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You Can Leave Your Glasses on

Glasses Can Increase Electoral Success

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Abstract: Does wearing glasses hurt or help politicians in elections? Although some research shows that glasses signal unattractiveness, glasses also increase perceptions of competence. In eight studies, participants voted for politicians wearing (photoshopped) glasses or not. Wearing glasses increased politicians' electoral success in the US (Study 1), independent of their political orientation (Studies 2a and 2b). This positive effect was especially strong when intelligence was important (Study 3), and even occurred if glasses were used strategically (Study 4). However, it did not extend to India (Study 5) due to different cultural associations with glasses (Study 6). Furthermore, while intelligence mediated the effect, warmth did not (Study 7). In summary, wearing glasses can robustly boost electoral success, at least in Western cultures.

Keywords: glasses, voting, stereotypes, politicians, election

Politicians appear to shun glasses. For example, even though presently around 61% of US citizens wear glasses, no US president since Harry Truman wore glasses in public (Pindell, 2015). After becoming the UK Prime Minister, David Cameron waited a full 3 months before wearing glasses in public and felt noticeably uncomfortable doing so (Swinford, 2013). Jeb Bush even attributed his failure to defeat Trump in the Republican primaries to his glasses (Jamieson, 2016). It seems politicians try to avoid wearing glasses in public because of possible associations with vision deficiency, old age, and weakness (Elman, 1977; Swinford, 2013; Terry & Krantz, 1993). But are politicians actually right in doing so? The current research aims to test this.

Effects of Glasses on Appearance

Politicians' appearance, in particular their facial appearance, certainly influences their electoral success (Antonakis & Dalgas, 2009; Jäckle & Metz, 2015; Little, Burriss, Jones, & Roberts, 2007; Todorov, Mandisodza, Goren, & Hall, 2005; Todorov, Olivola, Dotsch, & Mende-Siedlecki, 2015). For example, Todorov et al. (2005) found that in the US, 72% of the Senate races and 67% of the House races could be predicted by asking people who looked more competent. Given that glasses may signal declining health and weakness, politicians may be right to avoid wearing glasses in public.

Indeed, some research appears to support politicians' fears. Glasses are linked with a range of negative

characteristics, such as being less likeable, less attractive, and most importantly less dominant (Edwards, 1987; Hasart & Hutchinson, 1993; Leder, Forster, & Gerger, 2011; Lundberg & Sheehan, 1994; Terry & Krantz, 1993; Terry & Kroger, 1976). For example, an early study by Terry and Krantz (1993) found that wearing glasses reduced social forcefulness, a characteristic including dominance, aggressiveness, and courage. Leder et al. (2011) showed that wearing glasses, especially full-rimmed ones, reduces attractiveness.

Yet, in the current paper, we aim to show that wearing glasses actually improves electoral success. Although people have some negative associations, they also have many positive associations with glasses – in particular with learning, studying, and wisdom (Harris, 1991; Hellström & Tekle, 1994; Merry, 2012). This positive stereotype dates back to the Middle Ages, when monks used glasses to study despite declining vision. Glasses have since been commonly worn by people who perform intellectual or other highly skilled work (Ilardi, 2007). As a result, people associate glasses with a variety of competence-related characteristics, such as success, dependability, and industriousness, and most strongly intelligence (Harris, 1991; Hellström & Tekle, 1994; Jäckle & Metz, 2015; Leder et al., 2011; Manz & Lueck, 1968; Terry & Krantz, 1993; Thornton, 1943, 1944).

Based on this notion, we propose that wearing glasses *improves* electoral success due to the robust association between perceptions of competence and electoral success (Ballew & Todorov, 2007; Chiao, Bowman, & Gill, 2008; Todorov et al., 2005). Competence often seems to be the best facial predictor of participants' likelihood to vote for

a candidate (Jäckle & Metz, 2015; Rosenberg & McCafferty, 1987; Sussman, Petkova, & Todorov, 2013; Todorov et al., 2005; but see Praino, Stockemer, & Ratis, 2014; Verhulst, Lodge, & Lavine, 2010, for a discussion of when and why attractiveness might be more important). For example, competence seems to be the best predictor for electoral success in the previously mentioned US Senate and House races, in the German parliament, and for Bulgarian presidential candidates. In contrast, trust, likeability, attractiveness, and dominance do not predict electoral success as strongly as competence (Jäckle & Metz, 2015; Sussman et al., 2013; Todorov et al., 2005).

In summary, although earlier research suggests that glasses may have negative effects, we propose that because glasses clearly boost perceived competence, wearing glasses increases politicians' electoral success. We test this in eight studies using an experimental approach, in which we use photoshopped images of actual politicians (see Figure 1) to show participants the exact same politician – but with or without glasses. This experimental approach is particularly important because correlational findings from local elections in Denmark show that wearing glasses is related to *reduced* electoral success (Laustsen, 2014). However, the correlational nature of that study precludes causal inferences. Furthermore, Laustsen found this effect *after controlling* for differences in perceived competence between candidates, with glasses being related to increased competence. This is problematic because we predict that glasses increase electoral success exactly for this reason – by increasing perceived competence.

Hypothesis 1 (H1): Glasses increase electoral success.

Possible Moderators and Mediators of the Glasses Effect

Next, we predict that the positive effect of wearing glasses is moderated by a range of personal and situational factors.

Political Orientation

First, participants' or politicians' political orientation may play a role. In general, Republicans prefer conservative-looking politicians (Olivola, Sussman, Tsetsos, Kang, & Todorov, 2012; Olivola, Tingley, & Todorov, 2018), meaning politicians who look dominant (Laustsen & Petersen, 2015, 2016). As glasses tend to reduce dominance (Terry & Krantz, 1993), liberal participants may show a stronger and conservative participants a weaker glasses effect. Furthermore, attractiveness is generally important for electoral success (Berggren, Jordahl, & Poutvaara, 2010; Lutz, 2010; Praino et al., 2014; Rosar, Klein, & Beckers, 2008), but conservative politicians profit especially from it (Berggren,

Figure 1. Example of actual stimuli pairs used in studies with American participants. Included with the kind agreement of Mrs. Agneta Gille (MP of Swedish Parliament for the Social Democrats). These are the only stimuli for which we got the permission to include them in print, but we are happy to share stimuli for research purposes.

Jordahl, & Poutvaara, 2017). As glasses also reduce attractiveness (Leder et al., 2011; Lundberg & Sheehan, 1994), the positive effect of glasses may be stronger for liberal politicians and weaker for conservative politicians. Then, it is possible that the glasses effect would be stronger for politicians of the same political orientation as the participants than for politicians from another party. Therefore, we expect the glasses effect to be stronger for liberal participants and for liberal politicians.

Hypothesis 2a (H2a): The positive effect of glasses is stronger for liberal participants and liberal politicians than for conservative participants and politicians.

Finally, because the effect of party affiliation already predicts electoral decisions strongly in cross-party elections (Campbell, Converse, Miller, & Stokes, 1960), it is possible that the party affiliation of a politician overrides the glasses effect for partisans.

Hypothesis 2b (H2b): Do glasses increase electoral success in cross-party elections?

Political Situation

Next, the effect of glasses may depend on the traits required by a specific political situation. Based on evolutionary psychology, human beings look for effective leadership in order to be able to survive specific threats to their group (Spisak, Nicholson, & van Vugt, 2011; van Vugt, Johnson, Kaiser, & O'Gorman, 2008; van Vugt, 2006, 2014). For example, people prefer male presidential candidates, associated with agentic skills, when there is a threat of international conflict, have no preference in the absence of conflict (Falk & Kenski, 2006), and even prefer female candidates when the political situation demands a communal candidate to overcome internal divisions (Lammers, Gordijn, &

Otten, 2009). Similarly, people prefer masculine, strong, and dominant leaders in times of conflict, and feminine, intelligent, and cooperative leaders in times of peace (Laustsen & Petersen, 2015, 2017; Little et al., 2007; Spisak, Blaker, Lefevre, Moore, & Krebbers, 2014; Spisak, Dekker, Krüger, & van Vugt, 2012; Spisak, Homan, Grabo, & van Vugt, 2012; Spisak et al., 2011).

Based on these findings, we propose that the positive effect of glasses differs with the characteristics needed in the current political situation. Although glasses are associated with intelligence, they are also associated with reduced perceptions of dominance (Elman, 1977; Leder et al., 2011; Terry & Krantz, 1993). Therefore, we expect that glasses have a positive effect in political situations that demand intelligence, but do not have this effect if the political situation makes dominance a more valuable trait. We test this hypothesis in Study 3.

Hypothesis 3 (H3): The positive effect of glasses on electoral success is stronger when the political situation calls for intelligent leaders than when it calls for dominant leaders.

Strategic Use of Glasses

Next, we test whether the positive effect of glasses disappears when voters are aware that politicians deliberately use glasses to win votes. Trustworthiness and honesty are important predictors of electoral success (Hetherington, 1998; Little, Roberts, Jones, & DeBruine, 2012; McCurley & Mondak, 1995; Shephard & Johns, 2008; Wojciszke & Klusek, 1996). Using glasses merely to increase electoral success may be seen as deceptive and thus activate the common stereotype that politicians are dishonest (Blair, 2002; Koch, Imhoff, Dotsch, Unkelbach, & Alves, 2016). In addition, people tend to control for stereotypes if they are aware of their influence (Devine, 1989; Sczesny & Kühnen, 2004; Wegner & Bargh, 1998). If voters realize that a politician only wears glasses to look more intelligent, then they may avoid relying on that positive stereotype (Kunda & Sinclair, 1999). In sum, voters' awareness of the strategic use of glasses may block the positive effect on electoral success. We test this idea in Study 4.

Hypothesis 4 (H4): Glasses fail to increase electoral success if voters are aware of their strategic use.

Cross-Cultural Differences

Next, we examine the potential moderating effect of cross-cultural differences. Until now, the role of facial appearance in electoral success has been mostly studied with Western populations (Ballew & Todorov, 2007; Little et al., 2007; Poutvaara, Jordahl, & Berggren, 2009; Sussman et al.,

2013; Todorov et al., 2005). No research has tested whether the effect of glasses (e.g., on voting) generalizes across cultures. One reason why the effect of glasses may differ more across cultures than the general effect of facial appearance is that the cultural stereotypes of glasses may differ much more between cultures. Although in rich Western countries a majority of adults wears glasses, this is much less common in less wealthy countries where people only wear glasses for very serious vision problems. For example, while over 60% of US Americans wear glasses, only 7% of Indians do so (Center for Disease Control and Prevention, 2013; Karnani, Garrette, Kassalow, & Lee, 2010). Consequently, in India and other less wealthy countries, wearing glasses may be less strongly associated with intelligence but more with vision deficiency and weakness (Elman, 1977; Swinford, 2013; Terry & Krantz, 1993). Therefore, if an Indian politician wears glasses, this may more easily be perceived as a sign of weakness, rather than of competence, and thus not produce the same positive effects as in the West. We test this in Study 5.

Hypothesis 5 (H5): The positive effect of glasses on electoral success is limited to Western countries like the US and does not show in less wealthy countries like India.

Mediation by Intelligence and Warmth

Finally, we aim to demonstrate the process underlying the relation between glasses and electoral success. We predict that the positive effect of glasses is driven by glasses making candidates look more intelligent (Leder et al., 2011; Terry & Krantz, 1993), and perceived intelligence increasing electoral success (e.g., Little et al., 2012; Shephard & Johns, 2008; Todorov et al., 2005). We test this prediction in Study 6 and Study 7, while also focusing on the hypothesized difference between Americans and Indians in the cultural association of glasses with intelligence in Study 6 (Hypothesis 5).

