


Can a beautiful smile win the vote?

The role of candidates' physical attractiveness and facial expressions in elections

Lena Masch , Humboldt University of Berlin

Anna Gassner, Heinrich Heine University Düsseldorf

Ulrich Rosar, Heinrich Heine University Düsseldorf

ABSTRACT. Several empirical studies have linked political candidates' electoral success to their physical appearance. We reexamine the effects of candidates' physical attractiveness by taking into account emotional facial expressions as measured by automated facial recognition software. The analysis is based on an observational case study of candidate characteristics in the 2017 German federal election. Using hierarchical regression modeling and controlling for candidates' displays of happiness, consistent effects of physical attractiveness remain. The results suggest that a potential interaction effect between displays of happiness and attractiveness positively affects vote shares. The study emphasizes the importance of considering emotional expressions when analyzing the impact of candidate appearance on electoral outcomes.

Key words: candidate appearance, candidate characteristics, physical attractiveness, facial expressions, emotional displays, German federal elections, turnout, candidate support

Political candidates' physical appearance and its effects on electoral success have been subject to a number of empirical studies (e.g., Jäckle et al., 2020; Rosenberg et al., 1986; Schubert et al., 2011; Todorov et al., 2005). Candidate appearance can often be used as an “information shortcut” for making voting decisions (Lau & Redlawsk, 2001). Several studies have highlighted a variety of influential candidate characteristics, including gender (Debus, 2017; Huddy & Terkildsen, 1993), ethnicity (Masters, 1994; McDermott, 1998; Pietraszewski, 2016; West, 2017), competent-looking faces (Ballew & Todorov, 2007; Todorov et al., 2005), and even physical height (Murray, 2014).

Physical attractiveness—as an overall impression of candidates' appearance—has been established to have a positive effect on vote shares in different national and electoral contexts (e.g., Jäckle et al., 2020; Rosar et al., 2012). It is important to note that physical attractiveness and its perception is interrelated with these candidate characteristics. In general, physical attractiveness has a

“halo effect” on perceptions of a person (e.g., Verhulst et al., 2010), whereby other personal characteristics are evaluated more favorably based on perceived attractiveness. As a consequence, attractive individuals receive preferential treatment in social situations, have a higher likelihood of professional success, and are even happier in life than unattractive individuals (Hamermesh, 2011; Hamermesh & Abrevaya, 2013). Although these findings are only correlational, it is sometimes assumed that more attractive politicians have a “competition advantage” over their less attractive competitors (Rosar et al., 2012).

Additionally, candidates' emotional expressions can have an impact on impressions of them (e.g., Gabriel & Masch, 2017; Stewart et al., 2015) and thereby affect electoral success. Here, emotional expressions function as social cues (e.g., Hareli & Hess, 2012; Van Kleef, 2016). According to the ethological framework of emotional expressions (e.g., Sullivan & Masters, 1988), emotional displays can be grouped into three categories: happiness/reassurance, anger/threat, and fear/evasion. This classification has been shown to be highly applicable to the study of nonverbal communication among politicians and political leaders (e.g., Bucy & Grabe, 2008; Stewart et al., 2009). Emotional displays of happiness/reassurance are often seen as a sign of dominance,

doi: 10.1017/pls.2021.17

Correspondence: Lena Masch, Department of Psychology, Humboldt University of Berlin, Unter den Linden 6, 10099 Berlin, Germany. Email: lena.masch@hu-berlin.de

are suitable for incumbents (e.g., Sullivan & Masters, 1988), and are commonly observed among front-runners during election campaigns (Bucy & Grabe, 2008). Because of its attacking character, the emotional expression of anger is a suitable emotion for politicians of the opposition. While it is often connected with negativity and hostility, displays of anger can also be viewed as a sign of caring or empathy if the anger is directed toward a justifiable cause, such as social injustice (cf. Hess, 2014; Kinder, 1986; Masch, 2020). Displays of fear/evasion, on the other hand, as well as displays of sadness, should be largely avoided for those who want to obtain power (Schubert, 1991; Stewart et al., 2009).

Research also suggests positive effects of politicians' smiles on campaign posters (Horiuchi et al., 2012). Because of their prevalence in some countries, such as Japan and Germany, campaign posters might serve as mental representations of candidates when voters cast their ballot. In this sense, their presence on campaign posters is particularly relevant when candidate appearance is used by voters as an information shortcut (see Lau & Redlawsk, 2001). Research has also shown that the effect of smiling is dependent on the number of candidates in a voting district; a higher number of district candidates decreases the effect of smiling (Asano & Patterson, 2018). It should be noted, however, that a branch of research also considers differences in politicians' smiles (i.e., posed, controlled, or smiles depicting enjoyment, amusement, or contempt) as important for their political success (Stewart et al., 2015). These subtle differences might not be easily perceived by everyone. Nonverbal differences between smiles attributable to amusement or contempt might be particularly prominent in televised debates and similar interactive formats, whereas campaign posters without verbal context provide a static framework, which makes a broader classification of smiles and happiness feasible and adequate. Furthermore, in countries such as Japan and Germany, district campaign posters typically show portrait pictures of candidates that follow cultural display rules of happiness or neutral expressions. Negative emotional displays such as anger or disgust are generally not displayed on such campaign posters.

