Republican Voters Prefer Candidates Who Have Conservative-Looking Faces: New Evidence From Exit Polls

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Research shows people share common political facial stereotypes: They associate faces with political ideologies. Moreover, given that many voters rely on party affiliation, political ideology, and appearances to select political candidates, we might expect that political facial stereotypes would sway voting preferences and, by extension, the share of votes going to each candidate in an election. And yet few studies have examined whether having a stereotypically conservative-looking (or liberal-looking) face predicts a candidate's vote shares. Using data from U.S. election exit polls, we show that the Republican voters within each state are more likely to vote for a candidate (even a Democrat) the more that person has a stereotypically Republican-looking face. By contrast, the voting choices of the Democratic voters within each state are unrelated to political facial stereotypes. Moreover, we show that the relationship between political facial stereotypes and voting does not depend on state-level ideology: Republican voters in both right-leaning ("red") and left-leaning ("blue") states are more likely to vote for candidates with conservative-looking faces. These results have several important practical and theoretical implications concerning the nature and impact of political facial stereotypes, which we discuss.

KEY WORDS: political facial stereotypes, first impressions, voting, electoral success, exit polls

Voting—the process by which citizens actively select their leaders—is the lifeblood of democracy. Consequently, the utility of the democratic method is fundamentally limited by the quality of the decision-making process that voters use to elect political candidates. Democracy functions well to the extent that leader selection is driven by rational and informed choices on the part of the electorate. This means that candidates should be elected based on politically relevant qualities, such as their experience, intelligence, and positions on policy issues, and that voters should ignore superficial characteristics that do not predict leadership quality. In fact, many theories in political science and public choice assume that voters are careful, calculating decision-makers (Green & Shapiro, 1994; Jenke & Huettel, 2016; Quattrone & Tversky, 1988) who make reasonable choices given the available information (Key, 1966).

Alas, this assumption is undermined by a growing body of evidence that candidates' facial appearances influence voting (Ahler, Citrin, Dougal, & Lenz, 2017; Little, Burriss, Jones, & Roberts, 2007). For example, studies have shown that people are more likely to vote for political candidates who possess facial features that make them look competent (Olivola & Todorov, 2010a), and this tendency even generalizes to young children (Antonakis & Dalgas, 2009) and seniors (Franklin & Zebrowitz, 2016). Thus, facial appearances predict judgments and choices in the political domain, just as they do in other domains of life (Olivola, Funk, & Todorov, 2014; Todorov, Olivola, Dotsch, & Mende-Siedlecki, 2015; Zebrowitz, 1997; Zebrowitz & Montepare, 2008).

Here, we focus on another class of face-based social attributions inherently tied to the political domain: *political facial stereotypes* (Olivola, Sussman, Tsetsos, Kang, & Todorov, 2012). Political facial stereotyping refers to the tendency for people to associate some facial features with more right-leaning ideologies and some others with more left-leaning ideologies. Indeed, a growing body of evidence reveals that human judges generally agree on which faces look more ideologically conservative (politically right-leaning) and which ones look more ideologically liberal (politically left-leaning) (Olivola, Tingley, Bonica, & Todorov, 2018). There are good theoretical reasons to expect that political facial stereotypes could influence voting choices. In particular, Lau and Redlawsk (2001) argued that voters rely on a handful of heuristics to guide their election decisions and that three of these heuristics are based on candidate party affiliation, ideology, and appearances, respectively. Consequently, political facial stereotypes, which represent a unique mixture of these three commonly used voting heuristics (i.e., facial appearances thought to indicate party affiliation and political ideology), should offer a particularly compelling source of heuristic judgment for many voters. In fact, the potential for political facial stereotypes to influence voters was considered more than three-and-a-half decades ago by Bull and Hawkes (1982), who wondered "whether a Labour candidate standing in the general election will be more likely to succeed if he looks [stereotypically like a member of his party]" (p. 100), then speculated that a candidate who "does not fit the image [of his party] may well not receive support from the voter (and there may be many) who is affected by images and stereotypes" (p. 101). In sum, the idea that elections might be swayed by political facial stereotypes is quite plausible and deserving of attention given its implications for democracy.

And yet, despite a sizeable research literature on political facial stereotypes going back several decades (Olivola et al., 2018), very few studies have sought to determine whether these stereotypes predict which candidate someone is likely to vote for. Indeed, to the best of our knowledge, only three articles have examined the relationship between political facial stereotypes and voting[1] (Bull, Jenkins, & Stevens, 1983; Olivola et al., 2012; Samochowiec, Wänke, & Fiedler, 2010). The first such study was an attempt by Bull et al. (1983) to address the question that Bull and Hawkes (1982) had raised the year before. They had British participants rate the political leaning of political candidates in the United Kingdom (solely from their faces) and examined whether these ratings could predict the outcomes of the upcoming election. They found no relationship between political facial stereotypes and voting in their data. However, as they explained in their article, the particular election they examined

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[1] Laustsen and Petersen (2016), in one of their studies, also obtained evidence suggesting that people are more likely to select leaders with faces that stereotypically fit their preferred political ideology. However, their stimuli were not the faces of actual politicians (they presented participants with two computerized avatar faces), and the hypothetical "voting" context in their study was unrelated to modern politics (participants were asked to imagine living in a tribe in the jungle and indicated which of the two avatars they would prefer to lead the tribe in trying to solve a particular problem). Moreover, as Laustsen and Petersen noted (see Footnote 11 in their article), their study design (the same participants were asked to guess the ideology of their preferred leader *after* they had already indicated their preference) and their analysis (they found that the ideology attributed to preferred leaders mediated the relationship between participants' own ideology and their choice of preferred leader) do not allow them to determine the direction of the observed relationship between participants' "voting" preferences and the political ideology they attribute to their preferred leader. For example, it could have been the case that their participants simply attributed their own political ideology to their preferred leader *after the fact* (e.g., as a post hoc way to rationalize their choice of avatar-leader).

"resulted (for many reasons) in an overwhelming victory for one of the two main parties" (p. 716), which likely hindered their ability to detect any such relationship. Several decades later, Samochowiec et al. (2010) found that Swiss parliamentary members whose facial appearances seemed to stereotypically match their political orientations were more likely to be reelected than those whose faces seemed incongruent with their political stances. This suggests, as the authors put it, that "[l]ooking like what you are seems to be an asset in politics" (p. 211).[2]

Most recently, Olivola et al. (2012; henceforth: "OSTKT") showed that political facial stereotypes predict the hypothetical voting choices of right-leaning (but not left-leaning) participants in the United States and the actual vote shares of candidates running in right-leaning (but not left-leaning) US states. They presented participants with headshot photos of the two main rival candidates in Senate and gubernatorial elections involving a Republican running against a Democrat. Using nothing but these unlabeled pairs of facial photos, participants were asked to guess which of the two candidates was the Republican (or, equivalently, the Democrat) in each election. The proportion of participants who guessed (correctly or incorrectly) that a given candidate was the Republican provided a measure of how Republican-looking that politician was relative to his or her rival.

In their first study, OSTKT looked at the relationship between this index of "facial conservativeness" and candidates' electoral success. Even after controlling for candidate demographics and incumbency status, they found that candidates' vote shares increased the more they looked stereotypically Republican, but only in right-leaning ("red") states. In contrast, no relationship (in either direction) was found between political facial stereotyping and electoral success in left-leaning ("blue") states.

The finding that only elections in right-leaning states were susceptible to political facial stereotyping raises an important question: Is it something about the macrolevel characteristics of conservative states that leads their voters (regardless of political leaning) to rely more on political facial stereotypes or are Republican voters *individually* more likely than Democrats to rely on political facial stereotypes (regardless of the kind of state they reside in)? In an attempt to identify the source of these political facial biases and determine why only voters in right-leaning states were susceptible to voting based on political facial stereotypes, OSTKT conducted a follow-up web-based voting experiment. They showed the same sets of rival candidate headshots to a large, demographically diverse sample of respondents and asked them to indicate, from these photos alone, which of the two candidates they would hypothetically vote for. They found that Republican respondents were more likely to choose a candidate the more she or he looked stereotypically Republican, whereas Democratic respondents were unaffected by political facial stereotypes once candidate demographics were controlled for. Critically, the state that respondents grew up or resided in did not matter very much: Republican respondents were more likely to vote for Republican-looking candidates, regardless of whether they were from "red" or "blue" states. By contrast, Democrats from either type of state did not show a bias against (or for) Republican-looking candidates once candidate demographics were controlled for. These hypothetical voting results thus seemed to favor individual-level ideology, rather than state-level characteristics, as the main driver of the (predictive) effects of political facial stereotypes on voting.

However, OSTKT's experimental findings were potentially limited by several aspects of that study: (1) Their participants made purely hypothetical voting choices; (2) those choices were not made in the context of an actual election; and (3) they had no other information about the candidates (just their facial photos) and thus could not rely on objective knowledge of candidates' political affiliations to vote for their preferred party. Hypothetical voting decisions made in an experimental context

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[2] Having a face that stereotypically fits one's group may not always benefit politicians. Olivola, Eubanks, and Lovelace (2014) found that (elected) Democrats whose faces made them look like politicians (rather than other kinds of leaders) received smaller (winning) vote shares (see also Figure 1C in Olivola, Funk, & Todorov, 2014).

may differ, in a variety of important ways, from actual voting choices. First, individuals may invest much less time deliberating about inconsequential decisions (than they would about actual election choices), leaving them particularly susceptible to the influence of superficial appearance cues (Ballew & Todorov, 2007). Second, research shows that people rely more on facial appearances when no other information is available (e.g., Chang, Doll, van't Wout, Frank, & Sanfey, 2010; Rezlescu, Duchaine, Olivola, & Chater, 2012). Third, the absence of an electoral "atmosphere" in the experiment could have altered participants' mindsets and their motivations for selecting candidates, relative to what they would experience in a real voting booth on an actual Election Day. Finally, the process of making hundreds of voting decisions in an experiment—as opposed to the handful or less they would make in a real election—likely shaped the way participants approached these decisions; for example, by increasing their reliance on simple heuristics (e.g., choosing based on political facial stereotypes) to reduce the mental effort required to complete all the trials. For all these reasons (and perhaps others we haven't considered), the pattern of results that OSTKT reported in their voting experiment might not replicate among actual voters in a real election who were informed of the candidates' political affiliations (among other things). Indeed, Olivola and Todorov (2010a) noted several inconsistencies between results (concerning other face-based trait inferences) based on hypothetical versus actual votes, which led them to suggest "that experiments limited to the laboratory may overestimate the role of these inferences in predicting real life outcomes" (p. 94).

