of people who are conceptually seen as different would also be literally seen (visually) as different.

*"Inside out" processes.* Potential "inside out" processes are driven by politicians themselves, reflecting their personal influence on how the final photographs will appear. Although politicians themselves might or might not have direct control over their photographs on the government website, how they usually interact with their staff, how they present themselves in the public, as well as how they interact with the photographers are all factors that could influence their online depictions, which should also be shaped by their own attitudes regarding gender roles. For women in positions of political power, these gender roles are inherently complicated because

of the "double bind" that female leaders face (Eagly & Karau, 2002; McGinley, 2009). There is an interpersonal cost for female leaders who represent themselves as too dominant (masculine), which may make them respond by strategically playing up their feminine qualities (in this case, by presenting themselves with lower face-ism). It is also possible that prejudices against female leaders could lead to diminished self-confidence and expectancy confirming behaviors, which could also lead to an increase in more stereotypically feminine behaviors (Eagly & Karau, 2002). Additionally, as Levy (2005) notes, women can also be participants in antifeminist backlash, and to the extent that this effect is driven by "inside out" processes, this remains a possibility.

Finally, previous research has shown that people in gender egalitarian cultures are more likely to describe their *own* personalities in gender stereotypical ways (Costa, Terracciano, & McCrae, 2001; Guimond et al., 2007; Schmitt, Realo, Voracek, & Allik, 2008). This may be because people in egalitarian cultures are more likely to compare themselves to the other gender, which leads to increased self-stereotyping, whereas people in nonegalitarian cultures are more likely to compare themselves to others of the same gender, which leads to decreased self-stereotyping (Guimond et al., 2007). A similar process may be at play here. People in cultures that are high in institutional sexism may be more likely to make within-gender comparisons, which tend to minimize gender differences and therefore would result in similar facial prominence in photos, whereas people in cultures with low institutional sexism may be more likely to make other-gender comparisons, which tend to exaggerate gender differences. This would therefore result in a larger difference in facial prominence in photos (i.e., the face-ism bias).

### Practice Implications

The finding that photographs of female versus male politicians on their websites is paradoxically related to national indicators of gender equality is likely surprising to many politicians and their support staff (photographers, website editors, publicity managers, etc.). The face-ism bias is likely due to unconscious influences, so simply making politicians and their support staff aware of this bias and its negative implications for female politicians could reduce this bias. In particular, our article can contribute to that awareness by pointing out that being in a relatively egalitarian cultural context does not shield politicians from this face-ism bias; in fact, it exacerbates it.

Practically, high facial prominence is important to consider because it can lead to evaluations of competence versus warmth and likability (Archer et al., 1983; Levesque & Lowe, 1999; Schwarz & Kurz, 1989; Zuckerman, 1986). Given the link between rapid, unreflective trait judgments of competence and election outcomes (e.g., Todorov et al., 2005), this is a potentially important finding. We do not know whether the relatively small differences in facial prominence observed in these samples, however, would actually translate into real differences for these politicians' perceived competence. This is an empirical question that can be addressed in future research.

Beyond the specific bias of face-ism, our article can help contribute to dialogues about the relationship between different forms of sexism by providing empirical evidence that they can diverge at times. It may be easy for policy makers, political leaders, and citizens to become complacent when national indicators reveal their nation to be relatively gender egalitarian. However, our study shows that these national indicators are not always consistent with biases at the individual level, and so it is important to remain vigilant in the march toward gender equality.

### Strengths, Limitations, and Future Directions

Our study has a number of strengths, including that it is the largest known face-ism study to date, that it controls for occupational status across cultures, and that we rely on objective pieces of visual information (i.e., photographs), rather than self-report, to calculate our measure of individual sexism. However, every study has its limitations, the most obvious of which in our study involves the difficulty inherent to cross-cultural interpretations of research findings. For example, cultures could have different attributions of competitiveness and warmth associated with the size of faces in photographs. In particular, a larger face-to-body ratio may not necessarily indicate intelligence and assertiveness in cultures that are less institutionally gender equal, given that previous studies on face-ism have mostly been conducted in cultures with higher levels of institutional gender equality. However, even if facial prominence is interpreted differently in less institutionally egalitarian cultures, this difference alone does not fully explain why an individual-level indicator of sexism that is known to be associated with discriminatory consequences (i.e., stereotypical person perceptions) within more institutionally gender egalitarian cultures is so strong within these same cultures. In other words, cultural differences in interpretation of facial prominence in photographs would still not explain the mismatch that we have shown occurs within the cultures with higher levels of institutional gender equality.

