Do Male Politicians Have Big Heads? Face-ism in Online Self-Representations of Politicians

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Headshot portraits of all U.S. Governors, Senators, and Representatives and members of Parliament in Canada, Australia, and Norway are analyzed. In all countries, male politicians are represented with higher facial prominence than female politicians, paralleling a pervasive gender bias in media portraits. For American Congresswomen, high facial prominence is associated with a more pro-feminist voting record. Finally, anthropometric data show that gender differences in the facial prominence in portraits cannot be traced to gender differences in actual body proportions.

Across different media, cultures, and centuries, men are portrayed with more facial prominence than women in visual representations (Archer, Iritani, Kimes, & Barrios, 1983; Copeland, 1989; Hall & Crum, 1994). This "face-ism" bias[1] is assessed with an index that reflects the ratio of the face to the total visible body. A parallel bias has been observed for race. Magazines, paintings, and stamps depict African-Americans with less facial prominence than Caucasians, although this racial difference is not observed in art created by African-Americans (Zuckerman & Kieffer, 1994). These parallels suggest that high facial prominence is associated with higher social status.

Differences in facial prominence are unfortunately consequential. People rate a given person as more intrapersonally (e.g., intelligent, ambitious) and interpersonally (e.g., aggressive, dominant) powerful when the person is shown with high rather than low facial prominence (e.g., Archer et al., 1983;

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[1]In the interest of staying consistent with prior research, we use the term "face-ism" throughout this manuscript to refer to what may more appropriately be called "body-ism." As one helpful reviewer pointed out, the use of the term "face-ism" is backward from the way we usually describe disadvantaged groups in the classic "isms" (e.g. sexism, racism, etc.). Emphasizing someone's face has been shown to be advantageous whereas whole-body portrayals are the disadvantaged state, thus "body-ism" may be a more descriptive term for this phenomenon.

Levesque & Lowe, 1999; Schwarz & Kurz, 1989; Zuckerman, 1986). This effect is observed independent of the observer's or target person's gender and obtained even when both portraits are cropped from the same original.

The present studies extend facial prominence research by examining photographs of politicians. Drawing on pictures of all U.S. representatives, senators, and governors, as well as members of Parliament in Canada, Australia, and Norway, we observe that this gender bias is alive and well in politics—even under the constraints of headshots provided by the officials themselves. Our analyses focus on gender and race differences in facial prominence and relate them to politicians' education, current office, and voting record, where available. Before we elaborate on these issues, however, we address a possible methodological objection to face-ism research.

STUDY 1: A MEDIA BIAS OR A GENDER DIFFERENCE IN BODY PROPORTIONS?

Gender differences in facial prominence in media portrayals presumably reflect a bias to emphasize women's bodies and men's faces. Although this assumption is highly plausible, it is also conceivable that actual gender differences in body proportions contribute, at least in part, to the surprisingly robust "face-ism" phenomenon. We address this possibility on the basis of an anthropometric dataset by examining whether men have larger heads than women relative to the overall size of their bodies.

Method

The Belgian research group DINbelg collected 3-D body scans from a representative sample of 150,000 Belgian adults (aged 18–65) to build an anthropometric database for design purposes. Men's and women's head height and total height were retrieved from their website (http://www.dinbelg.be/background.htm).

Results and Discussion

On average, men were taller ($M = 1766$ mm for total height, $\sigma = 76$) and had larger heads ($M = 232$ mm for head height, $\sigma = 11$) than women ($M = 1646$ mm, $\sigma = 68$ and $M = 223$ mm, $\sigma = 14$, respectively), ts(149, 998) = 322.25 and 138.43, respectively, ps < .001. However, when examining their head-to-body proportions, women's heads ($M = .1355$, $\sigma = .2059$) were actually proportionally larger than men's heads ($M = .1314$, $\sigma = .1447$), $t(149, 998) = 4.46$, $p < .001$. Thus, gender differences in body proportions are *opposite* to the reliable observation that men are portrayed with higher facial prominence (i.e., a larger head-to-body ratio), confirming that face-ism

reflects a bias in visual representations. Next, we turn to differences in facial prominence in the political domain.

