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SOCIAL PSYCHOLOGY | RESEARCH ARTICLE

The influence of political candidates' facial appearance on older and younger adults' voting choices and actual electoral success

Robert G. Franklin Jr.[1]* and Leslie A. Zebrowitz[2]

Abstract: Younger adults (YA) judgments of political candidates' competence from facial appearance accurately predict electoral success. Whether this is true for older adults (OA) has not been investigated despite the fact that OA are more likely to vote than YA and may respond differently to particular facial qualities. We examined whether OA and YA ratings of competence, trustworthiness, attractiveness, and babyfaceness of opposing candidates in US Senate elections independently predicted their own vote choices and actual election outcomes. OA and YA ratings of attractiveness, competence, and trustworthiness positively predicted their choices, but the effect of competence was weaker for OA. Babyfaceness negatively predicted OA, but not YA, choices. OA and YA competence ratings equally predicted the actual election winners, while OA, but not YA, attractiveness ratings did so. Trustworthy and babyface ratings did not predict actual winners. These findings have implications for understanding age differences in candidate preferences and the prediction of election outcomes.

Subjects: Lifespan Development; Non-verbal Communication; Political Psychology; Social Psychology

Keywords: facial appearance; competence; trustworthiness; voting behavior; babyfaceness; attractiveness

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Leslie A. Zebrowitz is the Manuel Yellen Professor of Social Relations and Professor of Psychology at Brandeis University in Waltham, MA. She has published widely on the topic of social perception, and her book, (*Reading Faces: Window to the Soul?*) provides a systematic account of the tendency to judge people by their appearance, offering an in-depth analysis of two appearance qualities that influence impressions of others (babyfaceness and attractiveness) as well as a theoretical explanation of these impressions and their social outcomes.

PUBLIC INTEREST STATEMENT

This research examines whether there are age differences in voting behavior based on facial appearance. Research shows that people tend to vote for more competent-looking individuals in elections but this research has not examined specific age groups. Since there are differences in how older adults judge personality traits from faces, we examined whether this would affect how they evaluated potential candidates based on facial appearance alone. We found that older adults still chose more competent-looking candidates, but they did not prefer them as strongly as younger adults. Older adults also preferred more mature-looking candidates whereas younger adults did not prefer more mature or more babyish-looking candidates. These findings show that aging can lead to changes in what facial characteristics voters prefer which may play an important role in understanding age differences in voting behavior.

1. Introduction

Facial appearance plays an important role in individual preferences for political candidates. One critical limitation of this research is that it has examined only younger adults (YA) despite the fact that older adults (OA) are a key segment of the electoral process in the United States. Indeed, they vote at a much higher rate than other age groups across a variety of different democracies, even despite physical limitations that may make voting difficult (Binstock, 2006; Goerres, 2007). The importance of OA voting behavior has led candidates and researchers to invest considerable resources in issues important to OA and OA voting preferences. While much is known about OA voting tendencies, it is not known whether OA will be swayed by facial characteristics in the same manner as YA. The aim of the present study was to fill this gap in the literature.

2. Influence of candidates' facial appearance on voting behavior

In order to examine age as a potential moderator for the relationship between facial appearance and voting behavior, it is necessary to review the literature examining how facial appearance can affect voting behavior. Facial appearance plays a considerable role in determining YA voting preferences. Just a single image of a candidate from a campaign flyer is enough to convey an image of the candidate's competence, integrity, and fitness for office and can sway participants' choices for hypothetical elections (Rosenberg, Bohan, McCafferty, & Harris, 1986; Rosenberg & McCafferty, 1987). Moreover, facial appearance ratings made by YA also predict actual election results. For example, naïve participants' ratings of perceived competence based on facial appearance alone predicted electoral success in US Senate and House elections, with the more competent appearing candidate winning approximately 70% of elections. Judgments of competence are predictive even when viewing faces for only 100 ms, indicating the robustness of this effect (Olivola & Todorov, 2010).

Despite evidence indicating the reliability of facial ratings in predicting election outcomes, it is less clear which appearance qualities predict electoral success. Work by Todorov and colleagues found that competence ratings predicted success in US elections (Ballew & Todorov, 2007; Hall, Goren, Chaiken, & Todorov, 2009; Todorov, Mandisodza, Goren, & Hall, 2005). Another influence on electoral outcomes is a preference for more attractive candidates (Rosenberg, Kahn, & Tran, 1991). This may be an example of the attractiveness halo effect, or the general preference to see attractive individuals as possessing other positive attributes, such as being more socially adept or competent. Such a halo effect may lead to an association between attractiveness and competence, as in one study, attractiveness mediated the link between competence and vote share (Verhulst, Lodge, & Lavine, 2010). However, Todorov et al. (2005) found that attractiveness and looking competent were independent predictors of electoral success.

Other first impressions from faces also have been found to predict electoral success. Rule et al. (2010) examined perceptions of traits conveying power (dominance and facial maturity) and warmth (likeability and trustworthiness) as predictors of electoral success for US and Japanese politicians. They found that greater perceived power of candidates by both Japanese and US participants predicted US electoral success, whereas greater perceived warmth by both Japanese and US participants predicted Japanese electoral success. Thus, although both Japanese and US participants' trait ratings reliably predicted electoral success, looking powerful (maturefaced and dominant) was an asset in US elections while looking warm (likeable and trustworthy) was an asset in Japan. Although another study of US elections found that babyfaceness was unassociated with electoral success (Olivola & