



Contents lists available at SciVerse ScienceDirect

Journal of Experimental Social Psychology

journal homepage: www.elsevier.com/locate/jesp

FlashReport

Appearance-based politics: Sex-typed facial cues communicate political party affiliation[☆]Colleen M. Carpinella^{*}, Kerri L. Johnson

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HIGHLIGHTS

- ▶ We examine the influence of appearance-based cues on judgments of party affiliation.
- ▶ We find that facial cues associated with political party affiliation are sex-typed.
- ▶ Female Republicans are significantly more sex-typical than female Democrats.
- ▶ Accuracy of party judgments varies by sex-typicality and politician party.
- ▶ Facial sex-typicality mediates the influence of politician sex and party on perceiver party judgments.

ARTICLE INFO

Article history:

Received 16 November 2011

Revised 24 July 2012

Available online xxx

Keywords:

Social categorization

Face perception

Political psychology

Gender

Judgment accuracy

ABSTRACT

Consequential political judgments often rely on facial appearance, yet the facial cues that compel such judgments remain unspecified. We predicted that judgments of political party affiliation, and by extension their accuracy, rely on the sex-typicality of facial cues (i.e., the degree of facial masculinity and femininity). In Study 1, we found that among Republicans/Conservatives in the 111th U.S. House of Representatives, women were significantly more sex-typical than men. This was not true for Democrats/Liberals. In Study 2, we examined the relationship between sex-typicality of facial cues and social judgments. We found that the accuracy of Republican categorizations was positively related to feminine cues in women but negatively related to masculine cues in men. In contrast, the opposite pattern was true for Democratic categorizations. Facial sex-typicality mediated the interaction between politician sex and party and perceiver party affiliation judgments. We discuss the implications that these findings have for electoral politics.

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Introduction

Visual cues have a wide-spread impact on electoral decisions. From mere photographs, naïve raters can identify election winners and losers (Antonakis & Dalgas, 2009; Todorov, Mandisodza, Goren, & Hall, 2005). Judgments of competence account for 70% of the variance in U.S. election results (Atkinson, Enos, & Hill, 2009; Ballew & Todorov, 2007; Todorov et al., 2005), and such perceptions predict vote choice across cultures (e.g., Finland, Mexico, Brazil, United States, Japan; Berggren, Jordahl, & Poutvaara, 2011; Lawson, Lenz, Baker, & Myers, 2010; Rule et al., 2010). Moreover, observers can decipher the political party affiliation

of both unfamiliar elected officials and college students (Rule & Ambady, 2010), and, perceivers can identify the political ideology of unknown politicians from other countries (Bull & Hawkes, 1982; Samochowiec, Wänke, & Fiedler, 2010). Collectively, these findings show cross-culturally consistent effects: appearance-based judgments inform political perceptions. The cues that compel such judgments, however, remain poorly understood (Olivola & Todorov, 2010; Wänke, Samochowiec, & Landwehr, 2012).

The gendered nature of politicians and politics

We predicted that judgments of political party affiliation would rely on the sex-typicality of facial cues. Our prediction was guided by the gendered nature of the liberal-conservative continuum, in both policy advocacy and gender attitudes.

Across democratic political systems, women's historic realignment with more liberal politics (Inglehart & Norris, 2000) reflects shifts in political parties' values. In the U.S., for example, the Democratic Party is associated with socially liberal policies that aim to diminish gender disparities (e.g., women's rights, abortion rights); the Republican Party is associated with socially conservative policy issues that

[☆] These studies were supported by the National Science Foundation (BCS-1052896) to K.L.J. and a Graduate Research Fellowship to C.M.C. We thank Matthew Rilla and the Social Communications Lab for assistance with data collection; and Kelly Gildersleeve, Scott Johnson, Mariana Preciado, and Rob Shrode for helpful comments on this manuscript. Portions of these data were presented at the 2012 meeting of the Society for Personality and Social Psychology.

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tend to bolster traditional sex roles (e.g., military spending, national defense; Winter, 2010). These policy platforms are manifest in each party's image. Consequently, politicians may exhibit characteristics that reflect these values.

Gender attitudes also differ reliably by political ideology. Conservatives, in particular, encourage adherence to traditional gender roles (Lye & Waldron, 1997). Thus, communal and feminine women are highly regarded. Consequently, Republican women may be uniquely prone to exhibit sex-typical characteristics.

We reasoned that differences in political platforms and gender attitudes may be reflected in politicians' facial appearance. Specifically, we predicted that the sex-typicality of politicians' faces (i.e., men's facial masculinity; women's facial femininity) would vary as a function of their political party, thereby providing reliable cues for observers' judgments of political party. We tested our predictions using a large and convenient sample—members of the 111th U.S. House of Representatives. In Study 1 we measured the sex-typicality of facial cues of politicians. In Study 2 we tested how facial sex-typicality related to perceivers' judgments of political party.

Study 1

Method

Target population

Targets included the 434 members of the 111th U.S. House of Representatives (74 women, 360 men, 1 vacant seat)—256 Democrats (199 men, 57 women) and 178 Republicans (161 men and 17 women).

Procedures

We downloaded photographs from each politician's government website and coded for sex and political party. We imported each image individually into FaceGen Modeler using the Photo Fit Tool (Blanz & Vetter, 1999), and we measured each face's sex-typicality (i.e., masculinity for men and femininity for women) using the Gender Morph tool.¹ Theoretical values ranged from -40 (highly male-typed) to $+40$ (highly female-typed). We converted this to a common scale for men and women, reflecting the objective level of sex-typical facial cues. Thus, positive values indicated sex-typical characteristics (i.e., masculine men and feminine women); negative values indicated sex-atypical characteristics (i.e., feminine men and masculine women).

Results and discussion

We predicted that facial sex-typicality would vary as a function of Politician Party and Politician Sex. We analyzed sex-typicality using a 2 (Politician Sex) by 2 (Politician Party) ANOVA. Overall, women were more sex-typical than men (i.e., women were more feminine than men were masculine), $F(1,430) = 39.54, p < .001$; Republicans and Democrats did not differ in sex-typicality, $F(1,430) = 1.15, p = .284$. However, the predicted interaction between Politician Party and Politician Sex was significant (see Fig. 1), $F(1,430) = 18.76, p < .0001$. Among Republicans, women were significantly more sex-typical than men, $F(1,430) = 37.98, p < .0001$; among Democrats, this difference was much less pronounced, $F(1,430) = 3.72, p = .055$. As predicted, among women, Republicans were significantly more sex-typical than Democrats, $F(1,430) = 8.37, p = .004$. Unexpectedly, among men, Democrats were more sex-typical than Republicans, $F(1,430) = 20.70, p < .0001$. Importantly, these patterns were replicated using each politician's liberal/conservative voting record as an index of politician ideology (see online Supplement).

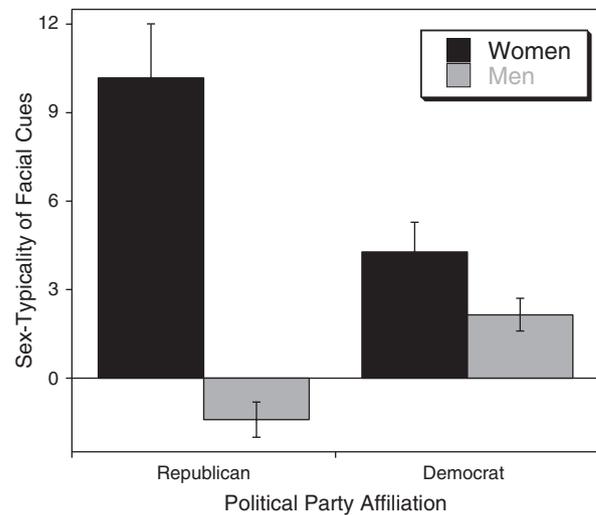


Fig. 1. The sex-typicality of facial cues as a function of Politician Party and Politician Sex. Positive values indicate sex-typical facial characteristics (masculine men; feminine women). Negative values indicate sex-atypical characteristics (feminine men; masculine women). Error bars depict standard errors.

Next, we tested our prediction that Republican women would be the most sex-typical politicians. We compared the sex-typicality of Republican women to all other groups using a planned contrast (contrast weights: 3, $-1, -1, -1$). As predicted, this contrast was significant, $F(1, 430) = 21.454, p < .0001$, indicating that Republican women were uniquely sex-typical.

We found partial support for our prediction that facial sex-typicality would vary as a function of sex and political party. Although our prediction that Republicans would appear more sex-typical than Democrats overall, was not supported, our specific predictions were. Female politicians were significantly more feminine than male politicians were masculine. This effect was obtained primarily because Republican women were highly sex-typical. This finding aligns with the conservatives' endorsement of strict gender norms for women (Lye & Waldron, 1997).

Study 2

If facial sex-typicality is apparent to perceivers, it may impact judgments of politicians. In Study 2, we examined whether judgments of political party relied on sex-typicality.

Method

Participants

One hundred twenty UCLA undergraduate students (35 men, 82 women, 3 unspecified) participated for course credit.

Procedure

First, participants categorized the political party of the 434 politicians from Study 1 using computer keys labeled "Republican" and "Democrat." Each trial consisted of a fixation cross (500 ms), followed by a randomly selected face that appeared until a judgment was made. Then, participants rated a subset of faces for femininity/masculinity (see online Supplement).

Results and discussion

Analytic strategy

We analyzed data using generalized estimating equations to accommodate dichotomous (accuracy, party identification) outcomes

¹ FaceGen Modeler estimates the parameters of facial characteristics relative to a database of hundreds of three-dimensional face scans of men and women.

and to accurately model hierarchical data (Fitzmaurice, Laird, & Ware, 2004). Politician Sex and Political Party were effect coded (Female = .5, Male = -.5; Democrat = -.5, Republican = .5); participant judgment and accuracy were coded numerically (Democrat = 0, Republican = 1; Error = 0, Accurate = 1). We report unstandardized regression coefficients (B) and Wald Z values for each parameter.

Accuracy of political party categorization

First, we tested the overall accuracy of political party categorizations to replicate prior work (Rule & Ambady, 2010). We computed a standard measure of sensitivity for each participant (see Table 1; Stanislaw & Todorov, 1999). Hits were coded as correct Democrat categorizations; correct rejections were coded as correct Republican categorizations.

Perceivers' categorizations were significantly above chance, ($d' = .1484$), one-sample $t(119) = 8.51, p < .0001$, thus demonstrating sensitivity to cues denoting political party. This was true for judgments of both women ($d' = .1519$) and men ($d' = .1158$), one-sample $t(119) = 5.91$ and 10.58 , respectively, both, $p < .0001$. Sensitivity did not differ as a function of Politician Sex, $t(119) = 1.17, p = .244$. Analyses of other signal detection parameters appear in the online Supplement. These findings replicate prior work demonstrating that perceivers can accurately categorize political party affiliation, here in a nationally meaningful sample – the entire membership of the U.S. House of Representatives.

Next, we tested how accuracy varied as a function of political party judgment, politician sex, and sex-typicality. Given the findings from Study 1, we predicted that categorization accuracy would be higher for more sex-typical women, but that categorization accuracy would be unrelated to the sex-typicality of men. We regressed Accuracy onto Judgment, Politician Sex, Facial Sex-Typicality, and all interactions. Overall, accurate categorizations were 8% more likely for judgments of women, relative to men, $B = -.08, SE = .04, z = -2.22, p = .03, OR = .92$; were 4% less likely for faces that were lower in sex-typicality, $B = -.004, SE = .002, z = -2.05, p = .0401, OR = .97$; and were 88% more likely for Democrat, relative to Republican judgments, $B = -2.11, SE = .007, z = -295.46, p < .0001, OR = .12$. Importantly, the three-way interaction also reached significance, $B = -.33, SE = .001, z = -361.34, p < .0001$ (see Fig. 2).