STUDY 2: AMERICAN POLITICS

For the first time in history, the 1984 U.S. presidential ballot 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. Unfortunately, Sparks and Fehlner's (1986) analyses were limited to only two news magazines and four politicians. We revisit this issue on the basis of a larger database, namely photographs of all major elected office holders in the United States during the 2000–2004 term, including 50 governors, 100 senators, and 435 representatives, and find strong support for a small but pervasive facial prominence bias. Of interest are (i) gender and (ii) race differences in facial prominence and (iii) the potential moderating roles of politicians' office and education. We also examine (iv) to what extent facial prominence in congressional self-representations is related to politicians' voting patterns on issues of women's rights. Because the photos used in this study are provided by the politicians themselves, our data also bear on whether (v) female politicians or politicians of color (unknowingly) represent themselves in ways that may give rise to lower attributions of power and competence.

Method

We retrieved headshot photos of all major political representatives in the United States from http://www.congress.org. Politicians' office and education were also available at this website. Following Archer et al. (1983), facial prominence was assessed as a ratio of two measures, namely (i) the distance from the visible top of the head, including hair, to the lowest part of the chin and (ii) the total length of the body shown in the photograph (visible top of the head to the lowest visible part of the body). All measures were taken in millimeters. An index value of 1.00 indicates that the picture shows *only* the face; 0.00 indicates that the face is not shown at all. Inter-coder reliability was calculated on 118 photographs, $\alpha = .99$.

Finally, we used the 2004 Report Cards of the Voter Information Services (VIS; http://www.vis.org/crc/default.aspx) as a measure of politicians' voting record on women's issues. VIS provides "grades" (ranging from 0–100%) based on the match between politicians' voting records and an advocacy group's stance. We calculated an overall pro-female score by standardizing

and averaging the scores from four advocacy groups (α = .89): Business and Professional Women/USA, American Association for University Women, NARAL Pro-Choice America, and National Right to Life Committee (reverse-scored).

Results

Gender and Office

As shown in Figure 1, the portraits of male politicians showed higher facial prominence (M = .78, N = 502) than the portraits of female politicians (M = .75, N = 83), $F(1, 583)$ = 19.87, p < .001. This main effect extends the observation of face-ism bias from media portraits to politicians' (self-) presentation in official portraits. Gender accounted for 3.3% of the variance in facial prominence and the effect is of medium size, Cohen's d = .49 (Cohen, 1988; Devilly, 2004). In addition, Senators (M = .79) and Representatives (M = .78) were portrayed with higher facial prominence than Governors (M = .75), $F(2, 582)$ = 9.24, p < .001, for the main effect.

Figure 1 also shows a breakdown by gender and office. Contrast analyses indicate that men *lower* their facial prominence at each higher level of political office, all ps < .03. This results in apparent gender parity at the governor level, whereas significant gender differences are observed for senators, $t(578)$ = 4.30, p < .001, and representatives, $t(578)$ = 2.15, p = .032. However, the absence of a gender difference at the governor level may also reflect the larger standard error associated with the smaller sample size; in any case, the Gender X Office interaction is not reliable, $F(2, 579)$ = .560, p = .572.
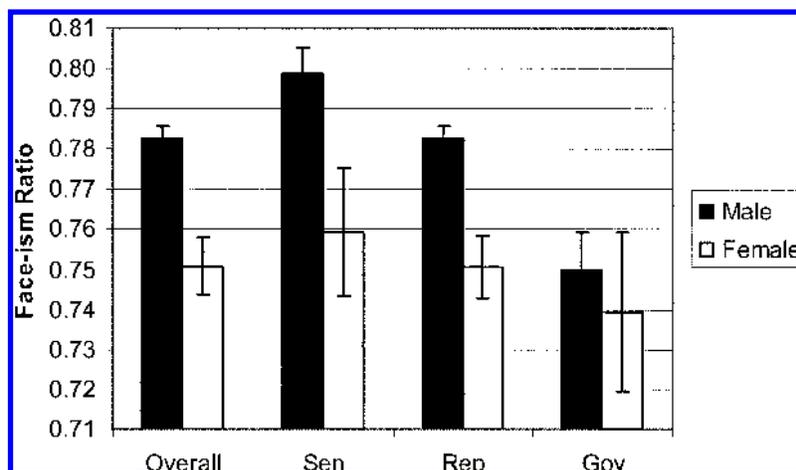

FIGURE 1 Differences in males and females' facial prominence at different levels of American politics.

Gender and Educational Background

We next addressed the influence of education, shown in Figure 2. There were no overall differences between politicians who only held an undergraduate degree (M = .78, N = 165), an undergraduate degree *plus* a Master's or law degree (M = .78, N = 321) or three university degrees (e.g., PhD; M = .77, N = 67), F < 1. Contrasts reveal that males with three degrees have *smaller* faces than males with one degree, $t(547)$ = −1.93, p = .05, and females with three degrees have *larger* faces than females with one degree, $t(547)$ = 62.37, p < .001, with the result that men and women with three degrees appear to represent themselves equally, t < 1, whereas gender biases in facial prominence remained for politicians with one or two university degrees, $t(547)$ = 3.75, p < .001, and $t(547)$ = 2.37, p = .018 respectively. Again, the standard errors are larger for smaller sample sizes and the corresponding interaction of Gender × Education failed to reach significance, $F(2, 547)$ = 1.48, p = .228, limiting interpretation of our results.

Race

Eighty-nine percent (N = 522) of American politicians in the 2000–2004 term were White, 6.2% (N = 36) were African-American, 3.8% (N = 22) were Hispanic-American, and 0.9% (N = 5) were Asian-American. Consistent with past research finding that race biases in facial prominence disappeared when portraits were created by African-American artists (Zuckerman & Kieffer, 1994), we found that African-American politicians presented themselves with significantly more facial prominence (M = .80) than Caucasians (M = .78), $t(581)$ = −1.96, p = .05. Also consistent, Asian-Americans represented themselves equally to Caucasians in online photographs, although
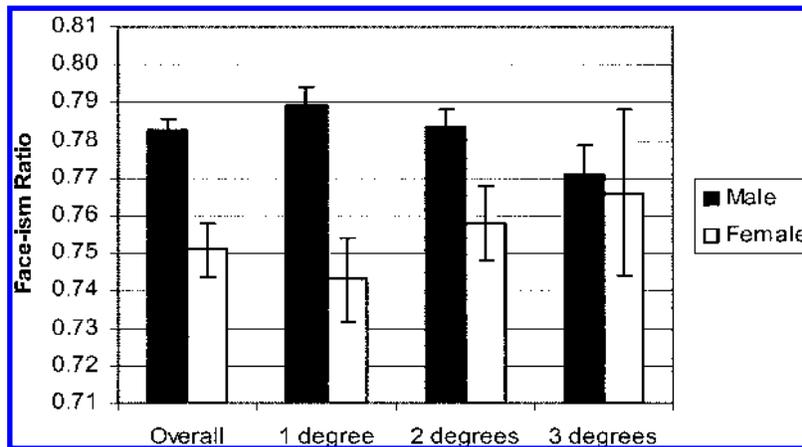

FIGURE 2 Differences in males and females' facial prominence with different levels of education in American politicians.
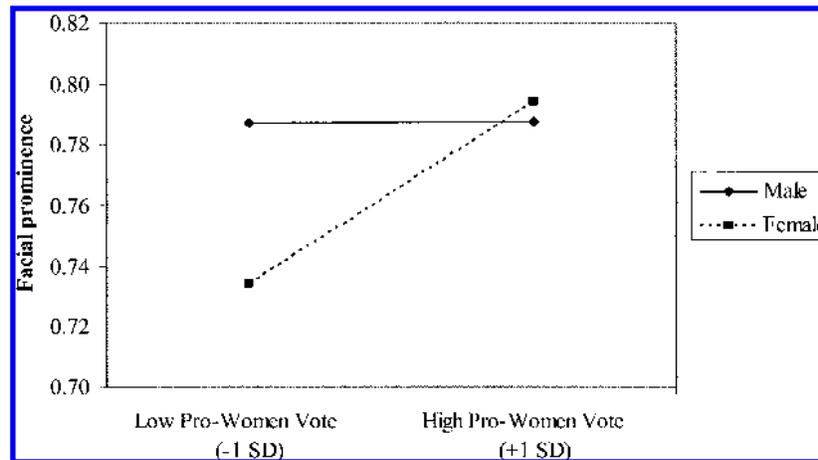
FIGURE 3 Differences in males and females' facial prominence is associated with their pro-women voting scores.

