

Facial features influencing political election outcomes and other social events

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Abstract. Faces are rich sources of social information, and their characteristics can help people to understand the society better. The outcomes of our most important social decisions depend on our ability to make accurate inferences about the inclinations, motivations and qualifications of others. People can make trait judgements about people within an extreme short amount of time. Some researchers have found that rapid and unreflective facial features judgements could be largely predictive in political election and other social events as well. Therefore, the research topic of this paper is the effect of the face; Judgement on social decision-making outcomes. This paper will provide a review of the impact of face recognition on political elections and the biases that arise from facial inferences. These results imply that quick, straightforward binary ability evaluations are sufficient to forecast the results of political elections, and facial traits can bias human choices. The potential impact of faces of social decision-making can be explained by their ability to predict a series of important outcomes.

1 Introduction

The process by which viewers infer personality qualities from an actor's conduct is a critical component of impression creation. Trait inferences has been widely explored in social psychology and developmental psychology in recent decades, and it has become one of the hotspots in the study of social cognition. Previously, a great majority of trait inferences studies were largely centered on behavior, but as research has progressed, it has been discovered that trait inferences are linked to the actor's face, laying the groundwork for face-based trait inferences to predict conduct. Faces can reveal people's identities, ages, and even personality and psychiatric states. According to recent study, face-based trait inferences can impact decision-making in many areas, such as elections.

2 Research review

First of all, three experiments are included in Ballew and Todorov's paper [1]. In the first experiment, participants were asked to determine who they thought was more competent after seeing the faces of the winners and runners-up in 89 gubernatorial campaigns. After exposure of the winner's and runner-up's faces for 100 milliseconds, as well as exposure for 250 milliseconds and an indefinite amount of time, the predictions were just as accurate. In the second experiment, three circumstances were presented to participants in a random order: one was to consider the conditions, requiring them to carefully consider their choices and make correct

judgments; One is to respond to deadline conditions, requiring them to make a decision within 2 seconds; The other is a replication condition of 250 milliseconds. Requesting participants to carefully consider and make correct judgments greatly increases reaction time and reduces the predictive accuracy of judgments, whether made after 250 milliseconds or within a 2-second reaction period. In the third experiment, the researchers gathered competency judgements two weeks prior to the 2006 gubernatorial elections in order to demonstrate that these assessments can prospectively predict election outcomes. Participants were asked to choose the Democratic or Republican candidate they thought was more qualified for each gubernatorial race after viewing photographs of both candidates. Additionally, 68.6% of the governorship races and 72.4% of the Senate races were anticipated by competency assessments gathered before to the 2006 elections. The results of the governor's election can be predicted by uncomplicated, unthinking judgment based just on the quick facial expression. Participants were more likely to choose the winner as more qualified even after seeing the winner and runner-up's faces for 100 milliseconds. In addition to demonstrating that people quickly infer traits from faces, the researchers also demonstrate that instructions to ponder and deliberately make wise decisions resulted in less precise forecasts of the election results.

Because according to previous research, people think that one of a politician's most crucial qualities is competence, and that assessments of competence can predict election results, researchers have concentrated on assessments of competence.

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According to Atkinson et al., the impact of anticipated election results of candidate selection may be a significant omitted variable. In Atkinson's experiment [2], to precisely evaluate the impact of face on voting while accounting for any candidate selection effects, researchers apply two different techniques. They first determine and account for the choice of candidate faces for districts, and then they turn to voter surveys. In a Congressional voting model, individual observations allow them to account for election context and possibly confounding voter characteristics. Most essentially, they can maintain the influence of voter partisanship and its connection to the party of the incumbent. This enables researchers to more accurately predict the direct impact of candidates' face on voter preference. It is thought that candidate facial characteristics are a part of a more thorough explanation for how candidate advantages work in elections. Despite the fact that it has been demonstrated that some people seem to have a particular reaction to a candidate's face, and politicians choose their constituencies based on appearance. There is still a chance for confusion. The approach does not measure other desirable candidate traits like wealth and competence, but they might be related to general competence. According to economics and psychology research, facial traits are linked to a variety of life outcomes. Candidates with other desirable attributes may be selected into competitive districts, and qualified faces may be accidental due to their link with these traits. This result is thought to be compatible with a more general thesis, according to which, when more competitive challengers are chosen for the most qualified districts, even before voters are involved, a correlation will be established between the preferred qualities and the election results. The primary process over the approach utilized by earlier candidate face researchers is that in this study, two faces were chosen in a random order from a pool of all contests are displayed, as opposed to merely the two opposing candidates in each actual race. The metric thus enables candidate comparison by assigning each contender a numerical face score.