To address these concerns, we approach this question in a new way, by comparing the voting preferences of Republicans and Democrats in actual elections. Specifically, we used exit-poll data to separate voters in each election according to their self-reported political affiliation, and we examined how well the voting preferences of Republicans and Democrats in each election were predicted by political facial stereotypes. We focus our analyses on the same set of elections used by OSTKT, and we utilize their measure of candidates' political facial stereotype impressions as our main predictor. However, whereas OSTKT carried out separate analyses for right-leaning ("red") states and left-leaning ("blue") states, we examine *all* states together and instead separately analyze the (reported) choices of Republican voters and Democratic voters. By doing so, we automatically control for all state-level and election-level characteristics when comparing results for Republican voters and Democratic voters. Moreover, we increase the number of observations by 64% and 85% for left-leaning and right-leaning electorates, respectively, relative to OSTKT.

Methods

Political Facial Stereotyping Data

As our main independent variable, we used the political facial stereotyping data collected by OSTKT, which covered 256 pairs of rival candidates drawn from the 1995–2006 gubernatorial and 2000–2008 Senate elections in the United States. OSTKT obtained standardized headshots of the Democrat and Republican running in each of these elections; specifically, photos of these candidates were pulled from the Internet, converted to black-and-white, standardized in size, placed on uniform gray backgrounds (to eliminate background cues), and edited to remove any salient visual symbols (e.g., U.S. flag pins). Participants ($N = 51$) were presented with these rival candidate photo pairs and asked to identify the Republican (or Democrat) in each election using only these face stimuli (see Figure 1). For a given election, the proportion of participants who incorrectly labeled the Democrat a "Republican" constitutes the index of how deceptively Republican-looking that Democratic candidate's face was (relative to the *actual* Republican candidate). Critically, this proportion was calculated after excluding responses from participants who recognized either candidate in that election.

Which person is the Republican candidate?

Figure 1. Example screen shot from an experimental trial showing rival candidates from one election. Participants responded by clicking directly on the photo of the person they guessed to be the Republican or Democratic candidate (in this example, the participant is asked to identify the Republican candidate). They were subsequently asked to indicate which (if any) of the two candidates they recognized.

Exit-Poll Data

As our dependent variable, we used exit-poll data indicating the proportion of surveyed voters who selected the Democrat in each election. As their name suggests, exit polls are conducted by surveying (a subset of) voters right after they have cast their votes (e.g., as they leave the location where they voted). Importantly, exit polls employ a combination of procedures designed to survey a representative sample of the voting population in each state.[3] Moreover, although exit-poll vote shares are based on a sample of reported voting choices, they have been shown to closely track actual vote shares (e.g., Curtice, Fisher, & Kuha, 2011; Hilmer, 2008; Larcinese, Snyder, & Testa, 2013; Levy, 1983), thus confirming their reliability. In our own data, for example, we find a strong correlation ($r > .9$) and small absolute difference ($M_\Delta < 4\%$) between exit-poll vote shares and actual vote shares.

The exit-poll data were obtained at two time points (2010 and 2016) and from two different sources: the CNN website[4] and the Roper Center.[5] Altogether, we were able to obtain exit-poll data for 171 of the 256 elections that OSTKT had examined. Following their approach, we ignored third-party votes when calculating Democratic candidates' vote shares in each election. Importantly, the exit polls asked surveyed voters to indicate their political affiliation, which allowed us to separately calculate (for each election and state) the proportion of Republicans versus Democrats who voted for a given candidate.

Table S1 in the online supporting information presents summary statistics for all variables in our analyses. Note that our final sample size ($N = 171$) was not chosen by us but simply represented the largest sample we could obtain, given the limited availability of exit-poll data. With this sample size and assuming an effect size within the range observed by OSTKT ($.24 < r < .48$), we calculated that our main analysis (the correlation between political facial stereotyping and shares of Republicans voting for the Democrat) would achieve 89–99% statistical power (using a two-sided test).

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[3] More information about the way exit polls are carried out in U.S. elections can be found at http://www.aapor.org/Education-Resources/Election-Polling-Resources/Explaining-Exit-Polls.aspx. The history and evolving methodologies of exit polls are discussed by Levy (1983), Mitofsky (1991), Hofrichter (1999), and Best and Krueger (2012).

[4] See www.cnn.com/election.

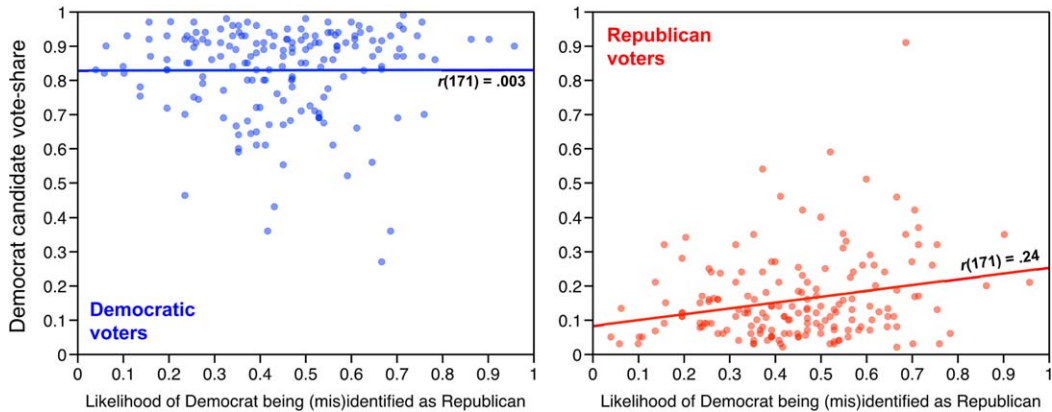[5] See http://ropercenter.cornell.edu/.