this conclusion is based on only five Asian-American politicians ($M = .79$), $t < 1$. In contrast, Hispanic-Americans tended to present themselves with less ($M = .75$) facial prominence than Caucasians, $t(581) = 1.84$, $p = .07$. To our knowledge, this is the first observation of racial bias in the facial prominence of self-selected pictures.

Congressional Voting

We tested whether women who present themselves with higher facial prominence are more likely to support feminist issues, consistent with their less gender-typed self-presentation. A step-wise linear regression with facial prominence as the dependent variable bears on this issue. In the first step we entered political affiliation as a covariate. In the next step, we entered Gender (0 = male, 1 = female) and Pro-Female Vote (0–100%), and in the final step we entered the two-way interaction term. Political affiliation was not related to facial prominence, nor was Pro-female Vote by itself, ts < 1, whereas gender was a significant predictor, as already reported. More important, a significant Gender X Pro-Female Vote interaction, $\beta = -.117$, $t(532) = -2.22$, $p = .027$, accounted for 4.5% of the variance. As shown in Figure 3, men's voting record was unrelated to the facial prominence of their portraits, whereas women's pro-female voting record increased with increasing facial prominence.

Discussion

Compared to typical media portrayals, where women's facial prominence scores range from .28 to .63 (Archer et al., 1983; Sparks & Fehlner, 1986),

the female politicians in our sample presented themselves with high facial prominence, as reflected in a score of .75. Nevertheless, they were still out-done by their male peers, who presented themselves with even higher facial prominence (.78). This pattern replicates the familiar gender difference at an overall high level of facial prominence and was obtained despite the tight constraints of professional headshot photographs. It suggests that gender differences in facial prominence are alive and well at high levels of professional standing, in contrast to what Sparks and Fehlner (1986) suggested two decades ago. We return to this issue after examining data from other countries in Study 3.

Gender differences in facial prominence were not observed among politicians who held three or more university degrees and among governors. In both cases, the absence of gender differences was due to a reduced facial prominence of males, not an increased facial prominence of females. However, the respective interaction terms were not significant. In Study 3, we revisit this issue on the basis of data sets from other countries and conduct a meta-analysis of all data sets to determine whether there is a reliable overall pattern.

Finally, we obtained first evidence that differences in facial prominence are meaningfully related to consequential real-world behaviors. For female politicians, facial prominence was significantly related to voting behavior on gender issues. Specifically, women who presented themselves with high facial prominence had a more pronounced pro-female voting record than women who presented themselves with low facial prominence. This presumably reflects that women who hold more feminist beliefs are likely to both present themselves in less gender-stereotyped ways and to vote in favor of women's interests.

STUDY 3: CROSS-NATIONAL COMPARISONS

Study 3 extends these analyses to three Western countries in which women make up a larger proportion of professional politicians than in the United States, where only 14% of the representatives and senators, and 18% of the governors, were women in 2000–2004. In contrast, women are better represented in the national Parliament of Canada (23.7%), Australia (25.3%), and Norway (38.3%). Of interest is whether the gender bias in facial prominence is robust across these countries and whether this bias declines with an increasing number of women in Parliament.

Method

We accessed standard headshot photos of all parliamentary political representatives from official government websites in Canada (http://www.parl.gc.

ca), Australia (http://www.aph.gov.au), and Norway (http://www.stortinget. no/english) during January 2005. The measurements follow the procedures of Study 2. Inter-coder reliability was calculated based on random subsets of 20% of the photos; it was $\alpha = .98$ for Canada (82 photos) and Australia (46 photographs) and $\alpha = .99$ for Norway (33 photos).

Results

In all three countries, a gender bias in facial prominence emerged, replicating the American findings (Study 2).

Canada

Gender and Office. Overall, Canadian photographs showed more facial prominence for male ($M = .57$, $N = 309$) than for female politicians ($M = .54$, $N = 97$), $t(404) = 3.91$, $p < .001$. Gender accounted for 3.6% of the variance in facial prominence and the effect was of medium size, Cohen's $d = .45$. Overall, Senators' facial prominence scores ($M = .57$, $N = 99$) were significantly higher than those of Members of Parliament ($M = .56$, $N = 307$), $t(404) = -1.94$, $p = .05$. The interaction of Gender × Office was not significant, $F(1, 402) = 2.27$, $p = .133$. (See Table 1 for means and effect sizes.)

Gender and Educational Background. Three hundred and five of the 409 politicians in our sample listed their educational background on the website. Of those, there were no overall differences between people who only held one college degree or diploma ($M = .56$, $N = 143$), people who held an undergraduate degree and a Master's or law degree ($M = .56$, $N = 122$), and those who held three or more university degrees (e.g., PhD; $M = .58$, $N = 40$), $p > .20$. The interaction of gender and education was not significant, $F(2, 299) = 1.45$, $p = .236$.

Australia

Gender and Office. Australian photographs also showed more facial prominence for male ($M = .72$, $N = 164$) than for female politicians ($M =$

TABLE 1 Effect Sizes across Countries used to Calculate Mean Weighted Effect Size

Country	# Male	Faceism male	*SD* male	# Female	Faceism female	*SD* female	Pooled *SD*	Total *N*	Cohen *D*
Norway	101	0.555	0.055	64	0.522	0.054	0.055	165	0.607
Australia	164	0.715	0.096	57	0.677	0.079	0.088	221	0.433
Canada	309	0.568	0.058	97	0.541	0.063	0.060	406	0.445
US	502	0.783	0.059	83	0.751	0.071	0.065	585	0.491

Note. SD = standard deviation.

.68, $N = 57$), $t(219) = 2.69$, $p = .008$. Gender accounted for 3.2% of the variance and the effect was of medium size, Cohen's $d = .43$. Representatives ($M = .73$; $N = 145$) had greater facial prominence than Senators ($M = .65$, $N = 76$), $t(219) = 6.35$, $p < .001$. There was no significant interaction of gender and office, $F(1, 217) = .261$, $p = .610$.

Gender and Educational Background. There were no overall differences as a function of the number of politicians' college degrees or diplomas (M's $= .70$, .71, and .69; N's $= 79$, 55, and $N = 29$ for one, two or three degrees, respectively), $F < 1$. As in the previous datasets, the interaction of gender and education is not significant, $F(1, 157) = .354$, $p = .702$.

Norway

Gender and Office. Finally, Norwegian male politicians ($M = .56$, $N = 101$) also presented themselves with higher facial prominence than their female colleagues ($M = .52$, $N = 64$), $t(163) = 3.80$, $p = .001$, with gender accounting for 8.1% of the variance. Cohen's d was .61, a medium effect size. The Norwegian parliament, Stortinget, has one level of elected members, thus an analysis by job title is not possible for Norway.

Gender and Educational Background. Because only five Norwegian politicians (including one female) had three university degrees, we created two categories for education: college degree or diploma versus graduate school degree. Overall, we found no difference in the facial prominence of politicians with college ($M = .54$, $N = 121$) and graduate ($M = .55$, $N = 34$) degrees, $t < 1$. Again, the interaction of Gender × Education was not significant, $F(1, 151) = .468$, $p = .495$.

Does Gender Bias Decrease as Women's Representation Increases?