While the effects of candidates' physical attractiveness and candidates' emotional displays have been studied independently, we aim to explore the relationship between physical attractiveness and facial expressions during election campaigns. Experimental studies have shown that facial attractiveness is predominantly dependent on facial symmetry, with more symmetrical

faces perceived to be more attractive. In addition to facial symmetry, advantageous features extend to baby-facedness for women (Cunningham, 1986) and facial dominance for men (Cunningham et al., 1990). For both genders, smiling has been linked to higher attractiveness ratings compared with neutral facial expressions (Cunningham, 1986; Cunningham et al., 1990; Reis et al., 1990). A reciprocal relationship between displays of happiness and physical attractiveness has been discussed in the literature, as experiments show that attractiveness ratings are influenced by the intensity of smiling but also indicate that attractiveness has an impact on happiness ratings (Golle et al., 2014). Overall, it appears that displays of happiness increase the likelihood of being perceived as physically attractive.

Hence, perceptions of candidates' physical attractiveness are likely to be positively affected by their positive emotional displays. In particular, displays of happiness on campaign posters, often measured by detecting smiles (e.g., Asano & Patterson, 2018; Horiuchi et al., 2012), might be favorable for attractive and unattractive politicians alike. Because voters might consciously or subconsciously be influenced by a variety of candidate characteristics when processing candidate appearance, the perception of physical attractiveness could be heightened by candidates' happiness or lessened by negative emotional displays. Such findings would indicate that the perception of physical attractiveness is multidimensional.

We assume that the combined occurrence of happiness and physical attractiveness could lead to an interaction effect whereby happiness has even stronger effects on vote shares for more attractive candidates than for less attractive candidates. Based on the theoretical expectations, we derive three hypotheses:

- H1:* The more attractive candidates are, the higher their direct vote shares will be.
- H2:* The happier candidates appear, the higher their direct vote shares will be.
- H3:* Displays of happiness have stronger effects on direct vote shares for more attractive candidates than for less attractive candidates.

Design

This study focuses on the 2017 German federal election as a single case study with observational data. In Germany's mixed-member proportional electoral system, voters can cast their vote (1) directly for a candidate and (2) for a party overall. The design is based on a full

sample of all voting district candidates from the six most relevant political parties in Germany. This includes all 1,779 candidates from the parties that obtained at least one seat in parliament after the election: Christian Democrats (CDU/CSU), Social Democrats (SPD), Alternative for Germany (AfD), Free Democrats (FDP), the Greens, and the Left. The direct candidates ran for office in 299 electoral districts. In 13 out of 299 electoral districts, one party—the AfD—did not list any candidates because of its nascent history. In two additional electoral districts, the Greens and the Left did not list any candidates.

Measures

The dependent variable consists of direct vote shares for candidates in their electoral districts. This is considered the first vote. Voters also cast a second vote that decides the proportional share of seats for each party in parliament. The personalized proportional vote system determines that candidates with the highest direct vote share enter parliament directly as district representatives (first-past-the-post system). The second vote is typically deemed to be the more important vote. This study focuses on the candidate vote, since it should be most affected by candidate appearance. This reasoning is also in line with previous research focusing mostly on direct votes for candidates and candidate appearance (e.g., Rosar et al., 2008; Rosar et al., 2012; Todorov et al., 2005). It is important to note that, traditionally, the CDU/CSU and the SPD have by far won most voting districts directly; however, some fluctuation can be observed over the last several years. The direct vote shares are measured in percentages, as reported by official statistics. All key confounding variables, such as party membership and age, are also derived from official and public data (The Federal Returning Officer, 2017).

To measure candidates' physical attractiveness, we collected photographs of candidates (as seen on campaign posters) during the election campaign in the summer of 2017. The photographs were rescaled, and identifying information such as party logos, pins, and religious symbols were removed. The measurement of physical attractiveness is based on the assumption of an "attractiveness consensus" (Grammer et al., 2003; Henss, 1992; Rosar et al., 2008), according to which a small number of coders—even a dozen—is sufficient to reliably measure attractiveness (Henss, 1992, p. 308). Twenty-four student coders rated the politicians' physical attractiveness on a 7-point Likert scale ranging from

unattractive (0) to attractive (6). Half the coders were male, and half were female; all were between the ages of 18 and 26 and received financial compensation for completing the task. The coders were not informed that the subjects of the portraits were politicians. To ensure that they could not easily identify the subjects of the study as politicians, we included well-known politicians only at the end of the questionnaire of the online rating task. According to the "Truth of Consensus Method" (e.g., Patzer, 1985), attractiveness mean scores were calculated for each candidate. The attractiveness ratings were statistically reliable (Cronbach's $\alpha = .95$). The overall attractiveness mean score was 1.80; the highest attractiveness rating was 5.33 and the lowest was 0.04.

The displayed expressions were not coded manually; instead, an algorithm for emotion recognition created by Microsoft Azure Cognitive Services was used to detect emotional expressions within each portrait. The algorithm is trained on a deep learning approach and decision rules, such as the Facial Action Coding System (e.g., Ekman, 1997; for further information, see Microsoft Cognitive Services 2020). The emotion recognition algorithm is used to classify expressions of eight distinct states: anger, contempt, disgust, fear, happiness, sadness, and surprise, as well as neutral appearances of candidates. The algorithm provides percentages for each emotional expression in one portrait (ranging from 0 to 1) that correspond to the probability of displaying the given emotion or a neutral expression. The probabilities sum to 1 across all classified emotional and neutral expressions for each picture.

While the emotion recognition algorithm classifies a number of discrete emotions simultaneously, a separate classification for facial features provides additional classifications for smiling. A closer inspection shows that the separate classification for smiling obtains the same results as the emotion recognition algorithm for happiness, indicating that happiness is most likely measured by movement of the lips (instead of true smiling or happiness). Therefore, displays of happiness are limited to the perception of smiles in this study. The algorithm is accessible via the Microsoft face API and has been used in recent studies in political communication (e.g., Bousalis et al., 2021; Bousalis & Coan 2021; Masch, 2020). Most of these studies are based on the use of one algorithm. By comparing the Microsoft algorithm with other emotion recognition software—namely, OpenFace and FaceReader—it can be shown that the Microsoft algorithm performs similarly well and accurately with regard to displays of happiness (Masch et al., 2021).