Figure 2. Democratic candidates' exit-poll vote shares plotted against their likelihoods of being misidentified as Republican. Points represent specific gubernatorial or Senate elections, and solid lines represent best linear fits. Standard parametric correlations between the two variables (r) and their associated sample sizes (in parentheses) are also presented. Left figure: Exit-poll vote shares from gubernatorial and Senate elections among Democratic voters. Right figure: Exit-poll vote shares from gubernatorial and Senate elections among Republican voters. Note that the correlation for Republican voters remains significant if we remove the outlier in the top-right corner: $r(170) = .215$, $p < .005$, [95% CI: .067, .354]. [Color figure can be viewed at wileyonlinelibrary.com.]

Results

Figure 2 presents the relationship between political facial stereotypes and vote shares across all elections in the dataset. The share of Republican voters in each state who chose Democratic candidates was positively correlated with how stereotypically Republican-looking those candidates were (relative to their Republican rivals): $r(171) = .239$, $p < .002$, [95% confidence interval: .092, .375]. By contrast, the share of Democratic voters who chose Democratic candidates was unrelated to political facial stereotypes: $r(171) = .003$, $p = .966$, [95% CI: $-.147$, .153]. We obtain similar results if we limit our sample to elections in which both candidates are male and Caucasian: Republican voters: $r(113) = .226$, $p = .016$, [95% CI: .043, .394]; Democratic voters: $r(113) = .092$, $p = .332$, [95% CI: $-.094$, .272].

To guard against possible confounds (such as differences in candidates' incumbency status, gender, ethnicity, and/or age[6]), we regressed the exit-poll vote shares onto the political facial stereotype measure, along with the following controls (all simultaneously entered and using robust standard errors): election type (Senate vs. gubernatorial), each candidate's incumbency status (two dummy variables), each candidate's gender (two dummy variables), whether each candidate was a minority (two dummy variables), and the age difference[7] between the two candidates. For Republican voters, we repeated the regression with state fixed effects added or after excluding one potential "outlier election" (the red data point in the top-right corner of Figure 2), to ensure that it wasn't critical to the reliability of the results. Finally, to guard against potential statistical issues associated with regressing raw proportions, we repeated these regressions using logit-transformed[8] vote shares (see Warton &

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[6] Research shows that appearance-based inferences of candidates' political affiliation are strongly influenced by their gender, ethnicity, and relative age (Olivola et al., 2012; Olivola et al., 2018).

[7] Specifically, we subtracted the Republican's age from the Democrat's age. Unfortunately, age and birth-year data were unavailable for candidates in 22 of the 171 elections in our sample, so our analyses utilizing age controls were limited to the remaining 149 elections.

[8] Regressions based on raw proportions (e.g., vote shares) can be problematic because the means and variances of proportions are correlated, thereby violating the homoskedasticity assumption of the linear regression model (Cohen, Cohen, West, & Aiken, 2003; Judd, McClelland, & Ryan, 2009; Warton & Hui, 2011). A recommended solution (see Warton & Hui, 2011) is to apply the logit transformation to the proportion (p) data: $\log(p/[1-p])$.

Table 1. Results of Exit-Poll Regression Analyses

			Robust			Coefficient (b)		Partial correlation
	N	b	SE	t	p	95% CI	Partial r	95% CI
Vote Shares (untransformed)								
Democratic voters	149	−.03	.08	.34	.735	[−.19, .13]	−.029	[−.193, .137]
Republican voters	149	.14	.06	2.24	.027	[.02, .26]	.187	[.022, .341]
Republican voters (+ state fixed effects)	149	.14	.07	2.04	.045	[.00, .27]	.210	[.006, .398]
Republican voters (excluding outlier)	148	.09	.04	2.12	.036	[.01, .18]	.178	[.012, .334]
Logit-Transformed Vote Shares								
Democratic voters	149	−.13	.54	.24	.811	[−1.20, .94]	−.020	[−.185, .145]
Republican voters	149	1.08	.41	2.63	.010	[.27, 1.90]	.218	[.054, .370]
Republican voters (+ state fixed effects)	149	1.09	.54	2.01	.048	[.01, 2.17]	.207	[.003, .395]
Republican voters (excluding outlier)	148	.86	.36	2.41	.017	[.16, 1.56]	.201	[.036, .355]

Note. Sample sizes and regression statistics in predictions of Democrat exit-poll vote shares (from Democratic voters *or* Republican voters) from the likelihoods of Democrats being misidentified as Republicans (i.e., political facial stereotypes). Each row represents a single regression model. All regression models included dummy variable controls for election type (Senate vs. gubernatorial), each candidate's incumbency status, gender, and ethnic minority status, as well as a (continuous variable) control for the age difference between candidates. For Republican voters, we also present the results of two additional models: one with state fixed effects (i.e., 49 dummy variables added) and another that excludes a potential "outlier election" in our dataset (red data point in the top-right corner of Figure 2). Results are presented both for "raw" (untransformed) exit-poll vote shares and for logit-transformed exit-poll vote shares.

Hui, 2011). Table 1 presents the results of all these regressions. Even after controlling for election type and candidate characteristics, we still found that Republican voters were more likely to choose a Democrat, the more that person had a (relatively) Republican-looking face, whereas Democratic voters' choices were not predicted by political facial stereotypes. Moreover, this pattern of results was robust to the addition of state fixed effects, the exclusion of a potential "outlier election," and a logit-transformation of the vote shares.