One might conjecture that the gender-stereotyped nature of politicians' portraits decreases as the representation of women in politics increases. Using the percentage of women in Parliament as an indicator of women's representation in politics, our data provide no support for this hypothesis. Across countries, the gender difference is remarkably robust and amounts to a difference of .03 on the 0–1 face-ism index in the United States, Canada, and Australia, and .04 in Norway. Thus, a nearly three-fold increase in the representation of women in Parliament (from 14% in the United States to 38% in Norway) is not associated with an increase in elected women's facial prominence on official portraits.

Moreover, the gender difference does not vary as a function of the respective country's general portrait style. Overall, the American and Australian portraits emphasize the face more than the Canadian and Norwegian portraits (with mean index scores of .78, .70, .56 and .54, respectively). Nevertheless, the gender difference remains constant at .03 for the United States, Canada, and Australia and .04 for Norway.

Meta-Analytic Integration

In the United States data set, we did not observe reliable gender differences in facial prominence among governors and politicians with high educational achievement (three or more university degrees). However, the corresponding interaction terms were not significant and parallel analyses of data from other countries failed to show a clear pattern. To further explore whether office and education variables moderate the size of gender differences in facial prominence, we conducted a meta-analysis of the available data.

The average weighted effect size of gender differences in facial prominence was $d = 0.48$ (95% C.I. $= 0.37, 0.62, k = 4, N = 1377$), a medium effect (Cohen, 1988). We next tested for status as a moderator by analyzing the difference in effect size at different levels of education or job title, calculated separately, using methods developed by Shadish and Sweeney (1991). We ran two regression analyses, one with education level (number of degrees) as the independent variable and the other with job title (representative versus senator) as the independent variable. In both analyses, Cohen's D (effect size) was the dependent variable, weighting by overall sample size of each group (Shadish & Sweeney, p. 884); see Table 2 for the data used in these analyses.

Number of degrees (1–3) was not significantly related to the size of gender difference in facial prominence, $\beta = -.285$, $t(10) = -.89$, $p = .40$. Across four countries the average effect size for gender differences in facial prominence was 0.496 for single degree holders ($k = 4, N = 508$, 95% C.I. $= 0.22, 0.78$), 0.617 for holders of two degrees ($k = 4, N = 532$, 95% C.I. $= 0.34, 0.90$), and 0.300 at the highest educational level of 3 degrees ($k = 3, N = 136$, 95% C.I. $= -0.02, 0.62$). Job title was also not significantly related to the size of gender difference in facial prominence, $\beta = -.660$, $t(5) = -1.76$, $p = .15$. The average effect size was 0.627 for representatives ($K = 3, N = 887$, 95% C.I. $= 0.37, 0.89$) and 0.342 for senators ($K = 3, N = 275$, 95% C.I. $= -0.08, 0.60$).

GENERAL DISCUSSION

Previous research showed that men and racial majorities are represented with more emphasis on their faces than women or racial minorities. The present research extends these findings in several ways.

First, our analysis of anthropometric data, based on a sample of Belgian adults, shows that gender differences in facial prominence in media portraits cannot be traced to gender differences in actual body proportions. On the contrary, women's heads are proportionately larger relative to the size of their bodies than men's (Study 1).

Second, and more important, analyses of headshot portraits of major elected political representatives in the United States (Study 2), Canada,