Hypothesis 6 (H6): Americans associate glasses with intelligence, whereas Indians do not. Therefore, wearing glasses increases electoral success because it increases perceived intelligence in the US, but in India, it does not.

Another possible mediator could be warmth. Some research finds that glasses increase facets of warmth such as honesty and helpfulness (Hellström & Tekle, 1994; Thornton, 1943, 1944), while other research finds that it reduces likeability (Jäckle & Metz, 2015; Leder et al., 2011). In turn, warmth is – next to intelligence – an important predictor for electoral success (Poutvaara et al., 2009; Rosenberg, Kahn, Tran, & Le, 1991; Shephard & Johns, 2008). If glasses lead to

increased warmth, warmth could also explain why glasses lead to higher electoral success. We test this prediction in Study 7.

Hypothesis 7 (H7): Glasses lead to increased warmth, so warmth explains electoral success for politicians with glasses additionally to intelligence.

Overview of Studies

In summary, eight studies test how wearing glasses affects electoral success. Study 1 tests our main prediction that politicians who wear glasses have a higher electoral success. Studies 2a and 2b look at the influence of political orientation of participants and politicians. Study 3 examines the impact of political demands. Study 4 examines the effect of voters' awareness of politicians' strategic uses of glasses. Study 5 explores cross-cultural moderation by testing whether the effect generalizes to India. Study 6 explains the underlying process by testing whether stereotypical associations between glasses and intelligence mediate the effect, and whether this is an explanation for the cross-cultural differences tested in Study 5. Finally, Study 7 tests warmth as another potential mechanism for the glasses effect.

Methodological Notes

Across these studies, participants were recruited on Amazon's Mechanical Turk (MTurk). Participants on MTurk are attentive to instructions and more representative of the US population than many convenience samples. Research using MTurk leads to similar results as nationally representative samples (Berinsky, Huber, & Lenz, 2012; Hauser & Schwarz, 2015; Mullinix, Leeper, Druckman, & Freese, 2016). To ensure high data quality, only MTurkers with an approval rate of over 90% participated, and only in one of these studies. Participants were compensated according to the length of each study. All studies were conducted using SoSci Survey (Leiner, 2015).

First, we developed one stimulus set for our studies with American samples and one for our studies with Indian samples. Each stimulus set consisted of eight original pictures of politicians and eight pictures photoshopped with glasses (see Electronic Supplementary Material, ESM 1, for more information on stimulus development). Few participants overall were suspicious of the glasses, and suspicion did not change results (see ESM 1). Throughout these studies,

we report how we set sample size. In some of these studies, we accidentally collected more participants than planned, as occurs often in online research. All participants who finished a study were included in the analyses. We did not exclude any data, and we report all measures and manipulations. We report all studies conducted as part of this research project.¹ Data and analyses can be found at <https://osf.io/8867z>.

Study 1: Glasses Increase Electoral Success

Study 1 tests whether wearing glasses increases politicians' electoral success (Hypothesis 1).

Method

Participants

Two hundred three American MTurkers (75 women, 128 men, $M_{\text{age}} = 36$ years) participated. Sample size was set a priori to 200, which gave us a power of .80 (Cohen, 1992) to detect a small effect of $d = 0.20$ (Faul, Erdfelder, Lang, & Buchner, 2007).

Procedure and Materials

Participants were shown 16 pairs of same-sex politicians in a random order in a mock election paradigm (e.g., Lambers et al., 2009; Todorov et al., 2005), and indicated who they would vote for. Half of the pairs were critical trials, consisting of one politician with and one politician without glasses (see ESM 1 for stimulus development). To avoid that participants would guess the aim of the study, the remaining half of the pairs were filler trials, consisting only of original, unaltered pictures of politicians. These pictures were also politicians from the pretest, but those that were not chosen for our target stimuli. Participants always only saw each politician once, either with or without glasses. Politicians were identified simply with the letter A or B.

Measures

To measure electoral success, participants indicated which politician they would vote for, on a 7-point scale from 1 = *definitely politician A* to 7 = *definitely politician B*. We also measured demographics, including whether participants

¹ Two additional studies are omitted from the paper given their conceptual and theoretical overlap with the reported studies. Study 1b ($N = 200$) replicated the positive effect of glasses of Study 1, $t(199) = 5.16$, $p < .001$, but was otherwise uninteresting because it failed to show a hypothesized moderation by dispositional differences. Study 4b ($N = 202$) only administered the wear glasses condition of Study 4. Consistent with the Study 4, participants indicated that wearing glasses would improve election success, $t(201) = 8.03$, $p < .001$. Given that Study 4 provides a more complete picture, we omit Study 4b. Both studies are in ESM 1.

wore glasses themselves, exploratory variables (see ESM 1), and participants' suspicion of glasses (see ESM 1).

Results

Data and analyses for all studies can be found at <https://osf.io/8867z>. We recoded all ratings so that higher values indicated a preference for politicians with glasses and lower values a preference for politicians without. In line with Hypothesis 1, a one-sample *t*-test indicated that participants preferred politicians with glasses over those without, $t(202) = 4.16, p < .001, d = 0.29, M = 4.20, SD = 0.69, CI_{95} [0.15, 0.43]$. For additional analyses with participants' or politicians' characteristics, see ESM 1.

Discussion

Study 1 provided first evidence for Hypothesis 1 that wearing glasses improves electoral success. In a mock election paradigm, participants were more likely to vote for politicians when these politicians wore glasses than when they did not. Because we used exactly the same pictures of each politician, only changing whether they wore glasses or not (and counterbalanced between participants), we can rule out that this effect was due to any confounds with the stimuli.

Studies 2a and 2b: Political Orientation

Study 2a tests whether the effect of wearing glasses depends on the political orientation of participants or of the politicians wearing glasses. The preregistration for this study can be found at <https://aspredicted.org/5e44q.pdf>. Study 2b tests whether glasses have a positive effect for partisans in cross-party elections. The preregistration can be found at <https://aspredicted.org/xg4cz.pdf>.

Method

Participants and Design

In Study 2a, 200 American MTurkers (80 women, 118 men, 2 other, $M_{age} = 34$) participated. The design was a 2 (political orientation of politician: Democrat vs. Republican) within-subjects design. As in Study 1, sample size was set to 200 to obtain 80% power for a small effect of $d = 0.20$. In Study 2b, 351 American MTurkers (159 women, 192 men, $M_{age} = 38$) participated. The design was a 2 (political orientation of politician with glasses: own vs. other

party) within-subjects design. Based on a small effect size of $d = 0.20$ and 90% power, indicating a sample size of 265, and to account for some analyses only with partisans, we set sample size to 350.

Procedure and Materials

We used the same procedure as in Study 1. In Study 2a, participants were told that the first eight pairs of politicians were Democrats and the second eight pairs were Republicans, or vice versa. Additionally, we asked participants two questions about glasses and fashion (see ESM 1). In Study 2b, politicians in the filler trials were always from the same party, and politicians in the critical trials were always a Republican running against a Democrat. Additionally, politicians had random names and appropriate ages (see ESM 1).

Results

Study 2a

As expected, participants were more likely to vote for the politician with glasses than for the politician without, $t(199) = 4.15, p < .001, d = 0.30, M = 4.20, SD = 0.67, CI_{95} [0.15, 0.43]$. In line with Hypothesis 2a, the more the participants identified as liberal, the more they showed the glasses effect, $r(198) = -.208, p = .003, CI_{95} [0.071, 0.337]$. However, contrary to Hypothesis 2a, this was the case regardless of whether the politician was described as Democrat or Republican, $t(199) = 0.09, p = .929, d = 0.01, M_{diff} = 0.01, CI_{95} [-0.13, 0.15]$. Then, we tested whether participants showed a stronger glasses effect for their own party. In this analysis, we only included participants who were identified as either Democrats or Republican. Again, liberals showed a stronger glasses effect than conservatives, $F(1, 151) = 7.52, p = .007, \eta^2 = .05, CI_{90} [.01, .11]$, while the effect did not differ by politicians' political orientation, $F(1, 151) = 0.07, p = .790, \eta^2 < .01, CI_{90} [0.00, 0.02]$, or the interaction between the two, $F(1, 151) = 0.29, p = .594, \eta^2 < .01, CI_{90} [0.00, 0.03]$. For effects of fashion, see ESM 1.

Study 2b

With regard to Hypothesis 2b, participants were more likely to vote for the politician with glasses even in cross-party elections, $t(350) = 3.58, p < .001, d = 0.19, M = 4.11, SD = 0.60, CI_{95} [0.85, 0.30]$. Only including partisans, participants strongly voted for politicians from their own party, $t(254) = 12.65, p < .001, d = 0.79, M = 4.98, SD = 1.24, CI_{95} [0.65, 0.93]$. However, they were less likely to do so when the politician from the other party was wearing glasses ($M = 4.88, SD = 1.49$) than when the politician from

their own party was wearing glasses ($M = 5.09$, $SD = 1.24$), $t(254) = 2.83$, $p = .005$, $d = 0.18$, $M = 0.21$, $SD = 1.19$, $CI_{95} [0.05, 0.31]$.

Discussion

Studies 2a and 2b replicate the basic finding of glasses leading to better electoral success. As expected in Hypothesis 2a, this effect is stronger the more liberal participants are. Interestingly, the same is not true for the politicians' political orientation: No matter whether a politician was presented as Republican or Democrat, participants preferred politicians with glasses. Additionally, glasses increased electoral success for politicians with the same or a different political orientation, and they also increased electoral success in cross-party elections. Glasses therefore seem to have a positive effect across the political spectrum of politicians.

Study 3: Political Demands

Study 3 tests whether the effect of wearing glasses depends on situational political demands, specifically on whether intelligence or dominance is desirable.

Method

Participants and Design

Two hundred American MTurkers (85 women, 115 men, $M_{age} = 32$) participated. Participants were randomly assigned to one of two between-participant conditions (peace vs. war). Expecting the same effect as in Study 1, we calculated sample size a priori with G*Power (Faul et al., 2007) to obtain a power of .80. We rounded the recommended sample size (192) up to a target $N = 200$.

Procedure and Material

We used the same procedure as in Study 1, except for the addition of the political demands manipulation. Participants first learned about the most important problem facing the country, either complex legislative problems (peace condition), or an attack from a neighboring country (war condition). In the former condition, the country needed a president who could deliberate on the problem, in the latter, a president who could act fast.

Measures

In addition to the measures from Study 1, participants indicated what the most important problem of the country was as an attention check (see ESM 1 for details). They also

stated what they searched for in a politician and filled out exploratory variables (see ESM 1).

Results

Eighty-seven percent of participants correctly identified the problem in the country before the vote. Participants in the peace condition also searched more for a politician who could deliberate well, rather than act fast, compared to participants in the war condition (see ESM 1 for analyses).

In support of Hypothesis 3, we found that participants' electoral decisions differed by experimental condition, $t(198) = 2.10$, $p = .037$, $d = 0.30$, $CI_{95} [0.02, 0.58]$. In the peace condition ($n = 96$), participants preferred the politicians with glasses over politicians without glasses, $t(95) = 2.49$, $p = .015$, $d = 0.25$, $M = 4.20$, $SD = 0.78$, $CI_{95} [0.05, 0.46]$. In the war condition ($n = 104$), participants had an equal preference for leaders with and without glasses, $t(103) = -0.43$, $p = .670$, $d = 0.04$, $M = 3.97$, $SD = 0.78$, $CI_{95} [-0.23, 0.15]$.