Finally, to examine whether state-level ideology (i.e., where on the "red"-to-"blue" spectrum a state fell) moderated the relationship between candidate facial conservativeness and voting, we reran the regressions above with two additional predictors entered. The first additional predictor was the proportion of votes received in that state by the Democratic *presidential* candidate during the closest occurring presidential election(s)[9]—this represents a measure of how conservative ("red") versus liberal ("blue") the state was, overall, at the time. The second additional predictor was an interaction term consisting of the product of the previous variable and the political facial stereotype measure—this interaction term provides a formal test of the hypothesis that the relationship between Republican votes received and facial conservativeness depends on the type of state that a candidate runs in. Note that for these analyses, we mean-centered the measures of political facial stereotyping, state political leaning, and their interaction. Table 2 presents the results of all these regressions. Even with these two additional predictors entered, we still found that Republicans were more likely to vote for a Democrat, the more that person had a (relatively) Republican-looking face, while Democratic voters' choices were unrelated to these political facial stereotypes. Moreover, the interaction term was neither significant for Republican voters nor for Democratic voters. In other words, the relationship between political facial stereotypes and voting did not depend on state-level ideology: Regardless of how right-leaning ("red") the state was, Republican voters were more likely to vote for Republican-looking candidates, while Democratic voters were no more (or less) likely to vote

[9] Following OSTKT, for Senate and gubernatorial elections that fell right between two presidential elections, we used the average of both presidential vote shares as our measure of state-level political leaning.

Table 2. Results of Exit-Poll Regression Analyses (with state-level political leaning)

	N	b	Robust SE	t	p	Coefficient (b) 95% CI	Partial r	Partial correlation 95% CI
Vote Shares (untransformed):								
Democratic voters								
Political facial stereotype	149	−.02	.07	.22	.826	[-.16, .13]	−.019	[−.185, .148]
State political leaning	149	.05	.15	.32	.746	[−.26, .36]	.027	[−.140, .193]
Political facial stereotype x State political leaning	149	.56	.80	.70	.483	[-1.02, 2.14]	.060	[−.108, .224]
Republican voters								
Political facial stereotype	149	.12	.05	2.18	.031	[.01, .22]	.183	[.017, .339]
State political leaning	149	−.28	.14	1.93	.055	[−.56, .01]	−.163	[−.321, .004]
Political facial stereotype x State political leaning	149	−1.14	.79	1.44	.152	[-2.70, .42]	−.122	[−.283, .045]
Republican voters (+ state fixed effects)								
Political facial stereotype	149	.11	.06	1.80	.076	[−.01, .24]	.188	[−.019, .381]
State political leaning	149	.26	.37	.72	.473	[−.46, .99]	.077	[−.133, .279]
Political facial stereotype x State political leaning	149	−.76	.73	1.04	.301	[-2.22, .70]	−.110	[−.310, .099]
Republican voters (excluding outlier)								
Political facial stereotype	148	.09	.05	1.98	.050	[.00, .18]	.167	[.000, .325]
State political leaning	148	−.16	.10	1.68	.096	[−.35, .03]	−.143	[−.302, .025]
Political facial stereotype x State political leaning	148	−.42	.44	.95	.346	[-1.29, .46]	−.081	[−.245, .087]
Logit-Transformed Vote Shares:								
Democratic voters								
Political facial stereotype	149	−.12	.52	.23	.822	[-1.15, .91]	−.020	[−.186, .147]
State political leaning	149	.30	1.00	.30	.762	[-1.68, 2.28]	.026	[−.141, .191]
Political facial stereotype x State political leaning	149	.90	5.36	.17	.867	[-9.70, 11.51]	.015	[−.152, .181]
Republican voters								
Political facial stereotype	149	.96	.39	2.47	.015	[.19, 1.73]	.206	[.041, .361]
State political leaning	149	−1.23	.91	1.35	.178	[-3.03, .57]	−.115	[−.276, .053]
Political facial stereotype x State political leaning	149	−7.07	4.78	1.48	.142	[-16.53, 2.39]	−.125	[−.286, .042]
Republican voters (+ state fixed effects)								
Political facial stereotype	149	.99	.53	1.86	.066	[−.07, 2.04]	.194	[−.013, .386]
State political leaning	149	1.70	2.29	.74	.460	[-2.85, 6.24]	.079	[−.131, .281]
Political facial stereotype x State political leaning	149	−3.21	5.03	.64	.525	[-13.20, 6.78]	−.068	[−.271, .141]
Republican voters (excluding outlier)								
Political facial stereotype	148	.82	.37	2.24	.027	[.10, 1.54]	.189	[.022, .345]
State political leaning	148	−.62	.73	.84	.400	[-2.06, .83]	−.072	[−.236, .096]
Political facial stereotype x State political leaning	148	−3.28	3.46	.95	.344	[-10.11, 3.55]	−.081	[−.245, .087]

Note. Sample sizes and regression statistics in predictions of Democrat exit-poll vote shares (from Democratic voters *or* Republican voters) from the likelihoods of Democrats being misidentified as Republicans ("Political facial stereotype"), the proportion of votes received in the state by the Democratic presidential candidate during the closest occurring presidential election(s) ("State political leaning"), and the interaction between these latter two variables ("Political facial stereotype × State political leaning"). Both predictors (and their interaction) were mean-centered. Each set of three rows represents a single regression model. All regression models included dummy variable controls for election type (Senate vs. gubernatorial), each candidate's incumbency status, gender, and ethnic minority status, as well as a (continuous variable) control for the age difference between candidates. For Republican voters, we also present the results of two additional models: one with state fixed effects (i.e., 49 dummy variables added) and another that excludes a potential "outlier election" in our dataset (red data point in the top-right corner of Figure 2). Results are presented both for "raw" (untransformed) exit-poll vote shares and for logit-transformed exit-poll vote shares.

for Democratic-looking candidates. Once again, this pattern of results was robust to the addition of state fixed effects,[10] the exclusion of a potential "outlier election," and a logit-transformation of the vote shares (Table 2).