Another potential consideration is the perception of sexuality in cultures with more or less gender equality. Because the female body is commonly objectified and viewed in a sexual manner (e.g., Fredrickson & Roberts, 1997), cultures in which expressions of sexuality (particularly female sexuality) are repressed may be less likely to include women's bodies in photographs (Nelson & Paek, 2005). Indeed, cultures that are low in gender equality also seem to be those where sexuality is more suppressed, suggesting an alternative explanation for our findings. This explanation is theoretically very interesting because it implies that there may be a trade-off involved between sexual freedom and portrayals of competence (via

higher facial prominence in photographs). It is difficult to speak to this alternative explanation with our data set because it does not include any measures of sexual attitudes, but we believe that this explanation is unlikely for two reasons. First, because we examined official headshots of politicians, there was low variability in the amount of facial prominence overall, such that the photographs tended to range from a full head shot to a head-and-shoulder shot (i.e., none of the photographs actually included the politician's full body). Second, this sexuality explanation could explain the decrease in the portrayal of women's bodies in cultures with less gender equality, but our data show that this cross-cultural face-ism effect is due to both the increase in the portrayal of women's bodies *and* the increase in facial prominence for photographs of men in egalitarian cultures. It is not clear how differences in perceptions of sexuality should relate to the facial prominence for men's photographs.

Finally, although face-ism is a measure of individual (or micro-level) sexism, just because we found a disconnection between institutional equality and the face-ism bias does not mean that we would find this pattern with all indicators of individual sexism. Our study demonstrates that this disconnection can exist, but not necessarily in all situations. Future research should continue to examine these questions using other measures of individual sexism.

In our analysis, we examined all political representatives, regardless of level (e.g., Senators, Representatives) and regardless of background variables other than gender (e.g., age, political experience, education). In future research, we suggest exploring whether these variables have any effect on the size of the gender difference in facial prominence across cultures. There are some intriguing (yet nonsignificant) patterns present in past research that might lead us to suggest that perhaps male biases in facial prominence are attenuated with increasing power (e.g., higher status political positions, higher levels of education; see Konrath & Schwarz, 2007). We leave this interesting possibility for future endeavors.

In conclusion, across 25 different cultures, our most striking finding is that indices of institutional gender equality are negatively correlated with the size of a classic gender bias in psychology. Our findings suggest that, perhaps with increasing equality, the complexity of negotiating gender roles also increases.

## References

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

Barrett, M. (1987). The concept of "difference." *Feminist Review, 26*, 29–41.

Brandt, M. J. (2011). Sexism and gender inequality across 57 societies. *Psychological Science, 22*, 1413–1418.

Central Intelligence Agency. (2010). *The world factbook*. Retrieved from https://www.cia.gov/library/publications/the-world-factbook/fields/2010.html

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

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

Costa, P. R., Terracciano, A., & McCrae, R. R. (2001). Gender differences in personality traits across cultures: Robust and surprising findings. *Journal of Personality and Social Psychology, 81*, 322–331.

Diekman, A. B., & Schneider, M. C. (2010). A social role theory perspective on gender gaps in political attitudes. *Psychology of Women Quarterly, 34*, 486–497.

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

Douglas, S. J. (2010). *Enlightened sexism: The seductive message that feminism's work is done*. New York, NY: Times Books.

Eagly, A. H., & Karau, S. J. (2002). Role congruity theory of prejudice toward female leaders. *Psychological Review, 109*, 573–598.

Eagly, A., Makhijani, M., & Klonsky, B. (1992). Gender and the evaluation of leaders: A meta-analysis. *Psychological Bulletin, 111*, 3–22.

Else-Quest, N. M., & Grabe, S. (2012). The political is personal: Measurement and application of nation-level indicators of gender equity in psychological research. *Psychology of Women Quarterly, 36*, 131–144.

Faludi, S. (2006). *Backlash: The undeclared war against American women* (15th anniversary ed.). New York, NY: Three Rivers Press.

Fredrickson, B. L., & Roberts, T.-A. (1997). Objectification theory: Toward understanding women's lived experiences and mental health risks. *Psychology of Women Quarterly*, *21*, 173–206.