Discussion

In the peace condition, Study 3 replicated the finding from Studies 1 and 2 that glasses increase electoral success. As predicted by Hypothesis 3, Study 3 also showed that this positive effect only occurs in the political situation that asks for intelligence in a leader, but not if the country is threatened by an armed conflict (stereotypically requiring dominance instead). Nonetheless, it is important to note that even if participants believed the country to be threatened by war, wearing glasses did not produce a negative effect.

Study 4: Strategic Use

Study 4 investigated whether the effect of glasses is undermined if participants are aware that glasses are used deliberately to improve electoral results (Hypothesis 4).

Method

Participants and Design

Two hundred one American MTurkers (77 women, 124 men, $M_{age} = 34$) participated. Participants were randomly assigned to one of two conditions (wear glasses vs. remove glasses). Based on the calculations in Study 3, sample size was set to 200 a priori.

Material and Procedure

In the wear glasses condition, participants were shown one random unaltered picture of a politician (from the American stimulus set). They were told that the politician was running for office but was not doing so well. Therefore, one advisor proposed that the politician should wear glasses. Then, participants were also shown the altered picture of the same politician. In the remove glasses condition, participants instead saw one of the photoshopped pictures of the politician with glasses. They were told the same story, but the advisor instead proposed to remove the glasses. Then, they also saw the original picture of the politician without glasses.

Measures

To measure overall success of the candidate, participants indicated how likely they and how likely others would vote for the candidate, both between 1 = *less likely* and 7 = *more likely*, and how wearing/removing glasses would change the politician's election results, between 1 = *definitely hurt* and 7 = *definitely help*. These three questions were averaged (wear glasses condition: Cronbach's $\alpha = .90$, remove glasses condition: Cronbach's $\alpha = .79$). For exploratory purposes, participants also indicated on two separate items whether glasses would help or hurt if the politician was running for the Republican Party or if the politician was running for the Democratic Party, both between 1 = *definitely hurt* and 7 = *definitely help*. We did not ask for suspicion in this study because we openly showed both the pictures with and without glasses.

Results

We recoded votes so that in both conditions, higher numbers indicated that participants preferred the politician to wear glasses (either keep wearing their glasses or start wearing them). Reactions to the politician differed by advice given, $t(199) = 2.81$, $p = .005$, $d = 0.40$, $CI_{95} [0.12, 0.68]$. Contrary to Hypothesis 4, for the wear glasses condition ($n = 101$), participants preferred the politicians to wear glasses, $t(100) = 3.74$, $p < .001$, $d = 0.37$, $M = 4.34$, $SD = 0.91$, $CI_{95} [0.17, 0.57]$. For the remove glasses condition ($n = 100$), participants did not have a preference for the politicians to either keep or remove the glasses, $t(99) = 0.32$, $p = .753$, $d = 0.03$, $M = 3.97$, $SD = 0.95$, $CI_{95} [-0.16, 0.23]$. This finding suggests that participants believe that adopting glasses can help a politician, while removing them does not, because they thought both they themselves and others would be more likely to vote for a politician with glasses. For additional analyses with participants' demographics and politicians' political orientation, see ESM 1.

Discussion

Study 4 failed to find support for Hypothesis 4. We again found a positive impact of glasses on electoral success, even when we directly told participants of the strategic use of glasses for the purpose of winning an election. Even though participants were aware of the impression management, they indicated that they and others would be more likely to vote for the politician with glasses. In contrast to that, removing glasses for strategic reasons did not lead to a positive effect, ruling out that participants were merely going along with any strategy an advisor proposed. All in all, these results show that voters' awareness that a politician wears glasses for strategic impression management goals does not seem to lead to any negative effects.

Study 5: Glasses in India

Our first four studies focused on American samples. To test for cultural differences, Study 5 tests whether the effect generalizes to a non-Western setting. As stated in Hypothesis 5, we expected the effect to be limited to the US and not shown in India.

Method

Participants

Two hundred three Indian MTurkers (74 women, 129 men, $M_{age} = 33$ years) participated. Sample size was set a priori at 200 to obtain a power of .80 (Cohen, 1992) to detect a small effect of $d = 0.20$ (Faul et al., 2007).

Procedure and Material

The procedure closely followed that of Study 1. Participants were shown eight pairs of same-sex Indian politicians of similar baseline popularity, in random order. The four critical trials featured a politician with and one without glasses. Then, participants stated for whom they would vote, on a 7-point scale from 1 = *definitely politician A* to 7 = *definitely politician B*. After that, participants answered demographic questions, whether they wore glasses themselves and whether they found anything suspicious.

Results

Participants' responses again were recoded so that higher values indicated a preference for politicians with glasses. In line with Hypothesis 5 and consistent with the idea that wearing glasses may even be seen as a sign of weakness, Indians marginally preferred politicians *without* glasses,

$t(202) = -1.94, p = .054, d = 0.14, M = 3.84, SD = 1.20, CI_{95} [-0.27, 0.002]$. See ESM 1 for analyses with participants' demographics.

Discussion

Consistent with our reasoning for Hypothesis 5, the positive effect of glasses did not replicate in India. In fact, if anything, glasses led to marginally lower electoral success. As we described, glasses are rare in India (only 7% wear them) and are typically worn out of dire medical needs. Therefore, Indians may not associate glasses with intelligence as much as Americans do.

Another possibility may be that Indians value different characteristics in politicians. For example, Rule et al. (2010) showed that dominance predicts electoral success in the US and warmth does not, but the opposite is true for Japan. Therefore, we directly compared ratings of intelligence for politicians with glasses and their predictive power for electoral success in India and the US in Study 6.