The analysis mainly focuses on happiness as a metric variable and dichotomous variable according to this classification. The probability for happiness has also been recoded as a dummy variable of displaying happiness (1) for pictures with a probability higher than .8. A probability below .8 was coded as not happy (0). The cutoff point was chosen to reflect a high confidence that the images display happiness, and it further aligns with the skewed, almost bimodal, distribution of the variable. To obtain a classification, the pictures have to adhere to a certain pixel size (preferably at least 200 x 200 pixels). Unfortunately, this was not the case in one campaign photo, so that picture was manually coded at a later stage. The results do not change regardless of whether this specific observation is included in the analyses.

Procedure

To adequately reflect the structure of the data, linear hierarchical regression modeling is used, whereby 1,779 candidate observations on level 1 are clustered in 299 electoral districts on level 2. Furthermore, the statistical analysis considers a range of candidate characteristics, including age, gender, nobility titles, academic degrees, immigration background, party affiliation, and whether the candidate is a well-known public figure or previously was a member of parliament. Additionally, the number of candidates in an electoral district is considered in order to reflect the degree of competitiveness in a district. These factors have been deemed potentially confounding factors in previous research (e.g., Gassner et al. 2019; Rosar et al. 2008; Rosar et al. 2012). The models further differentiate between candidates from East and West Germany for two political parties—the Left and the AfD—in order to reflect path dependencies of historical, political, and social variations that still lead to noticeable differences in electoral results. This is particularly the case for candidates of the two parties. The Left was established in 2007 by a merger between the Party of Democratic Socialism (PDS) and Labour and Social Justice – The Electoral Alternative (WASG). The PDS was the successor of the Socialist Unity Party of Germany (SED)—the ruling party of the German Democratic Republic—and as its descendant the Left has historically higher vote shares, including direct mandates, in East German voting districts. As a relatively new party, the AfD has gained a stronger foothold and support in East German states.

Results

Figure 1 displays the distributions of each classified emotion according to the Microsoft algorithm for perceived emotion recognition. The majority of pictures have a high likelihood of displaying happiness (smiles), while negative emotions such as anger, contempt, disgust, fear, and sadness show very low probabilities. These negative emotions as well as the emotion of surprise are therefore negligible when it comes to emotional expressions on campaign pictures in this case. Next to happiness, neutral expressions are the only other classification that can be empirically observed with high confidence. This overall pattern conveys a high face validity given the nature of the campaign posters.

A more detailed distribution of happiness in the candidate sample shows differences in physical attractiveness and happiness across candidates' party affiliations. Candidates running for mainstream parties (CDU/CSU, SPD, FDP, the Greens) are not only perceived as more attractive physically than candidates of populist political parties (the Left, the AfD), they also display higher degrees of happiness (see Table 1). On average, the incumbents and likely front-runners of the SPD and CDU/CSU show the highest probabilities of happiness on their campaign posters compared with candidates of smaller parties. Candidates for the SPD, the FDP, and the Greens appear to be perceived as particularly physically attractive, while candidates of the Left and the AfD are perceived as noticeably less attractive on average.

The findings indicate a positive effect of candidates' physical attractiveness on direct vote shares (*H1*) when controlling for relevant candidate characteristics (see Model 1 in Table 2). The results further indicate a statistically significant effect of physical attractiveness on direct vote shares that remains when controlling for happiness (see Model 2 and Model 3 in Table 2). Both measurements of happiness show a positive effect on direct vote shares (*H2*). Additionally, a moderated relationship between happiness and physical attractiveness (*H3*) occurs when testing for an interaction between physical attractiveness and displays of happiness, whereby smiling candidates and more attractive candidates receive a higher degree of direct vote shares compared with others (see Models 4 and 5 in Table 2; see also Figure 2). Both interaction effects are statistically significant at the 10 percent level.

Discussion

In line with previous research, displaying smiles on campaign posters has a positive impact on political

Candidates Physical Attractiveness and Facial Expressions

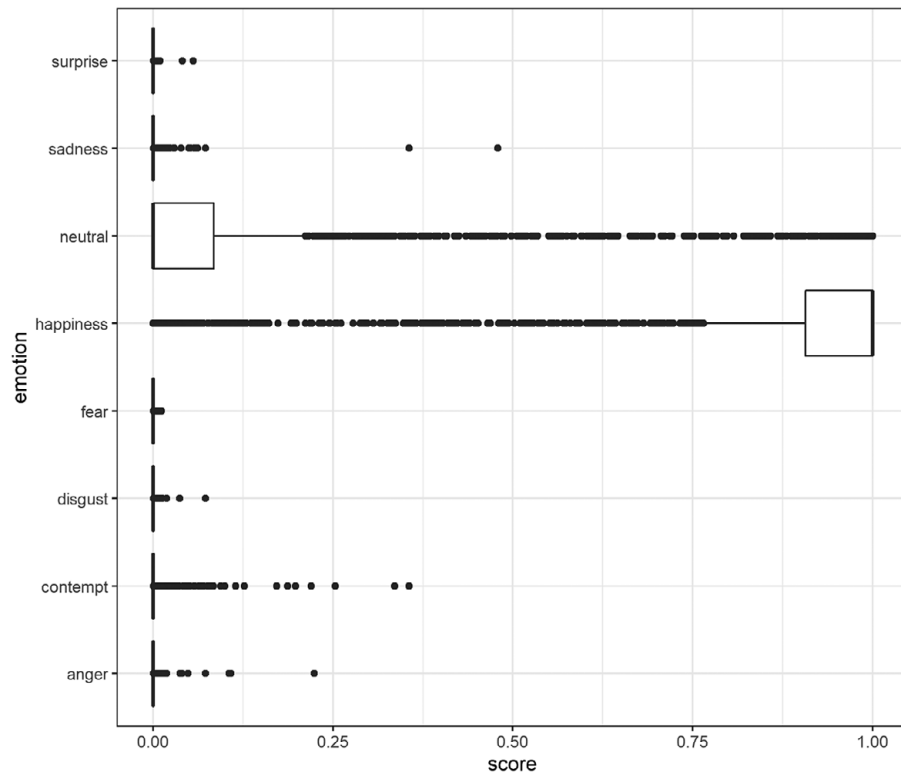


Figure 1. Emotion classifications of candidates’ faces in the German federal election 2017. Figure displays the frequencies of classification results based on the Microsoft emotion detection algorithm for 1,778 portrait pictures of direct candidates.

Table 1. Descriptive statistics of physical attractiveness and happiness according to party membership.

	Mainstream parties				Populist parties	
	CDU/CSU	SPD	FDP	The Greens	The Left	AfD
Physical attractiveness	1.75 (0.88)	2.06 (0.98)	1.94 (0.98)	1.94 (1.01)	1.60 (1.07)	1.39 (0.73)
Happiness	0.92 (0.22)	0.95 (0.18)	0.83 (0.30)	0.88 (0.28)	0.78 (0.34)	0.71 (0.39)
N	299	299	299	298	297	286

Note: Table displays mean values and standard deviations in parentheses for attractiveness (ranging from 0 to 6) and happiness (ranging from 0 to 1). Two separate ANOVA show significant differences for these two variables across party membership ($p < .001$; two-tailed).

success. The findings indicate that not only is displaying happiness favorable for candidates overall, it is especially beneficial for attractive politicians. The results show that physical attractiveness has a consistent positive effect on vote shares that increases slightly when candidates display happiness. While controlling for displays of happiness, the effects of attractiveness persist, underlining the importance of candidates’ physical appearance for their electoral success.

Previous research has put forward the idea that “beauty is beastly” and may come with a price, whereby

a high level of attractiveness can be disadvantageous, especially for women (Heilman & Saruwatari, 1979; Lizotte & Meggers-Wright, 2019). This effect can be emphasized for attractive female politicians who are smiling because of gendered “display rules” of emotions and paternalistic stereotypes (Eagly & Johannesen-Schmidt, 2001; Renner & Masch, 2019). Therefore, both attractiveness and smiles could lessen perceptions of competence and therefore decrease vote shares. Hence, moderating effects of gender have been tested in this analysis, but the results do not show any significant

Table 2. Hierarchical regression of direct vote shares on physical attractiveness and happiness.

	Direct vote shares (%)				
	(1)	(2)	(3)	(4)	(5)
Attractiveness	1.007*** (0.158)	0.996*** (0.158)	1.000*** (0.158)	0.235 (0.455)	0.569 [†] (0.304)
Happiness (metric)		0.859* (0.413)		-0.400 (0.819)	
Happiness (dichotomous)			0.655* (0.298)		-0.177 (0.583)
Attractiveness * Happiness (metric)				0.863 [†] (0.484)	
Attractiveness * Happiness (dichotomous)					0.533 [†] (0.322)
Number of district candidates	-0.452*** (0.070)	-0.457*** (0.070)	-0.460*** (0.070)	-0.448*** (0.070)	-0.451*** (0.070)
Party affiliation (vs. CDU/CSU)					
SPD	-11.436*** (0.419)	-11.432*** (0.419)	-11.446*** (0.419)	-11.428*** (0.419)	-11.448*** (0.419)
FDP	-27.229*** (0.486)	-27.150*** (0.487)	-27.143*** (0.487)	-27.118*** (0.487)	-27.124*** (0.487)
The Greens	-26.757*** (0.463)	-26.695*** (0.463)	-26.704*** (0.463)	-26.672*** (0.463)	-26.686*** (0.463)
The Left (West Germany)	-27.706*** (0.503)	-27.596*** (0.504)	-27.598*** (0.504)	-27.587*** (0.504)	-27.572*** (0.504)
The Left (East Germany)	-17.042*** (0.749)	-16.947*** (0.759)	-16.850*** (0.753)	-16.865*** (0.760)	-16.778*** (0.754)
AfD (West Germany)	-23.906*** (0.512)	-23.752*** (0.517)	-23.772*** (0.516)	-23.724*** (0.517)	-23.757*** (0.515)
AfD (East Germany)	-12.255*** (0.797)	-12.054*** (0.801)	-12.065*** (0.801)	-12.049*** (0.801)	-12.061*** (0.800)
Gender (female vs. male)	-1.033*** (0.309)	-1.126*** (0.312)	-1.124*** (0.312)	-1.186*** (0.314)	-1.182*** (0.314)
Age in years (vs. younger than 30)					
30–39 years	1.348** (0.508)	1.369** (0.508)	1.365** (0.508)	1.334** (0.508)	1.328** (0.508)
40–49 years	2.303*** (0.500)	2.317*** (0.499)	2.314*** (0.499)	2.282*** (0.499)	2.287*** (0.499)
50–59 years	1.652** (0.510)	1.665** (0.509)	1.675** (0.509)	1.617** (0.510)	1.632** (0.509)
Older than 60 years	1.678** (0.554)	1.730** (0.554)	1.724** (0.554)	1.680** (0.555)	1.676** (0.554)
Immigration background	0.004 (0.479)	-0.012 (0.478)	-0.013 (0.478)	-0.036 (0.478)	-0.035 (0.478)
Doctoral degree or higher	0.210 (0.354)	0.216 (0.353)	0.212 (0.353)	0.193 (0.353)	0.196 (0.353)
Nobility title	-1.281 (0.982)	-1.299 (0.981)	-1.308 (0.981)	-1.223 (0.982)	-1.251 (0.981)
Member of parliament	3.571*** (0.357)	3.560*** (0.357)	3.547*** (0.356)	3.584*** (0.357)	3.572*** (0.357)
Candidate is a public figure	6.886*** (0.926)	7.036*** (0.928)	6.999*** (0.927)	7.092*** (0.928)	7.038*** (0.926)
Intercept	34.711*** (0.889)	33.985*** (0.953)	34.225*** (0.915)	35.017*** (1.115)	34.828*** (0.984)
Observations level 1	1,779	1,778	1,779	1,778	1,779
Observations level 2	299	299	299	299	299
Log likelihood	-5,358.326	-5,353.053	-5,356.208	-5,351.273	-5,355.049
AIC	10,760.650	10,752.110	10,758.420	10,750.550	10,758.100

Note: Table 2 displays unstandardized regression coefficients. Standard errors in parentheses. † $p < .1$; * $p < .05$; ** $p < .01$; *** $p < .001$ (two-tailed). Attractiveness * Happiness (metric), tolerance = .10, VIF = 19.34; Attractiveness * Happiness (dichotomous), tolerance = .05, VIF = 10.26.

Candidates Physical Attractiveness and Facial Expressions

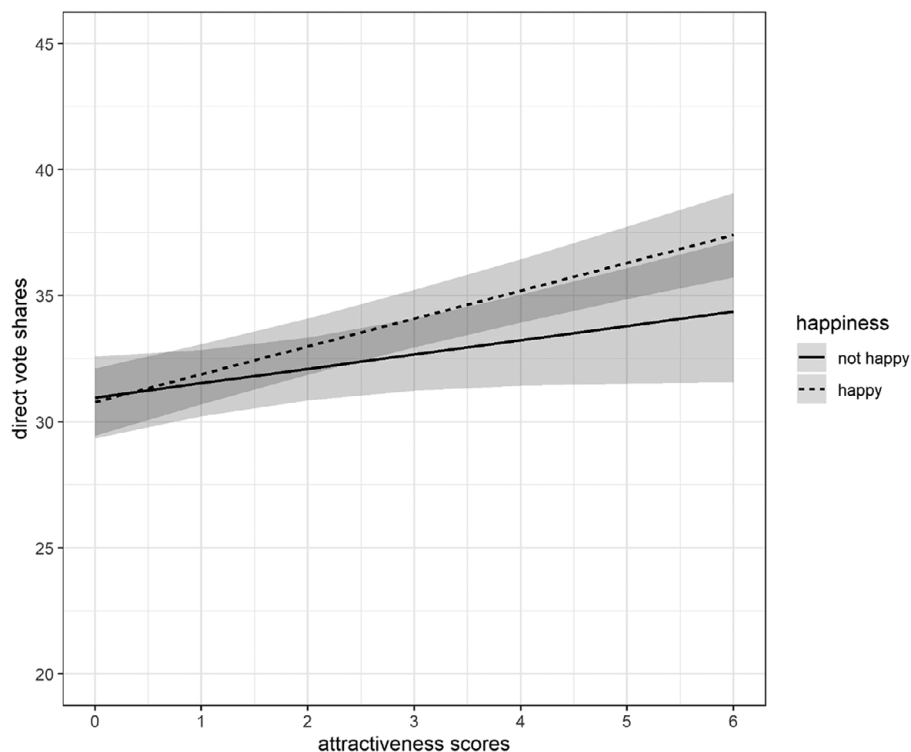


Figure 2. Interaction between physical attractiveness and happiness on direct vote shares. Figure displays the predicted direct vote shares based on a marginal effect plot with a 95% confidence interval according to happiness (dichotomous) and physical attractiveness.

effects (see Table A in the Appendix). However, it has to be noted that the sample size of very attractiveness female candidates is fairly small, and therefore this study might be limited in detecting the “beauty is beastly” effect.

In addition, it is necessary to consider ethnicity and race when studying the effects of candidate appearance (e.g., West, 2017), since voters typically attribute cues to it, such as representation and advocacy for a minority. However, one limitation of this study lies in its sample size, as it does not allow for detailed testing of moderating effects for race and ethnicity. The analysis for political candidates in Germany only considered immigration background as a confounding variable. This is due to the fact that the sample of German candidates in 2017 is not diverse enough to study politicians’ ethnic backgrounds and race in a quantitative manner. Gender, ethnicity, and race are relevant candidate characteristics that should be explored more closely in further research, especially with respect to stereotypical perceptions. One candidate characteristic that does not seem to moderate the effects of attractiveness is age. An interaction between attractiveness and age is not significant based on these data. By analyzing

the effects of attractiveness for each age group as specified in Table 2, a consistent effect emerges across age groups (see Tables B, C, D, E, and F in the appendix).

In candidate-centered politics, voting decisions are inherently based on choices between candidates. As a result, perceptions of candidates during election campaigns are often formed in relative terms—that is, candidates are evaluated in comparison with their opponents (Rahn et al., 1990, p. 155). Hence, the findings in Table 2 were replicated with relational measures of physical attractiveness and happiness for each candidate compared with other candidates in their electoral districts, as suggested by Rosar et al. (2008). The results indicate that the findings are robust when using a relational measure of attractiveness (see Table G in the Appendix), since relative physical attractiveness and happiness are associated with higher vote shares. A relational measure of happiness is not linked to higher vote shares (see Tables H and I in the Appendix). Therefore, in the case of single-shot campaign posters, displays of happiness are likely to be beneficial for candidates regardless of their opponent’s behavior. However, it can be assumed that relational effects of emotional

expressions emerge more strongly when the range of displayed emotions increases—that is, when anger or disgust is displayed alongside happiness and neutral expressions in other political settings.