Discussion

These new analyses, based on exit-poll data, provide important additional evidence linking political facial stereotypes and the election preferences of right-leaning voters. Whereas OSTKT only found a relationship between political facial stereotypes and aggregate election vote shares in right-leaning U.S. states, we have now shown that political facial stereotypes actually predict voting across "red" *and* "blue" states if we focus on the choices of right-leaning voters. Conversely, we have shown that they neither predict voting in "red" *nor* "blue" states if we focus on the choices of left-leaning voters. In doing so, our analyses also corroborate the results of OSTKT's hypothetical voting study by showing that the reason political facial stereotypes predict aggregate voting in right-leaning states, but not left-leaning states, has more to do with their differing proportions of right-leaning voters than with any other state-level characteristics. In other words, individual-level ideology, rather than state-level characteristics, is the main moderator of the relationship between political facial stereotypes and voting.

It is worth noting that the predictive power[11] of political facial stereotypes cannot be attributed to candidate age, gender, or ethnicity, as we controlled for these variables and still we found that Republican voters were more likely to vote for candidates with conservative-looking faces. Moreover, OSTKT showed that the political facial stereotypes of these candidates were unrelated to how attractive, honest, and dependable their faces looked and that the predictive power of these political facial stereotypes is unrelated to candidate facial competence. In sum, political facial stereotypes predict voting above-and-beyond other features of the face that have previously been shown to correlate with candidates' vote shares (Olivola & Todorov, 2010a).

These findings have a number of important practical and theoretical implications. First, the predictive power of political facial stereotypes is particularly surprising (relative to other face-based social attributions) since voters are fully informed of candidates' *actual* political affiliations—if not before they go to vote, then certainly at the time they make their voting choices (since candidates' party affiliations are clearly indicated on the voting ballots themselves). This knowledge should eliminate the need to rely on political facial stereotypes and, by extension, their ability to predict voting. And yet, our findings show that having a deceptively Republican-looking face may help Democrats "steal" Republican votes without compromising their support among left-leaning voters. Therefore, to the extent that right-leaning voters end up voting for Democrats who look deceptively conservative, this likely reflects an undesirable bias if their goal is to elect the more conservative candidate. After all, Republican candidates tend to *actually* be more conservative than their Democratic rivals on most issues (Gries, 2014; Jacobson, 2013; Levitt, 1996; McCarty, Poole, & Rosenthal, 2016), no matter

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[10] Technically, the political facial stereotype coefficients reported in Table 2 are (only) marginally significant following the addition of state fixed effects. However, this "failure" to reach standard significance levels is likely due to insufficient power (i.e., our limited sample size), given that adding state fixed effects "costs" 49 degrees of freedom (i.e., one-third of the sample) and doesn't really alter the values of the political facial stereotype coefficients. Moreover, note that the political facial stereotype coefficients remain significant (at the "classic" $p < .05$ level) in models with state fixed effects that do not include state political leaning and its associated interaction term (see Table 1).

[11] To be clear, we are not claiming that political facial stereotypes predict voting among Republicans better than all other factors. Nor are we arguing that the predictive power of political facial stereotypes is large in any absolute sense. For example, if we examine the six regression models of Republican voters in Table 1, we find that the amount of unique variance predicted by political facial stereotypes—that is, the incremental change in R^2 when we add this predictor to a model after having controlled for the other variables—ranges from 1.25% to 2.31%, depending on the model (by comparison, the unique variance predicted by candidate age differences ranges from 0% to 1.13%). The main point we are making is that political facial stereotypes should predict 0% of the variance in vote shares, and the fact that they predict *any* variance is interesting.

how their faces make them look. Ironically, conservative voters' biased preferences for Republican-looking candidates may actually give Democrats an unfair general advantage. Since left-leaning voters are not swayed by political facial stereotypes, the Democratic Party could gain Republican votes (without alienating their political base) by nominating candidates who have conservative-looking faces, whereas the Republican Party only stands to lose Republican votes when they nominate candidates who happen to possess stereotypically liberal-looking faces.

Second, these results effectively address a potential concern that the relationship between political facial stereotypes and voting might simply reflect the possibility that more conservative-looking Democrats do, in fact, have more conservative agendas (relative to less conservative-looking Democrats), which would help increase their vote shares in right-leaning states. The concern, in other words, is that the relationship is spurious: Right-leaning voters are more likely to vote for candidates with more right-leaning agendas, and it just so happens these candidates have more conservative-looking faces. However, if this were the case, we would see this relationship reflected in the preferences of both right-leaning voters (who would be more likely to vote for Democrats with relatively conservative agendas) *and* left-leaning voters (who would be *less* likely to do so). The fact that we observe a *within-election* dichotomy (in terms of preferences being predicted by political facial stereotypes) between left-leaning and right-leaning voters presented with the *same* candidates annuls this concern. Moreover, it seems unlikely that Republican voters are more able to accurately infer political leaning from facial features given that previous studies found Republicans are no better than Democrats at identifying political orientation from faces (Olivola & Todorov, 2010b).