Human facial features and expressions are one of the main sources of information in our lives, and although some physical information is very obvious, there is still a lot of information that is ambiguous and difficult to detect.

The facial appearance of target individuals was systematically manipulated by the researchers in Olivola's paper [3].

For voters who don't have enough political information, the association is especially strong (collapsing throughout levels of television exposure). The facial competence of the candidate does not indicate the voting choices of people with significant political understanding. In contrast to Democrats, Republican voters are more likely to support politicians who have a stereotypically Republican appearance. The stereotypical way that Republicans seem like politicians has nothing to do with their ability to gain votes. Contrarily, it makes unfavorable predictions about the Democratic victory margin. Is it possible to determine political affiliation from an individual's face? Actually, back in 2010, there

were experiments in the field of facial features been carried out to explore the relationship between political facial stereotyping and election outcomes. According to Rule et al., people's political affiliations are thought to be accurately deduced from their faces [4]. Participants were tasked with classifying the Republican and Democratic candidates for the U.S. Senate in the elections of 2004 and 2006 based on their political party affiliation. Images of the Democratic and Republican candidates for the Senate in the elections of 2004 and 2006 were acquired from the Cable News Network website or the candidates' campaign websites. Each photograph was made grayscale, had its dimensions standardized, and was cropped to the subject's extremities (top of head, sides of hair, or ears). Candidates who were members of racial minorities were not included in the study to avoid racial stereotypes. Based on images of the candidates' faces, perceivers were able to correctly identify which candidates were Democrats or Republicans for the U.S. Senate. According to their senior yearbook images, Study 2 demonstrated that these effects were present among both Democratic and Republican college students. The results of Study 3 then showed that these assessments were connected to variations in the perceived features of the Republican and Democratic faces. Democrats were thought to be less powerful than Republicans. Additionally, targets were more likely to be labeled as Republicans by others as their perceived power increased. Similar to this, when targets were considered to be warmer, it is highly possible that Democrats to be associated with them. In this paper, the researchers designed more detailed experiments to explore how well such vague stereotypes predict election outcomes.

Similar to this, babyfacednesses are seen as signs of less ability and have a higher failure rate in political campaigns [5]. The researchers put this hypothesis into the test using 2772 respondents' assessments of the facial features of 1785 Finnish political candidates based on photographs. The findings support the notion that babyfacedness is negatively correlated with assumed political skill. Despite this, depending on the sample of candidates, babyfacedness is either irrelevant to electoral success or positively connected.

In Finnish elections, It was discovered by Poutvaara et al. That assessments of face competence predicted political success for male candidates but not for female candidates. Chiao et al. found that facial competence negatively predicted political success for male candidates in the 2006 House of Representatives races, but not for female candidates (however, they also found that, in simulation experiment elections, face competence was a big predictor of election results for both sexes.) [6,7]. In order to examine the predictive effectiveness of face competency assessments between elections with one female candidate and the other male and those with both male candidates, the researchers analyzed and compared data from three different elections [7]. As a result, they found that, in contrast to Poutvaara et al. and Chiao et al., The political election of female candidates was predicted by candidate competence, at least as well as that of male candidates.

After searching the data, it is found that most scholars choose white males as experimental samples in the field of facial features, but few scholars have explored female and minority politicians, so the samples of female and minority candidates are particularly important. In this paper, the researchers added female candidates to explore the impact of facial competence on the election results of female candidates, but it is obvious that more research is required to explore whether gender influences the predictive value of facial competence. In this paper the researchers used a mixed model of male and female candidates, it is still unclear whether the results would be different for female-female candidates elections.

It is believed that slight differences in geography and culture can have a huge impact on the experiment, and subjects with different cultural backgrounds may have very different opinions about the same thing. After Ballew and Todorov published their findings in 2006, Chappell Lawson, an associate professor at MIT, praised Todorov's work as "pioneering and seminal," and said that some of the co-authored research he had done with Gabriel Lenz, also at MIT, supported the new findings. According to Lawson et al., 2010's study, American students were able to anticipate the results of elections in Mexico using their own instincts [8].