Study 6: Intelligence as Mediator

Study 6 replicated the finding of Study 5 and directly compared an Indian sample and an American sample in one study. It also tested whether the unequal glasses effect in India and America is due to different associations of glasses with intelligence (Hypothesis 6). As an alternative explanation, it examined whether people in the US and India value intelligence differently.

Method

Participants

Four hundred seven participants were recruited on MTurk. We targeted our sample so that we obtained an equal number of Indians ($N_{\text{India}} = 206$; 76 women, 130 men; $M_{\text{age}} = 32$ years) and Americans ($N_{\text{America}} = 201$; 80 women, 120 men, 1 other; $M_{\text{age}} = 33$ years). We set sample size a priori at 200 per sample so that again we would be able to detect a small effect of $d = .20$ in each sample.

Procedure and Material

Participants were shown a pair of same-sex politicians of similar baseline popularity from the respective stimulus set. Participants indicated their associations of intelligence for the two candidates, judging who was more intelligent, more rational, and more intellectual (Terry & Krantz,

1993), between 1 = *definitely politician A* and 7 = *definitely politician B*, Cronbach's $\alpha = .77$, and rated exploratory variables (see ESM 1). As in previous studies, all ratings were recoded so that higher ratings indicated that the politician with glasses was considered to be more intelligent. Next, we used the same measure of electoral success as in previous studies. After that, participants provided demographics. Given that measures of suspicion did not moderate any of the previous results, we did not measure suspicion.

Results

We first discuss the influence of glasses on electoral success and intelligence in both India and the US. Then, we test whether the difference in electoral success is mediated by differences in intelligence ratings.

Election Results

Supporting Hypothesis 5, Indians and Americans differed in their preference for politicians with glasses, $t(358) = 2.43,^2 p = .016, d = 0.24, CI_{95} [0.05, 0.44]$. Replicating the results of Studies 1–4, Americans ($n = 201$) preferred politicians with glasses over those without glasses, $t(200) = 3.69, p < .001, d = 0.26, M = 4.41, SD = 1.57, CI_{95} [0.12, 0.40]$. Consistent with Hypothesis 5, Indians ($n = 206$) again did not share this preference, $t(205) = -0.44, p = .657, d = 0.03, M = 3.93, SD = 2.35, CI_{95} [-0.17, 0.11]$, although we did not find the marginally significant reversal we found in Study 5.

Intelligence

In support of Hypothesis 6, Indians and Americans differed in their associations between glasses and intelligence, $t(388) = 4.12$ (see Footnote 2), $p < .001, d = .41, CI_{95} [0.21, 0.60]$. While Americans rated politicians with glasses as more intelligent than politicians without, $t(200) = 6.95, p < .001, d = 0.49, M = 4.59, SD = 1.20, CI_{95} [0.34, 0.64]$, Indians did not, $t(205) = 0.28, p = .784, d = 0.02, M = 4.03, SD = 1.52, CI_{95} [-0.12, 0.16]$.

Mediation

To test whether intelligence ratings explained the difference in electoral success between countries (Hypothesis 6), we tested for mediation with the Process macro (Hayes, 2013, 10,000 bootstrapping resamples). The full mediation model can be found in Figure 2. Mirroring the previous analyses, participants' country predicted electoral success for politicians with glasses compared to politicians without, $b = -0.481, SE = 0.199, p = .016, CI_{95} [-0.871, -0.090]$, showing that Americans were more likely to vote for politicians with glasses than Indians. Similarly, participants'

² Corrected for variance heterogeneity.

Figure 2. Mediation model for Study 6. Country of participants predicts intelligence ratings of politicians with glasses, which predicts electing politicians with glasses. * $p < .05$; *** $p < .001$.

country predicted intelligence ratings of politicians with glasses compared to politicians without, $b = -0.558$, $SE = 0.136$, $p < .001$, $CI_{95} [-0.825, -0.291]$, as Americans found politicians with glasses compared to those without more intelligent than did Indians. When both country and intelligence ratings were used to predict electoral success, intelligence ratings predicted electoral success, $b = 0.957$, $SE = 0.055$, $p < .001$, $CI_{95} [0.849, 1.065]$, but country did not, $b = 0.053$, $SE = 0.154$, $p = .730$, $CI_{95} [-0.249, 0.355]$. Therefore, the data is in line with Hypothesis 6: The different electoral preferences of Indians and US Americans for politicians with glasses can be explained through their different intelligence ratings for politicians with glasses, indirect effect $ab = -0.534$, $SE = 0.134$, $CI_{95} [-0.804, -0.272]$. For additional analyses on how Indians and Americans value intelligence in a candidate, see ESM 1.

Discussion

The current results replicate and integrate the findings of Studies 1–5, by showing that although wearing glasses produces a positive effect on political candidates' electoral success in the US, this is not the case for political candidates in India. Furthermore, these results show that this is due to a difference in the stereotype of glasses. Where Americans strongly associate glasses with intelligence, Indians do not.

Study 7 – Intelligence and Warmth as Mediators

Study 7 was used to replicate the effect that glasses make politicians look more intelligent in the US and therefore lead to higher electoral success. More importantly, it tested whether glasses make politicians look warmer in the US as another explaining mechanism.

Method

The preregistration for this study can be found at <https://aspredicted.org/t6d5v.pdf>.

Participants

Two hundred and one American MTurkers participated (84 women, 116 men, $M_{age} = 36$). Sample size was set to 200 to obtain 80% power for a small effect of $d = .20$.

Procedure and Materials

Procedure and materials were very similar to Study 6 for the American MTurkers. The only difference was that instead of dominance, we measured warmth. To measure warmth, participants answered which of the two politicians was more compassionate, friendly, and honest (Terry & Krantz, 1993), on a 7-point Likert scale between 1 = *definitely politician A* and 7 = *definitely politician B*, Cronbach's $\alpha = .80$. Again, we did not measure suspicion due to absent effects of suspicion in the previous studies.