Third, these results also rule out the possibility that the causal relationship between facial conservativeness and electoral success runs in the other direction. That is, one could have interpreted OSTKT's findings as evidence that winning candidates in right-leaning states alter their appearances following election victories to appeal to their constituents. Therefore, according to this alternative account, electoral success in conservative states would cause candidates to (somehow) make their faces look more conservative (e.g., to better obtain the trust and support of the conservative majorities in those states), rather than the other way around. However, this account is contradicted by our finding that political facial stereotypes also predict the voting preferences of Republicans in left-leaning ("blue") states, where winning candidates do not have an incentive to look more conservative. As an additional test of the reverse-causality account, we examined the relationship between the political leaning of an electorate and the facial conservativeness of the winning candidate in that election. The reverse-causality account predicts that winning candidates should have more Republican-looking faces the more their electorate (i.e., the state they run in) leans to the right. We regressed the facial conservativeness of the winning candidates onto our measure of state-level conservativeness, along with the control variables[12] included in our previous regressions. In addition, we included a dummy variable[13] indicating whether the winning candidate was the Republican or Democrat. Contrary to the reverse-causality account, the political leaning of the state did not significantly predict the facial conservativeness of the winning candidate, $b = .19$, $t(138) = 1.21$, $p = .227$, [95% CI: $-.12$, .49] ($b = .005$, $t(92) = .04$, if we only consider elections between Caucasian male candidates). In sum, there are several good reasons (including additional points raised by OSTKT) to doubt the reverse-causality account.

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[12] For this analysis, our age-difference control was calculated by subtracting the losing candidate's age from the winner's age, so that the resulting variable indicates how many years older or younger the winner was than the loser.

[13] This additional control was added because Republican candidates are (obviously) more likely to win in more conservative states and because some studies have suggested that naïve participants can identify candidates' political party affiliations from facial features alone, at least to some extent (for a review of this literature, see Olivola et al., 2018). Therefore, the political affiliation of the winning candidate will be correlated with the ideology of the electorate and possibly with how stereotypically Republican-looking his or her face is, which could create a spurious correlation between state-level ideology and facial conservativeness.

Fourth, previous studies have found that knowing a candidate's political affiliation biases the way voters process subsequent information about that person (Lodge & Hamill, 1986; Lodge, McGraw, & Stroh, 1989; Rahn, 1993) and mentally represent his facial features (Young, Ratner, & Fazio, 2014). Interestingly, our results (and those of OSTKT) suggest that this relationship also runs in the opposite direction: It seems that a candidate's facial features can bias how voters perceive his or her political orientation, even when they know that person's (actual) political affiliation. Thus, in addition to the previously demonstrated top-down relationship, whereby stereotypes of political groups influence how their individual members are perceived, there seems to be a bottom-up relationship, whereby political facial stereotypes can influence the extent to which individuals are perceived to be representative members of their political group.

Fifth, researchers have argued that voter political knowledge and partisanship should both mitigate the impact of implicit processes (Ryan, 2017) such as appearance-based trait inferences (e.g., Lenz & Lawson, 2011; Riggio & Riggio, 2010), and studies have indeed found evidence to support the mitigating roles of political knowledge (Ahler et al., 2017; Lenz & Lawson, 2011) and partisanship (Atkinson, Enos, & Hill, 2009; Johns & Shephard, 2007). With regard to political knowledge, the argument is that well-informed voters need not rely on superficial facial cues to form inferences and select candidates (Lenz & Lawson, 2011). And yet, our results (and those of OSTKT) show that being perfectly informed about candidate political affiliation does not prevent Republican voters from relying on political facial stereotypes at the voting booth. With regard to partisanship, the argument is that voters who identify with a political party would be less likely to rely on superficial facial cues because these partisan voters are more likely to be politically involved (and therefore informed) and more likely to vote based on (actual) political affiliation (Riggio & Riggio, 2010). However, our results (and those of OSTKT) indicate that this is not the case when it comes to political facial stereotypes, for which partisanship can actually *enhance* the influence of appearances on voting tendencies. Specifically, voters who identify as Republican are more likely to vote according to political facial stereotypes. In fact, a closer examination of the data from Study 2 in OSTKT provides additional evidence[14] for this point: Only the (hypothetical) voting choices of strongly partisan Republican participants were predicted by political facial stereotypes, but not those of participants who merely leaned Republican. In sum, political facial stereotypes differ from other face-based inferences in that they manage to predict the election choices of voters who are perfectly knowledgeable (about candidate political affiliations) and strongly partisan (and Republican). At a more general level, political facial stereotypes represent an interesting exception to the notion that strong, explicit attitudes and motivations should mitigate the impact of implicit processes (Ewoldsen, Rhodes, & Fazio, 2015; Fazio & Olson, 2014; Ryan, 2017).