Based on the nature of campaign posters in Germany, this study is limited to the effects of happiness compared with other emotional expressions such as anger and disgust. Effects on vote shares could vary greatly with regard to different emotional expressions. The perception of emotional expressions is highly context-dependent (Barrett et al., 2011; Hess et al., 2020), and it has been shown that politicians' emotional expressions are dependent on displays of other politicians (Masch, 2020, p. 237). Therefore, a variety of emotional expressions and their interplay with each other and with candidate characteristics, such as physical attractiveness, should be considered in the future.

Overall, it seems worthwhile to expand measurements of attractiveness to capture physical attributes of attractiveness beyond mere facial features and distinguish them from each other; ideally, this could be undertaken in experimental settings. As measurements of physical attractiveness are predominantly based on a consensus of attractiveness, it is necessary to clarify this measure of facial attractiveness conceptually. Our reasoning for this is as follows: the effects of physical attractiveness are continuously present in research on candidate appearance and electoral success, but there seem to be differences between levels of physical attractiveness according to party affiliation, whereby politicians of mainstream parties (CDU/CSU and SPD) and especially of niche parties with a high-income voting clientele (FDP and the Greens) are rated as more attractive than politicians of fringe or even populist parties (the Left and the AfD).

This finding could be caused by several factors. First, it could be that mainstream parties have a higher degree of professionalism when campaigning (e.g., professional photo shoots), which may enhance professional appearance and candidate expressions on campaign posters. Second, more attractive politicians might self-select into more successful and mainstream political parties. Because of lifelong advantages well into adulthood, attractiveness could function as a social advantage in candidates' biographies. Based on these individual experiences, attractive individuals may be satisfied with the status quo (Peterson & Palmer, 2017). As a result, they may have more incentives to maintain the social, political, and economic status quo and therefore participate in mainstream political parties. However, politicians who did not experience those advantages based

on their looks might be inclined to challenge the status quo, and consequently engage in populist and antiestablishment political parties. Third, belonging to antiestablishment parties could also encourage politicians to signal otherness by looking and dressing differently than the elites: untraditional and “roguishly.” Such codes contradict the idea of a single beauty norm within a society and, therefore, also contradict the measurement of an attractiveness consensus. Lastly, the perception of physical attractiveness measured by the consensus could also reflect social class attributes, wealth, and status since candidates' physical attractiveness clearly corresponds to (median) income levels of their parties' voting clientele.

Given that physical attractiveness combines many visible candidate characteristics, and its perception could even be influenced by emotional displays (e.g., heightened by happiness), it is necessary to study the perception of physical attractiveness and its consequences more closely in an experimental manner. Observational studies are limited to a certain number of candidate characteristics and their potential interactions without enabling researchers to analyze their causal relationship. As the presented models already indicate some concerns regarding potential issues of multicollinearity, observational studies cannot simply be expanded to include a larger number of candidate attributes. This is particularly true, given that ethnicity, gender, and race influence whether citizens run for office. Changing the design to thoughtfully planned experiments could show which specific visible attributes increase favorability, all else being equal.

Conclusion

The findings of the present study show that candidate appearance is crucial for electoral success. They also highlight the need to study factors that determine physical attractiveness in light of distinct facial features such as dominance (Laustsen & Petersen, 2020) and competence (Todorov et al., 2005), as well as their interaction with visible attributes of social status and wealth that are part of any immediate overall impression. It is further of relevance to consider the effects of physical attractiveness ratings with regard to specific emotional expressions. Positive effects of physical attractiveness on vote shares remain present when controlling for displays of happiness. There is also some support for the assumption that more attractive candidates profit the most from smiling

on campaign posters. While the results support all three hypotheses, the analysis is only based on observational data and the investigated links are therefore strictly correlational. The reported associations between physical attractiveness, displays of happiness, and vote shares necessitate further experimental research for the purpose of investigating the underlying relationship between varying visible candidate attributes, their interactions, and vote shares. Future experiments are required in order to analyze the causal relationship between physical attractiveness and emotional expressions and to disentangle the causal mechanisms between politicians' emotional expressions and their physical attractiveness on their electoral success.

Supplementary Materials

To view supplementary material for this article, please visit <http://dx.doi.org/10.1017/pls.2021.17>.