Results

Replicating previous studies, participants marginally preferred politicians with glasses, $t(200) = 1.93$, $p = .055$, $d = 0.14$, $M = 4.22$, $SD = 1.61$, $CI_{95} [-0.003, 0.27]$, and perceived them as more intelligent, $t(200) = 6.25$, $p < .001$, $d = 0.44$, $M = 4.52$, $SD = 1.18$, $CI_{95} [0.30, 0.59]$. However, they did not perceive politicians with glasses to be warmer than politicians without, $t(200) = -0.06$, $p = .956$, $d < 0.01$, $M = 4.00$, $SD = 1.28$, $CI_{95} [-0.14, 0.13]$. Even though warmth did not differ for politicians with and without glasses, both warmth of a politician, $b = 0.558$, $SE = 0.064$, $p < .001$, $CI_{95} [0.432, 0.684]$, and intelligence of a politician, $b = 0.621$, $SE = 0.070$, $p < .001$, $CI_{95} [0.483, 0.759]$, predicted electoral success.

Discussion

Study 7 replicates the effect of glasses on perceived intelligence. Contrary to Hypothesis 7, we find no effect of glasses on perceived warmth. This is in line with the mixed effects found by previous research, finding glasses to be related to both increased and decreased warmth (Hellström & Tekle, 1994; Jäckle & Metz, 2015; Leder et al., 2011; Thornton, 1943, 1944). While both intelligence and warmth predict electoral success quite well, the missing influence of glasses on perceived warmth indicates that intelligence is responsible for the electoral success of politicians with glasses, while warmth is not.

Meta-Analysis

To precisely estimate the glasses effect, we conducted a meta-analysis for our US and Indian samples (see ESM 1 for inclusion of studies). Using R (R Core Team, 2017),

we computed effect sizes and standard errors with BootES (Kirby & Gerlanc, 2013) and then computed a random-effects meta-analysis with metafor (Viechtbauer, 2010). Consistent with the studies reported above, for the US sample, we found a clear effect of glasses, $d = 0.25$, $SE = 0.03$, $p < .001$, $CI_{95} [0.19, 0.31]$. In contrast, for the Indian sample, there was no positive effect of glasses, $d = -0.08$, $SE = 0.05$, $p = .115$, $CI_{95} [-0.19, 0.02]$. Most importantly, country moderated the glasses effect, $b = -0.336$, $SE = 0.064$, $p < .001$, $CI_{95} [-0.462, -0.211]$. Therefore, glasses increased electoral success in the US, but not in India.

General Discussion

While politicians often believe that glasses can hurt their electoral success, we show in eight experiments that glasses actually increase electoral success. In Study 1 (basic paradigm), participants in mock elections voted for politicians without glasses or with photoshopped glasses. We found that participants clearly preferred candidates with glasses. The positive effect of glasses was particularly strong for liberal participants (Study 2a) – but also occurred in cross-party elections (Study 2b) – and when intelligent politicians were needed (Study 3). Furthermore, against our prediction, the positive effect of glasses held even for the strategic use of glasses (Study 4). Cross-culturally, the positive effect of glasses observed in the US did not extend to India, because people in India do not share Americans' stereotype to associate glasses with intelligence (Studies 5 and 6). Finally, while glasses seem to increase perceptions of intelligence, which lead to higher electoral success, perceptions of warmth remain unchanged by glasses (Study 7).

The fact that people preferred candidates with glasses even when these glasses were worn strategically (Study 4) is surprising, given that people usually control for their stereotypes when they are aware of them. A strategic use of glasses should rather activate the stereotype of a dishonest politician (Devine, 1989; Kunda & Sinclair, 1999). Possibly, voters know that in the US, presidential candidates spend millions of dollars and employ hundreds of staff members to find the best way to improve their self-presentation (Gilens, 2012; Morton & Cameron, 1992; Stratmann, 2005). In that light, a small amount spent on glasses seems trivial and may not lead to such strong reactions. Future research may seek to test this further.

Limitations and Strengths

One limitation of our work is that participants were not offered any substantive information about the candidates

and did not have any reason to assume that their decision would influence their lives. In real elections, voters have more access to substantive information (political programs) and may be more motivated to process these. By only offering peripheral cues, our design may have favored peripheral over central processing (Chaiken, 1980; Petty & Cacioppo, 1986; Thompson, Roman, Moskowitz, Chaiken, & Bargh, 1994) and increased the effect. At the same time, considerable political scientific literature argues that many real-life political decisions, including elections, are characterized by strong peripheral processing (Lupia, 1994; Popkin, 1991). Furthermore, peripheral cues may have an even stronger impact when people have other information to attribute their decision to (Yzerbyt, Schadron, Leyens, & Rocher, 1994). Finally, while cues like party affiliation or policy beliefs likely play a stronger role than glasses, glasses are – in contrast to these other factors – easily changeable.

Another limitation concerns our participants and stimuli. While MTurkers are more representative of the US population than convenience samples, they are still somewhat more liberal than a representative sample (Berinsky et al., 2012). Previous research has shown that conservatives value facial dominance more than liberals (Laustsen & Petersen, 2015, 2016). We also found that liberal participants showed a stronger effect of glasses in Study 1 (see ESM 1) and tested this in Study 2a. Therefore, it is possible that very conservative voters would not show a glasses effect, as they value dominance more in their decision.

Similar arguments can be made for the used glasses and stimuli. We chose contemporary glasses, which may be better in conveying intelligence than old-fashioned glasses, which perhaps only convey reduced dominance and decreased health. Additionally, some glasses might convey warmth while others do not, which would explain inconsistent findings in previous research on the relationship of glasses and warmth. In this case, warmth might additionally mediate the effect of glasses on electoral success, leading to a stronger effect. Pending future research, we assume that most glasses that are relatively neutral in color and shape are associated with intelligence, so that the effect of glasses should be positive. Similarly, we chose politicians that already looked likeable and trustworthy. For sinister-looking politicians or politicians with known negative characteristics, glasses might hurt, as competence is only seen as positive if it is coupled with morality (Landy, Piazza, & Goodwin, 2016). It is likely that people are more afraid of competent evil than incompetent evil.