Among Republican categorizations, accurate judgments were 98% more likely for more feminine women, simple $B = .09, SE = .004, z = 21.72, p < .0001, OR = 1.98$, but were 40% less likely for more masculine men, simple $B = -.07, SE = .001, z = -55.86, p < .0001, OR = .60$. Among Democrat categorizations, accurate judgments were 58% less likely for more feminine women, simple $B = -.11, SE = .003, z = -33.14, p < .0001, OR = .43$, but 74% more likely for more masculine men, simple $B = .07, SE = .002, z = 48.18, p < .0001, OR = 1.74$. These findings demonstrate that facial sex-typicality relates to the accuracy of political party judgments.

The role of sex-typed cues in political party categorizations

Next we tested our central prediction that political party categorizations would be related to the sex-typicality of a politician's face,

Table 1
Signal detection analysis for perception of political party affiliation.

Politician sex	Hits	Misses	CR	FA	d'	C'	Beta
Female	62.41	37.59	46.02	53.98	.1519	-.5275	1.0116
Male	48.10	51.90	59.10	40.90	.1158	.8125	1.0488
Overall	51.32	48.68	57.85	42.15	.1484	.0853	1.0408

Note. Parameters for signal detection analyses were conducted using standard algorithms, and by coding correct categorization of a Democrat as a Hit, correct categorization of a Republican as a Correct Rejection (CR), miscategorization of a Democrat as a Miss, and miscategorization of a Republican as a False Alarm (FA).

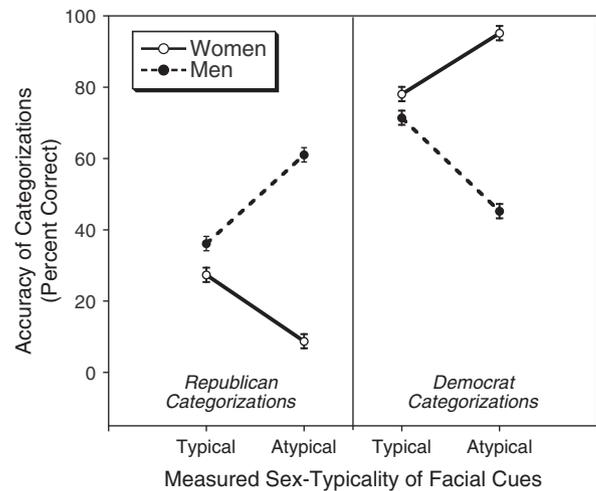


Fig. 2. Accuracy of political party categorizations as a function of Politician Sex, Party Judgment, and Facial Sex-Typicality Cues. Predicted values were estimated at 1 SD above and below 0 for Facial Sex-Typicality Cues, thus indicating sex-typical and sex-atypical facial appearances. Error bars depict standard errors within each simple slope.

leading highly sex-typical faces to be judged more frequently as Republicans. If correct, this pattern would imply that sex-typicality cues may be utilized in a heuristic fashion by perceivers.

Test for moderation

First, we regressed Party Judgments onto Politician Sex, Facial Sex-Typicality, and their interaction. Overall, Republican categorizations were twice as likely for men than women, $B = .74, SE = .06, z = 11.39, p < .0001, OR = 2.09$ and were more likely as facial sex-typicality increased, $B = .01, SE = .002, z = 6.06, p < .0001, OR = 1.07$ (based on 1 SD change in sex-typicality). As predicted, the interaction was also significant (see Fig. 3), $B = -.01, SE = .003, z = -3.92, p < .0001$. Among women, Republican categorizations were 16% more likely with each SD increase in femininity, simple $B = .02, SE = .003, z = 6.91, p < .0001, OR = 1.16$; among men, however, no such relation was observed, simple $B = -.0001, SE = .001, z = -.07, p = .9439$,