References

- Asano, M., & Patterson, D. P. (2018). Smiles, turnout, candidates, and the winning of district seats: Evidence from the 2015 local elections in Japan. *Politics and the Life Sciences*, 37(1), 16–31. <https://doi.org/10.1017/pls.2017.12>
- Ballem, C. C., & Todorov, A. (2007). Predicting political elections from rapid and unreflective face judgments. *Proceedings of the National Academy of Sciences*, 104(46), 17948–17953. <https://doi.org/10.1073/pnas.0705435104>
- Barrett, L. F., Mesquita, B., & Gendron, M. (2011). Context in emotion perception. *Current Directions in Psychological Science*, 20(5), 286–290. <https://doi.org/10.1177/0963721411422522>.
- Boussalis, C., Coan, T., Holman, M., & Müller, S. (2021). Gender, Candidate Emotional Expression, and Voter Reactions During Televised Debates. *American Political Science Review*, 1–16. doi:10.1017/S0003055421000666
- Boussalis, C., & Coan, T. G. (2021). Facing the electorate: Computational approaches to the study of nonverbal communication and voter impression formation. *Political Communication*, 38(1–2), 75–97. doi:10.1080/10584609.2020.1784327
- Bucy, E. P., & Grabe, M. E. (2008). “Happy warriors” revisited: Hedonic and agonistic display repertoires of presidential candidates on the evening news. *Politics and the Life Sciences*, 27(1), 78–98. https://doi.org/10.2990/27_1_78
- Cunningham, M. R. (1986). Measuring the physical in physical attractiveness. Quasi-experiments on the sociobiology of female beauty. *Journal of Personality and Social Psychology*, 50(5), 925–935. <https://doi.org/10.1037/0022-3514.50.5.925>
- Cunningham, M. R., Barbee, A. P., & Pike, C. L. (1990). What do women want? Facialmetric assessment of multiple motives in the perception of male facial physical attractiveness. *Journal of Personality and Social Psychology*, 59(1), 61–72. <https://doi.org/10.1037/0022-3514.59.1.61>
- Debus, M. (2017). An “Angela Merkel effect”? The impact of gender on CDU/CSU voting intention between 1998 and 2013. *German Politics*, 26(1), 35–48. <https://doi.org/10.1080/09644008.2016.1182501>
- Eagly, A. H., & Johannesen-Schmidt, M. C. (2001). The leadership style of women and men. *Journal of Social Issues*, 57(4), 781–797. <https://doi.org/10.1111/0022-4537.00241>
- Ekman, R. (1997). *What the face reveals: Basic and applied studies of spontaneous expression using the Facial Action Coding System (FACS)*. Oxford University Press.
- The Federal Returning Officer. (2017). Election to the 19th German Bundestag on 24 September 2017. Retrieved October 23, 2020, from <https://www.bundeswahlleiter.de/en/bundestagswahlen/2017.html>
- Gabriel, O. W., & Masch, L. (2017). Displays of emotion and citizen support for Merkel and Gysi: How emotional contagion affects evaluations of leadership. *Politics and the Life Sciences*, 36(2), 80–103. <https://doi.org/10.1017/pls.2017.15>
- Gassner, A., Masch, L., Rosar, U., & Schöttle, S. (2019). Schöner wählen: Der Einfluss der physischen Attraktivität des politischen Personals bei der Bundestagswahl 2017. In K.-R. Korte & J. Schoofs (Eds.), *Die Bundestagswahl 2017* (pp. 63–82). Wiesbaden: Springer VS.
- Golle, J., Mast, F. W., & Lobmaier, J. S. (2014). Something to smile about: The interrelationship between attractiveness and emotional expression. *Cognition and Emotion*, 28(2), 298–310. <https://doi.org/10.1080/02699931.2013.817383>
- Grammer, K., Fink, B., Möller, A. P., & Thornhill, R. (2003). Darwinian aesthetics: Sexual selection and the biology of beauty. *Biological Review*, 78(3), 385–407. <https://doi.org/10.1017/S1464793102006085>
- Hamermesh, D. S. (2011). *Beauty pays: Why attractive people are more successful*. Princeton University Press.
- Hamermesh, D. S., & Abrevaya, J. (2013). Beauty is the promise of happiness? *European Economic Review*, 64, 351–368. <https://doi.org/10.1016/j.eurocorev.2013.09.005>
- Hareli, S., & Hess, U. (2012). The social signal value of emotions. *Cognition and Emotion*, 26(3), 385–389. <https://doi.org/10.1080/02699931.2012.665029>