The results are surprising because Mexican politicians frequently highlight quite different aspects of their look, such as by adopting mustaches and beards, which American politicians tend to avoid. Despite this, the Americans were still capable of predicting the Mexican winners. The effects in the data are at least as strong as the ones Todorov's team found. This may suggest that despite the influence of different facial features, the factors that help people make predictions are similar in different background. In the same way, focusing on cultural and geographical differences, based on the previous statement of people frequently and unconsciously draw conclusions about underlying features based on physical appearance [7,9,10,11]. By analyzing the facial characteristics of 18 candidates, Sussman et al. explicitly tested whether US residents could predict the outcomes of the 2011 Bulgarian presidential elections, and it turned out the predictions of American residents matched the election results. The presidential elections of Bulgarian are in particular worth studying because, despite the fact that the candidates are running for a position of great power, there are few barriers to getting their names on the ballot. As a result, many people run for president in each election cycle; there were 18 candidates in the year under review. Due to the variability in facial features that can be accommodated by such a large number of candidates, it is now possible to see how effectively assessments of competence could predict election results for a wide range of candidates [12].

3 Major strength and weakness

Numerous studies have demonstrated that people infer traits about others from their faces and that these social

attributions have an impact on the leadership outcomes in a range of circumstances.

The majority of earlier studies in the field of political studies have paid significantly less attention to visual imagery and instead have focused on transcripts or printed recordings of the media. Until then, political scientists have focused on the modest, traditional effects of the media on election outcomes. Ballew and Todorov have a positive contribution not only on facial feature domain but also on the political field.

On the other hand, all relevant variables (e.g., facial competence, attractiveness) ranged from 0 to 1 are represented, for each candidate, the percentage of respondents who thought that person appeared more competent, or physically attractive than his or her opponent. The face assessments of competing applicants are thus entirely redundant and perfectly negatively related. And due to the cultural differences of trait inferences, Ballew and Todorov's paper lacks of the diversity in race and gender. Although a lot of studies have shown that many judgments have cross-cultural consistency, these behavioral judgments show cross-cultural differences in understanding.

For example, when American and North Korean subjects were shown a short film about walking posture, it was found that the two groups agreed on the target gender and age in the film, but disagreed on the meaning of the behavior [13]. In North Korea, slow speech during a speech indicates a higher status of the speaker, but the opposite is true in the United States [13]. In both studies, the subjects' judgments (for example, the target's gender, age, and speed of speech) were consistent, but the meaning of these cues vary depending on the cultural context. Even such a simple perception can lead to biases in understanding, so that different understandings of the same thing in major decisions can produce different predictions and outcomes. But the meaning of these clues changes with different cultural backgrounds. Even such a simple perception can lead to biases in understanding, different interpretations of the same thing in major decisions can produce very different predictions and outcomes [14].

In the study by Olivola et al., researchers chose to use computer software to systematically change the faces that participants were shown, manipulating the visual features of target individuals. The researchers were able to get an ideal result. But at the same time, some of the inevitable facial features in real life would be neglected.

For Rule et al.'s paper about the correlation between individuals' political affiliations and faces, the lack of Republican perceivers is one of the work's limitations [4]. Additionally, the investigations were carried out in the northeastern United States, and the stereotypes about the personalities associated with specific political subordination may differ from those that are in other parts of the nation. For example, The northeastern United States is frequently known for its support of liberal legislators and democratic political leadership. The findings that Republicans are perceived as powerful and Democrats as warm could be influenced by the perceivers' anticipations, beliefs, or preferences for the

personalities of these two political parties. And for Sussman's paper, although the researchers chose subjects and candidates from different backgrounds, they can't prove whether there are differences in the way people of different races predict election outcomes, but indeed, the large sample size and the variability of facial features can help people to see how effectively assessments of competence predict election results [12].

In politics, are voters influenced by the facial features of candidates? In a related study, a large number of research has shown that face-based trait inferences can predict political election outcomes. However, the exploration in this aspect is not deep enough. Due to cross-cultural differences, more influential factors should be taken into account when conducting experiments in different cultural backgrounds. For example, what is considered the most important political trait in different cultures? Whether there is gender discrimination in the political field under this culture. Secondly, most of the candidates' photos in this field are male, which limits the promotion of the research conclusions to female politicians. In future studies, experiments should be conducted on female politicians, or mixed experiments should be conducted on male and female politicians' photos at the same time, so as to explore whether gender has an impact on the prediction accuracy of facial traits on political election results.

4 Discussion

It is believed that Facial features are one of the most important factors influencing election results. This paper could help politicians and political scientists understand the factors that influence political events, and also help psychologists in related fields to understand the academic process in the field of facial features.

According to previous researchers, providing relevant information to decision-makers can sometimes alleviate the biased effect of facial expressions. For example, when people are able to obtain information about past behavior, they rely less on facial features when making investment decisions. Unfortunately, even if people have clear and relevant information, they are still influenced by facial expressions.