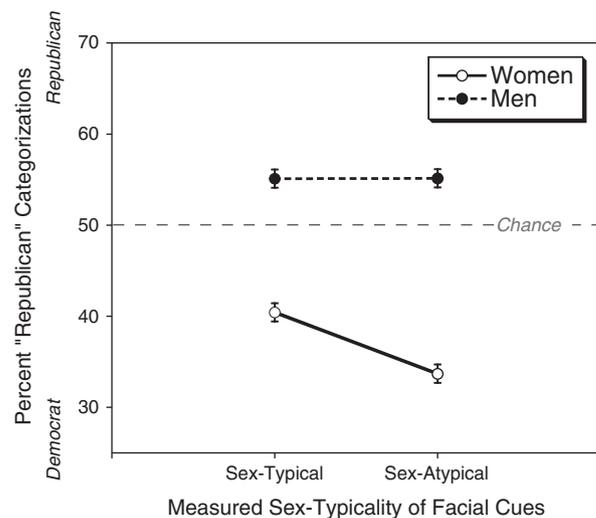


Fig. 3. Proportion of "Republican" categorizations as a function of Politician Sex and Facial Sex-Typicality Cues. Predicted values were estimated at 1 SD above and below 0 for Facial Sex-Typicality Cues, thus indicating sex-typical and sex-atypical facial appearances. Error bars depict standard errors within each simple slope.

OR = .99. Thus, perceivers' judgments of political party affiliation related to facial sex-typicality, especially for judgments of female politicians.

Mediated moderation model

Next, we examined the possibility that party affiliation judgments would not only vary as a function of politician party and politician sex as described above, but that these effects would be mediated by facial sex-typicality. We conducted a multilevel path analysis to test for mediated moderation (Edwards & Lambert, 2007).

Following the recommendations of Edwards and Lambert (2007), we modeled the mediated pathway depicted in Fig. 4. Due to the logistic and nested nature of our data, Party Judgments were modeled using a logistic link and random intercept for variability using Mplus (Muthén & Muthén, 2011). Both Politician Sex (path α_1) and Politician Party (path α_2) were independently associated with facial Sex-Typicality, $Bs(SEs) = 1.16(.02)$ and $.36(.01)$, both $p < .0001$. Corroborating the findings of Study 1, the Politician Sex by Politician Party interaction was also associated with Sex-Typicality (path α_3), $B(SE) = -.95(.02)$, $p < .0001$.

Most importantly, we examined for mediated moderation. Specifically, we modeled the Politician Sex by Politician Party interaction, through facial Sex-Typicality, and tested the significance of this indirect effect. Frequently, indirect effects are not normally distributed, and standard z tests therefore yield biased results. Consequently, we computed 95% confidence intervals using bootstrapping with 5000 replicates to test the proposed mediated pathway. As predicted, the indirect effect for the interaction between Politician Party and Politician Sex on Party Judgment through facial Sex-Typicality was significant (path $\alpha_3\beta$), $B = -.06$, 95% CI $[-.09, -.03]$, providing support for mediated moderation.

Tests of simple slopes were significant, indicating that the nature of this mediation differed by politician sex. Among women, the simple indirect effect of Politician Party on Party Judgment through facial Sex-Typicality was significant (path $\alpha_1\beta$) $B = -.04$, 95% CI $[-.06, -.02]$. Relative to female Democrats, female Republicans were more sex-typical, and this predicted Republican categorizations among observers. Among men, the simple indirect effect was also significant (path $\alpha_2\beta$) $B = .02$, 95% CI $[.01, .04]$, but in the opposite direction. Relative to male Democrats, male Republicans were less sex-typical, and this predicted Republican categorizations among observers. These findings indicate that the moderated effect of the Politician Sex by Politician Party interaction for Party Judgments was mediated by Sex-Typicality. As predicted, perceivers utilized the sex-typicality of faces to judge the political party of politicians.