TABLE 2 Effect Sizes across Countries, Education Levels, and Job Titles

Country	Topic	Status	# Male	Faceism male	*SD* male	# Female	Faceism female	*SD* female	Pooled *SD*	Cohen *D*	Total *N*
US	Education	3 degrees	59	0.7707	0.044	8	0.7655	0.119	0.089	0.058	67
US	Education	2 degrees	285	0.7835	0.061	36	0.7580	0.064	0.062	0.409	321
US	Education	1 degree	134	0.7891	0.060	31	0.7434	0.071	0.065	0.699	165
Canada	Education	3 degrees	30	0.5906	0.102	10	0.5320	0.046	0.079	0.737	40
Canada	Education	2 degrees	98	0.5654	0.050	24	0.5219	0.066	0.058	0.745	122
Canada	Education	1 degree	99	0.5709	0.053	44	0.5491	0.065	0.059	0.367	143
Australia	Education	3 degrees	24	0.6868	0.113	5	0.6766	0.080	0.098	0.104	29
Australia	Education	2 degrees	41	0.7280	0.073	14	0.6750	0.071	0.072	0.737	55
Australia	Education	1 degree	52	0.7108	0.104	27	0.6799	0.095	0.100	0.310	79
Norway	Education	2+ degrees	20	0.5607	0.034	14	0.5395	0.039	0.037	0.575	34
Norway	Education	1 degree	74	0.5511	0.061	47	0.5149	0.058	0.060	0.607	121
US	Job title	Senator	86	0.7987	0.056	14	0.7594	0.082	0.071	0.557	100
US	Job title	Rep	375	0.7828	0.057	60	0.7507	0.071	0.064	0.498	435
Canada	Job title	Senator	65	0.5773	0.084	34	0.5633	0.076	0.080	0.174	99
Canada	Job title	Rep	244	0.5650	0.049	63	0.5285	0.050	0.050	0.737	307
Australia	Job title	Senator	57	0.6618	0.111	19	0.6320	0.090	0.101	0.295	76
Australia	Job title	Rep	107	0.7429	0.073	38	0.6990	0.062	0.068	0.647	145

Note. U.S. governors were excluded from Job title analysis since the U.S. was the only country with Governors and was not comparable. Norway was excluded from Job title analysis because it has a unicameral Parliament (only one parliamentary level). For education, three degrees were coded 3, two degrees were coded 2, and one degree was coded 1. For job title, senator was coded 1 and representative was coded 0. SD = standard deviation.

Australia, and Norway (Study 3) show a consistent gender difference: Overall, the faces of male politicians are more prominent in these portraits than the faces of female politicians. Effect size analyses indicate that this gender difference is of medium size, with Cohen's (1988) ds ranging from .43 to .61, with an average effect size of .48 (see Table 1). This robust difference is observed under the constrained conditions of headshot portraits, retrieved from official government websites. These portraits are usually provided by the politicians' own offices and are part of the politicians' public self-presentation.

Third, within the United States, facial prominence is significantly related to female representatives' voting behavior on gender related issues. This presumably reflects that female politicians who hold more feminist beliefs are likely to both represent themselves in less gender-stereotyped ways and to vote in favor of women's interests. This finding provides the first evidence that facial prominence in self-selected portraits is meaningfully related to consequential real-world behaviors.

Fourth, across four Western countries, the size of gender differences in facial prominence was unaffected by the percentage of women elected to Parliament (Study 3). Apparently, national differences in gender equality, as reflected in the representation of women in Parliament, do not translate into differential self-presentations of elected politicians. A broader range of countries from a more diverse set of cultures may shed more light on the covariates of this gender difference.

Fifth, using a meta-analysis we find that education level or job title does not moderate gender differences in facial prominence. Interactions between gender and education or job title were non-significant at the individual country level as well as in meta-analytic tests of moderation. Although this null effect does not rule out status-related moderation effects, it suggests that any such effects that may exist are likely to be small.

Finally, we observed that racial background influenced politicians' facial prominence in the United States. Whereas Hispanic politicians presented themselves with marginally lower facial prominence, the photographs of African-American politicians showed more facial prominence than the portraits of any other group (Study 2). This is consistent with Zuckerman and Kieffer's (1994) analysis of African-Americans' self-portraits and may reflect an effort to counteract perceived biases. Future research may fruitfully address which variables influence whether minorities self-represent with low versus high facial prominence.

Previous experimental research, using facial prominence differences that exceeded the differences observed in the present naturalistic studies, has shown that high facial prominence fosters attributions of higher competence and power (Archer et al., 1983; Levesque & Lowe, 1999; Schwarz & Kurz, 1989; Zuckerman, 1986). Whether the smaller differences observed in our studies translate into real differences in citizens' evaluations of politicians'

competence is an empirical issue that warrants further testing. For now, our findings provide preliminary evidence for what many citizens may suspect about male politicians: they do indeed have big heads, or at least, they present themselves that way.

ACKNOWLEDGMENTS

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