Glick, P., Fiske, S. T., Mladinic, A., Saiz, J. L., Abrams, D., Masser, B., ... Lopez, W. (2000). Beyond prejudice as simple antipathy: Hostile and benevolent sexism across cultures. *Journal of Personality and Social Psychology*, *79*, 763–775.

Guimond, S., Branscombe, N. R., Brunot, S., Buunk, A. P., Chatard, A., Desert, M., ... Yzerbyt, V. (2007). Culture, gender, and the self: Variations and impact of social comparison processes. *Journal of Personality and Social Psychology*, *92*, 1118–1134.

Heilman, M. E. (2001). Description and prescription: How gender stereotypes prevent women's ascent up the organizational ladder. *Journal of Social Issues*, *57*, 657–674.

Inter-Parliamentary Union. (2012). *Women in national parliaments*. Retrieved from http://www.ipu.org/wmn-e/classif.htm

Jaggar, A. (1974). On sexual equality. *Ethics*, *84*, 275–291.

Jhally, S., & Lewis, J. (1992). *Enlightened racism: The Cosby show, audiences, and the myth of the American dream*. Boulder, CO: Westview Press.

Konrath, S., & Schwarz, N. (2007). Do male politicians have big heads? Face-ism in online self-representations of politicians. *Media Psychology*, *10*, 436–448.

Levy, A. (2005). *Female chauvinist pigs: Women and the rise of Raunch culture*. New York, NY: Free Press.

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

Marecek, J. (2012). The global is local: Adding culture, ideology, and context to international psychology. *Psychology of Women Quarterly*, *36*, 149–153.

Matthews, J. L. (2007). Hidden sexism: Facial prominence and its connections to gender and occupational status in popular print media. *Sex Roles*, *57*, 515–525.

McCrae, R. R., Terracciano, A., & 78 Members of the Personality Profiles of Cultures Project (2005). Universal features of personality traits from the observer's perspective: Data from 50 cultures. *Journal of Personality and Social Psychology*, *88*, 547–561.

McGinley, A. (2009). Hillary Clinton, Sarah Palin, and Michelle Obama: Performing gender, race, and class on the campaign trail. *Denver University Law Review*, *86*, 709–725.

McRobbie, A. (2009). *The aftermath of feminism: Gender, culture and social change*. Los Angeles, CA: Sage.

Nelson, M. R., & Paek, H.-J. (2005). Cross-cultural differences in sexual advertising content in a transnational women's magazine. *Sex Roles*, *53*, 371–383.

Price, K., & King, J. M. (2010). Face-ism in the 2008 U.S. Presidential general election photo coverage of candidates in news & business magazines. *Business Research Yearbook—Global Business Perspectives*, *17*, 570–577.

Powell, G., & Butterfield, D. (1989). The 'good manager': Did androgyny fare better in the 1980s? *Group & Organization Studies*, *14*, 216–233.

Rudman, L. A., & Glick, P. (2001). Prescriptive gender stereotypes and backlash toward agentic women. *Journal of Social Issues*, *57*, 743–762.

Ryan, M. K., Haslam, S. A., & Kulich, C. (2010). Politics and the glass cliff: Evidence that women are preferentially selected to context hard-to-win seats. *Psychology of Women Quarterly*, *34*, 56–64.

Schein, V. E., & Davidson, M. J. (1993). "Think manager–think male"—Managerial sex typing among U.K. business students. *Management Development Review*, *6*, 24–28.

Schmitt, D., Realo, A., Voracek, M., & Allik, J. (2008). Why can't a man be more like a woman? Sex differences in big five personality traits across 55 cultures. *Journal of Personality & Social Psychology*, *94*, 168–182.

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.

Sparks, G., & Fehlner, C. (1986). Faces in the news: Gender comparisons of magazine photographs. *Journal of Communication*, *36*, 70–79.

Szillis, U., & Stahlberg, D. (2007). The face-ism effect in the internet: Differences in facial prominence of women and men. *International Journal of Internet Science 2*, 3–11.

Todorov, A., Mandisodza, A., Goren, A., & Hall, C. (2005). Inferences of competence from faces predict election outcomes. *Science*, *308*, 1623–1626.

United Nations Development Programme (UNDP). (2011). *Human development reports*. Retrieved from http://hdr.undp.org/en/reports/global

Williams, J. E., & Best, D. L. (1990). *Sex and psyche: Gender and self viewed cross-culturally*. Thousand Oaks, CA: Sage.

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