Sixth, as OSTKT previously noted, the fact that political facial stereotypes predict the preferences of voters on one side of the political spectrum but not the other also differentiates them from other kinds of faced-based social attributions, such as facial competence, which attracts the votes of both conservative and liberal voters (Lenz & Lawson, 2011; Olivola et al., 2012), or facial dominance,

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[14] In their second study, OSTKT had participants classify themselves into one of six partisanship categories: "Democrat," "Republican," "Independent (Democrat-leaning)," "Independent (Republican-leaning)," "Independent (no leaning)," or "Other/None." Applying logistic regressions with clustered standard errors (at the participant level, to adjust for repeated measures) to their Study 2 data, we examined how well political facial stereotypes predicted hypothetical voting choices within each partisanship category. Specifically, for each partisanship category, we regressed the likelihood that a participant chose the Democratic candidate onto that candidate's (relative) facial conservativeness, while simultaneously controlling for participant gender and age, as well as each candidate's incumbency status and the age difference between the two candidates. Following OSTKT's approach, we controlled for candidate gender and ethnicity by restricting our analyses to elections involving pairs of Caucasian male rivals. These analyses revealed that only the (hypothetical) voting choices of "strict" Republicans were predicted by political facial stereotypes: Their likelihood of selecting the Democratic candidate increased the more he had a (deceptively) Republican-looking face ($b = .020$, $z = 5.61$, $p < .001$, [95% CI: .013, .027]). By contrast, participants who categorized themselves as merely "Republican-leaning" were not more likely to select Republican-looking Democrats ($b = .002$, $z = .55$, [95% CI: −.005, .009]). Nor did political facial stereotypes predict hypothetical votes in any other partisanship category (all $|z\text{-values}| < .9$).

which some studies have shown is a positive predictor of conservative votes and a negative predictor of liberal votes (e.g., Laustsen & Petersen, 2016). To the best of our knowledge, there are only two other demonstrations of such an asymmetry (between political parties) within real elections. One is the finding that, although both left- and right-leaning voters are more likely to vote for attractive candidates (Berggren, Jordahl, & Poutvaara, 2010), this tendency is stronger in the latter group[15] (Berggren, Jordahl, & Poutvaara, 2017). The second is the finding that having the face of a stereotypical politician is a negative predictor of the (winning) vote shares received by elected Democrats but unrelated to the vote shares received by elected Republicans (Olivola, Eubanks, & Lovelace, 2014; Olivola, Funk, & Todorov, 2014). Since Democrats are far more likely to be elected in states with a left-leaning electorate (and vice-versa for Republicans), this suggests that Democratic voters prefer candidates who do *not* look like stereotypical politicians, whereas Republican voters are indifferent to, or unaffected by, this particular aspect of candidate facial appearance.

Finally, building on the previous point, our results should *not* be interpreted to imply that Republican voters are generally more superficial (i.e., more likely to vote based on appearances) than Democratic voters. Indeed, both Lenz and Lawson (2011) and OSTKT showed that both groups are more likely to vote for candidates who have more competent-looking faces. Similarly, we can look at the exit-poll data to see how well the vote shares of Republican and Democratic voters within each state correlate with candidates' facial competence: It turns out that both Republicans ($r(143) = .24$, $p = .004$) and Democrats ($r(143) = .27$, $p = .001$) are more likely to vote for a candidate, the more that person has a (relatively) competent-looking[16] face. Thus, beyond political facial stereotypes and (to a less extreme degree) physical attractiveness (Berggren et al., 2017), we have no evidence that Republican voters are more susceptible to selecting candidates based on facial appearances. An interesting, albeit challenging, goal for future research is to understand why it is that Republicans rely on political facial stereotypes but Democrats do not.

Conclusion

These results provide the most compelling evidence (to date) that conservative voters in the United States are attracted to candidates who have Republican-looking faces and that this tendency has more to do with their individual-level characteristics than with any state-level factors. The predictive power of political facial stereotypes is all the more surprising when we consider the fact that these voters know candidates' *actual* political affiliations. This tendency for conservative voters to prefer Republican-looking candidates gives Democrats a potential advantage (all else being equal): By nominating candidates who have conservative-looking faces, they could gain Republican votes without

[15] Although right-leaning voters may be more likely to rely on candidate attractiveness, this is unlikely to explain our results. First, OSTKT previously showed that political facial stereotypes are unrelated to attractiveness (among the candidates in their data); in fact, they found that the correlation between attractiveness and the likelihood of being identified as Republican was directionally (but not significantly) negative. We used their data to calculate this correlation for the subset of elections in our analyses (for which attractiveness data were available) and again found the correlation between physical attractiveness and political facial stereotypes to be very low: $r = .079$ ($r = .064$ if we only consider elections between Caucasian male candidates). Second, we found that the correlation between attractiveness and Republican votes is much lower than the correlation between political facial stereotypes and Republican votes: $r = .0004$ vs. $r = .239$ ($r = .156$ vs. $r = .226$ if we only consider elections between Caucasian male candidates). Finally, and contrary to the notion that Republican candidates are generally more attractive (Berggren et al., 2017) and that voters might therefore use attractiveness to infer candidate conservativeness, we actually found that the average Republican candidate was judged to be *less* attractive than his or her Democratic rival by 60% of participants (57% if we only consider elections between Caucasian male candidates). Similarly, for only 48% of the elections in our sample was the Republican candidate judged to be more attractive than the Democrat by a majority of participants (50% if we only consider elections between Caucasian male candidates).

[16] We obtained candidate facial competence scores for 143 of the 171 elections in our dataset, using existing data drawn from previous studies (for details, see Ballew & Todorov, 2007; Olivola & Todorov, 2010a; Todorov, Mandisodza, Goren, & Hall, 2005).

alienating their political base. By contrast, Republicans only stand to lose votes by nominating candidates who happen to possess stereotypically liberal-looking faces. In closing, we call on researchers with access to exit-poll data from other countries to examine whether these findings hold for conservative voters in other political systems.

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SUPPORTING INFORMATION

Additional supporting information may be found in the online version of this article at the publisher's website:

Table S1. Descriptive Statistics

Table S2. Correlations Between Variables

Exit Poll Analyses

Exit Poll Data