Theoretical Implications

Our findings can only partly be explained by an evolutionary psychological view on leadership selection. From a

strong evolutionary standpoint, health and attractiveness should be preferred in leaders in all situations (Spisak et al., 2014), and they should be signaled by unchangeable biological factors such as a person's height or their face's width-to-height ratio (Poutvaara, 2014; Spisak et al., 2011; van Vugt et al., 2008). If glasses signal anything, it should be weakness and bad health, leading to less leadership potential regardless of culture. In contrast to that, our results indicate that glasses positively influence the perception of leaders in some countries, depending on the associated stereotypes. This is in line with a moderate perspective that assumes that people use facial information to detect desirable traits depending on the situation (Oosterhof & Todorov, 2008; Spisak et al., 2014), as leadership emerged as an adaptive strategy to solve important problems faced by the group (Spisak et al., 2011; van Vugt, 2006; van Vugt & Ronay, 2013). Accordingly, we find that wearing glasses increases electoral success when situational demands lead people to look for intelligent leaders, and only in countries where glasses are considered to be a reliable signal for intelligence.

Another important theoretical implication concerns the cross-cultural differences we tested, as previous cross-cultural research on facial appearance shows mixed results. On the one hand, Americans' and Indians' ratings of politicians' competence predicted Mexican and Brazilian election outcomes (Lawson, Lenz, Baker, & Myers, 2010). On the other hand, Americans' and Japanese's ratings of dominance only predicted election results in the US, while their ratings of warmth only predicted election results in Japan. Additionally, explicit ratings of electoral success were only predictive within country (Rule et al., 2010). Even though both links in our mediation model are well established, we show that our findings only apply to the US (and, tentatively, to Western cultures where glasses are common) and find that the effects of glasses on elections do not generalize to India (or, tentatively, to Eastern cultures, if glasses are less common). Furthermore, this difference seems to be due to factors that are quite susceptible to cultural influences (stereotypes of glasses, see, e.g., Cuddy et al., 2009, for cultural differences in stereotype content), while the basic mechanism of electing competent-looking politicians does not seem to differ.

Practical Implications

We believe that our findings also have important practical implications. Politicians with competent faces seem to enjoy better electoral success than their less competent-looking colleagues. Although that finding has important theoretical implications, the applied, practical implications for politicians are limited. First, it is unclear what facial features actually contribute to this effect, as most studies

looked at how general impressions predict votes (Atkinson, Enos, & Hill, 2009; Ballew & Todorov, 2007; Chiao et al., 2008; Poutvaara et al., 2009; Shephard & Johns, 2008; Todorov et al., 2005). More importantly, in those few cases when specific features were examined, these features were mostly unchangeable, such as the shape of politicians' faces or eyes (Rosenberg et al., 1991; Zebrowitz & Montepare, 2005). In contrast, we focused on an easily changeable feature – glasses – that politicians can change to their advantage by simply making a purchase!

Our results suggest that wearing glasses does not harm politicians as many appear to think, but instead seems to offer politicians an advantage over their competitors (at least in Western cultures) without any real drawbacks. Even though we found that the positive effect of glasses was moderated by a number of factors, it did not reverse in any of these cases. For example, Study 2b showed that glasses had the same positive effect in cross-party elections. Although Study 3 showed that glasses do not have a positive effect when a country is threatened by conflict (suggesting the need for dominance over intelligence), glasses also did not have a negative effect even then. Additionally, Study 4 showed that voters' awareness of self-presentation intentions behind wearing glasses does not undermine the positive effects of wearing glasses.

Although the glasses manipulation produced small effects across studies, such small effects could nonetheless make a difference, in particular in a plurality or first-past-the-post system, such as in the US, Canada, or Great Britain. In these elections, political candidates gain little beyond getting the smallest majority possible (50.1% of the vote), and thus, such elections are often decided by relatively narrow margins (Downs, 1957). A small effect could make a difference between winning and losing a battleground state and thus provide a candidate with an edge over their opponent. However, we note that election success depends not only on the decisions of the voters, but also on the decision to vote at all. As we have not tested the effect of glasses on voter turnout, we cannot say whether glasses would also help to mobilize voters to vote.

Conclusion

Facial features are consistently found to be important predictors of electoral success (Ballew & Todorov, 2007; Todorov et al., 2005). Yet existing research has limited itself to mostly testing fixed, unchangeable features of faces. We focus on changeable features and show that wearing glasses reliably boosts electoral success. Glasses offer an easy, effective, and robust way for politicians to change their facial features and increase the probability of electoral success in the West (as long as competence is important). In fact, politicians may even use glasses

strategically, as voters are still more likely to vote for them when this strategic use is known. The positive effect of glasses may not generalize beyond Western settings such as India though. Overall, our research suggests that not only unchangeable, but also alterable facial features play an important role in impression formation and electoral success.

Open Data/Materials

Data and analyses can be found at <https://osf.io/8867z>.

Electronic Supplementary Materials

The electronic supplementary material is available with the online version of the article at <https://doi.org/10.1027/1864-9335/a000359>

ESM 1. Analyses (.pdf)

Stimulus development, Studies 1b and 4b, and additional analyses.

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Alexandra Fleischmann, Joris Lammers, Janka I. Stoker, and Harry Garretsen designed the study concept. A. Fleischmann and J. Lammers designed the studies, and A. Fleischmann collected and analyzed the data. A. Fleischmann drafted the manuscript; all authors edited the manuscript and approved of the final version.

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