- Heilman, M. E., & Saruwatari, L. R. (1979). When beauty is beastly: The effects of appearance and sex on evaluations of job applicants for managerial and nonmanagerial jobs. *Organizational Behavior and Human Performance*, 23(3), 360–372. [https://doi.org/10.1016/0030-5073\(79\)90003-5](https://doi.org/10.1016/0030-5073(79)90003-5)
- Henss, R. (1992). *Spieglein, Spieglein an der Wand... Geschlecht, Alter und physische Attraktivität*. Weinheim: Psychologie Verlags Union.
- Hess, U. (2014). Anger is a positive emotion. In W. G. Parrott (Ed.), *The positive side of negative emotions* (pp. 55–75). Guilford Press.
- Hess, U., Dietrich, J., Kafetsios, K., Elkabetz, S., & Hareli, S. (2020). The bidirectional influence of emotion expressions and context: Emotion expressions, situational information and real-world knowledge combine to inform observers' judgments of both the emotion expressions and the situation. *Cognition and Emotion*, 34(3), 539–552.
- Horiuchi, Y., Komatsu, T., & Nakaya, F. (2012). Should candidates smile to win elections? An application of automated face recognition technology. *Political Psychology*, 33(6), 925–933. <https://doi.org/10.1111/j.1467-9221.2012.00917.x>
- Huddy, L., & Terkildsen, N. (1993). Gender stereotypes and the perception of male and female candidates. *American Journal of Political Science*, 37(1), 119–147. <https://doi.org/10.2307/2111526>
- Jäckle, S., Metz, T., Wenzelburger, G., & König, P. D. (2020). A catwalk to Congress? Appearance-based effects in the elections to the U.S. House of Representatives 2016. *American Politics Research*, 48(4), 427–441. <https://doi.org/10.1177/1532673X19875710>
- Kinder, D. R. (1986). Presidential character revisited. In R. R. Lau & D. O. Sears (Eds.), *Political cognition: The 19th Annual Carnegie Symposium on Cognition* (pp. 233–257). Lawrence Erlbaum.
- Lau, R. R., & Redlawsk, D. P. (2001). Advantages and disadvantages of cognitive heuristics in political decision making. *American Journal of Political Science*, 45(4), 951–971. <https://doi.org/10.2307/2669334>
- Laustsen, L., & Petersen, M. B. (2020). Why are right-wing voters attracted to dominant leaders? Assessing competing theories of psychological mechanisms. *The Leadership Quarterly*, 31(2), 101301. <https://doi.org/10.1016/j.leaqua.2019.06.002>
- Lizotte, M.-K., & Meggers-Wright, H. J. (2019). Negative effects of calling attention to female political candidates' attractiveness. *Journal of Political Marketing*, 18(3), 240–266. <https://doi.org/10.1080/15377857.2017.1411859>
- Masch, L. (2020). *Politicians' expressions of anger and leadership evaluations: Empirical evidence from Germany*. Nomos. <https://doi.org/10.5771/9783748906803>
- Masch, L., Homan, M., & Han, O. (2021). *Smiling face or frowning face? Comparing emotion recognition algorithms for applications in political communication research* [Unpublished manuscript].
- Masters, R. D. (1994). Differences in responses of blacks and whites to American leaders. *Politics and the Life Sciences*, 13(2), 183–194. <https://doi.org/10.1017/S0730938400018360>
- McDermott, M. L. (1998). Race and gender cues in low-information elections. *Political Research Quarterly*, 51(4), 895–918. <https://doi.org/10.2307/449110>
- Microsoft Cognitive Services. (2020). *Face documentation*. Retrieved October 23, 2020, from <https://docs.microsoft.com/en-us/azure/cognitive-services/face/>
- Murray, G. R. (2014). Evolutionary preferences for physical formidability in leaders. *Politics and the Life Sciences*, 33(1), 33–53. https://doi.org/10.2990/33_1_33
- Patzner, G. L. (1985). *The physical attractiveness phenomena*. Plenum.
- Peterson, R. D., & Palmer, C. L. (2017). Effects of physical attractiveness on political beliefs. *Politics and Life Sciences*, 36(2), 3–16. <https://doi.org/10.1017/pls.2017.18>
- Pietraszewski, D. (2016). Priming race: Does the mind inhibit categorization by race at encoding or recall? *Social Psychological and Personality Science*, 7(1), 85–91. <https://doi.org/10.1177/1948550615602934>
- Rahn, W. M., Aldrich, J. H., Borgida, E., & Sullivan, J. L. (1990). A social-cognitive model of candidate appraisal. In J. A. Ferejohn & J. H. Kuklinski (Eds.), *Information and democratic processes* (pp. 136–159). University of Illinois Press.
- Reis, H. T., Wilson, I. M., Monestere, C., Bernstein, S., Clark, K., Seidl, E., Franco, M., Gioioso, E., Freeman, L., & Radoane, K. (1990). What is smiling is beautiful and good. *European Journal of Social Psychology*, 20(3), 259–267. <https://doi.org/10.1002/ejsp.2420200307>
- Renner, A. M., & Masch, L. (2019). Emotional woman—rational man? Gender stereotypical emotional expressivity of German politicians in news broadcasts. *Communications*, 44(1), 81–103. <https://doi.org/10.1515/commun-2017-0048>
- Rosar, U., Klein, M., & Beckers, T. (2008). The frog pond beauty contest: Physical attractiveness and electoral success of the constituency candidates at the North Rhine-Westphalia state election of 2005. *European Journal of Political Research*, 47(1), 64–79. <https://doi.org/10.1111/j.1475-6765.2007.00720.x>
- Rosar, U., Klein, M., & Beckers, T. (2012). Magic mayors: Predicting electoral success from candidates' physical attractiveness under the conditions of a presidential electoral system. *German Politics*, 21(4), 372–391.

Candidates Physical Attractiveness and Facial Expressions

- Rosenberg, S. W., Bohan, L., McCafferty, P., & Harris, K. (1986). The image and the vote: The effect of candidate presentation on voter preference. *American Journal of Political Science*, 30(1), 108–127. <https://doi.org/10.2307/2111296>
- Schubert, J. N. (1991). Human vocalizations in agonistic political encounters. In G. Schubert & R. D. Masters (Eds.), *Primate politics* (pp. 207–220). Southern Illinois University Press.
- Schubert, J. N., Curran, M. A., & Strungaru, C. (2011). Physical attractiveness, issue agreement, and assimilation effects in candidate appraisal. *Politics and the Life Sciences*, 30(1), 33–49. https://doi.org/10.2990/30_1_33
- Stewart, P., Bucy, E., & Mehu, M. (2015). Strengthening bonds and connecting with followers. A biobehavioral inventory of political smile. *Politics and the Life Sciences*, 34(1), 73–92. <https://doi.org/10.1017/pls.2015.5>
- Stewart, P. A., Salter, F. K., & Mehu, M. (2009). Taking leaders at face value: Ethology and the analysis of televised leader displays. *Politics and the Life Sciences*, 28(1), 48–74. https://doi.org/10.2990/28_1_48
- Sullivan, D. G., & Masters, R. D. (1988). “Happy warriors”: Leaders’ facial display, viewers’ emotions, and political support. *American Journal of Political Science*, 32(2), 345–368. <https://doi.org/10.2307/2111127>
- Todorov, A., Mandisodza, A. N., Gorem, A., & Hall, C. C. (2005). Inferences of competence from faces predict election outcome. *Science*, 308(5728), 1623–1626. <https://doi.org/10.1126/science.1110589>
- Van Kleef, G. A. (2016). *The interpersonal dynamics of emotion: Toward an integrative theory of emotions as social information*. Cambridge University Press.
- Verhulst, B., Lodge, M., & Lavine, H. (2010). The attractiveness halo: Why some candidates are perceived more favorably than others. *Journal of Nonverbal Behavior*, 34(2), 111–117. <https://doi.org/10.1007/s10919-009-0084-z>
- West, E. A. (2017). Descriptive representation and political efficacy: Evidence from Obama and Clinton. *Journal of Politics*, 79(1), 351–355. <https://doi.org/10.1086/688888>