In the political field, having a face that looks very capable is one of the most predictive factors for success and status, while in the military field, having a dominant-looking is a better predictor.

Studies have shown that people have an intuitive impression of a candidate's facial features. Facial features such as facial symmetry and level of appearance are associated with favorability and trust in candidates. These impressions often directly affect the voting behavior of voters and thus influence the results of political elections.

Facial features were also associated with perceptions of a candidate's leadership. Research has found that candidates with features such as higher facial symmetry and wider foreheads are more likely to be perceived as leadership in the minds of voters and thus more competitive in the election.

In addition to their influence on political election outcomes, facial features play an essential role in other social events as well. Being able to predict criminal guilt based on facial looks has major ramifications for the legal system. People with faces that are commonly associated with criminal behavior are more likely to be chosen from a lineup by the police and put on trial. Defendants who appear untrustworthy or whose faces resemble those of the crime they are accused of are more likely to be found guilty after a trial [3]. The facial characteristics of judges have an impact on the outcome of defendants' punishments. Judges with more serious and severe facial features tend to hand down harsher penalties, whilst judges with more amicable facial traits prefer to hand down softer sentences. Beyond politics, facial features influence every aspect of human life.

This paper studies the positive correlation between facial features and election results, on the other hand, the facial competency may be related to other possible candidate characteristics, such as financial resources which this paper does not account for. In the future, the operation of the above related variables can be further refined to facilitate the in-depth study of this topic.

4 Conclusion

In conclusion, domestic and foreign scholars have comprehensively studied the influence of facial features on political election results and other social events, and the results are rich and enlightening, which greatly promotes the rapid development of facial feature recognition and political science. In order to make a better summary of the researches in the field of facial feature recognition, this paper selected representative studies in related fields for analysis and comparison and have proposed a method that facial features are one of the most important factors influencing election results based on previous studies. This article provides a deeper insight of the importance of facial feature recognition and its impact on the predictability of political elections. This work contributes to existing knowledge of facial features by providing a review of the impact of face recognition on political elections and the biases that arise from facial inferences. It's not hard to find that based on a number of literature reviews although a large number of research results have been achieved in the study of election prediction based on facial inferences, there are still some problems and deficiencies in this field that lead researchers to further explore and discuss. For example, there are few studies on female politicians, which limits the generalization of conclusions. In addition, in the large number of studies based on faces, the discussion on the role of facial expression should be more in-depth. Considering the complexity of election context, the influence of this variable is worth considering. Future research should consider the potential effects of more factors such as the diversity of candidates and dynamic state of image.

References

1. C. C. Ballew, A. Todorov. *P Natl Acad Sci Usa*, **104**(46), 17948–17953 (2007)
2. M. D. Atkinson, R. D. Enos & S. J. Hill. *Quart J Polit Sci*, **4**(3), 229–249 (2009)
3. C. Y. Olivola, F. Funk & A. Todorov. *Trends Cogn Sci*, **18**(11), 566–570 (2014)
4. N. O. Rule, N. Ambady. *Plos One*, **5**(1), e8733 (2010)
5. P. Poutvaara, H. Jordahl & N. Berggren. *J Exp Soc Psychol*, **45**(5), 1132 – 1135 (2009)
6. J. Y. Chiao, N. E. Bowman & H. Gill. *Plos One*, **3**(10), e3666 (2008)
7. C. Y. Olivola, A. Todorov. *J Nonverbal Behav*, **34**(2), 83–110 (2010)
8. J. C. H. Lawson, G. Lenz, A. Baker & M.D. Myers. *World Polit*, **62**(4), 561–593 (2010)
9. C. C. Hall, A. Goren, S. Chaiken & A. Todorov. *The Political Psychology of Democratic Citizenship*, Oxford : Oxford University Press
10. A. Todorov, C. P. Said, A. D. Engell & N. N. Oosterhof. *Trends Cogn Sci*, **12**(12), 455–460 (2008)
11. L. A. Zebrowitz, J. M. Montepare. *Appearance DOES matter. Science*, **308**(5728), 1565–1566 (2005)
12. A. B. Sussman, K. Petkova & A. Todorov. *J Exp Soc Psychol*, **49**(4), 771–775 (2013)
13. J. M. Montepare, L. A. Zebrowitz. *J Nonverbal Behav*, **17**(1), 55–68 (1993)
14. Z. N. Yang, S. W. Hou. *Adv Psych Sci*, **19**(7), 1047-1053 (2011)