General discussion

We found that the facial sex-typicality of politicians varied as a function of sex and political party (Study 1) and that facial sex-typicality related to political party judgments and their accuracy (Study 2). Among Republicans, but not Democrats, women were more feminine than men were masculine, and these very factors related to the accuracy of political party judgments. Moreover, the sex-typicality of facial cues mediated the effect of politician sex and party on perceivers' judgments of political party affiliation. As predicted therefore, political affiliation was strongly related to gendered facial cues, and observers exploited this fact when providing judgments of politicians. Although demonstrated in the context of American politics, these findings have implications more broadly, insofar as appearance-based cues have been widely linked to perceptions of political attitudes and identification.

As predicted, we found that Republican women were highly feminine. Indeed, compared with all other politicians, Republican women exhibited the highest degree of sex-typicality. While this specific pattern was expected, the relative lack of masculinity among Republican men was not. We predicted that Republicans would be more sex-typical than Democrats, on average, but this was not the case. We suspect that this asymmetry occurred, at least in part, because political leadership is a historically masculine endeavor, thus automatically conferring masculine characteristics on male politicians. Consequently, it may be unnecessary for Republican men's appearance to exhibit the masculinity that is regarded by their party's gender attitudes. Instead, their policy advocacy and leadership roles, by their very nature, have already conferred those characteristics on them. Republican women, in contrast, may fulfill proscriptive gender norms for their party through their physical appearance.

The current studies provide an unparalleled level of specificity for understanding how facial characteristics affect perceptions of politicians. We found that the sex-typicality of facial cues provides crucial information about political party affiliation. These effects may have eluded other research because prior studies collapsed across politician sex, excluded female politicians entirely, and/or failed to measure objective facial characteristics. Taking these factors into consideration, we obtained objective evidence for partisan differences in the sex-typicality of facial cues, and we measured how these objective differences impinge on perceptions of party affiliation. This strategy enabled us to determine precisely how sex-typical facial shape is related to participants' judgments of political party identification. We suspect these impacts extend beyond American politics. Evidence suggests that the gendered nature of the liberal/conservative ideological continuum is widespread across

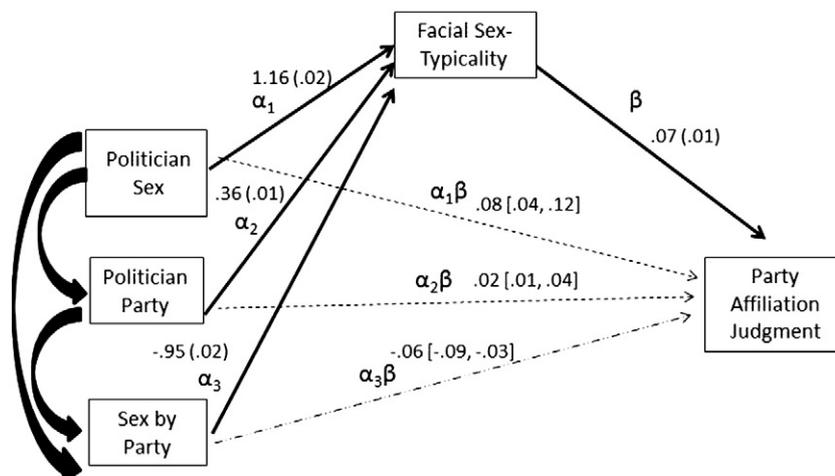


Fig. 4. Mediated moderation model path diagram. Direct effects are indicated by a solid line and indirect effects are indicated by a dotted line.

political systems (Inglehart & Norris, 2000). Thus, these insights are likely to apply to political perceptions more broadly when democratic political party systems are in place.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <http://dx.doi.org/10.1016/j.jesp.2012.08.009>.

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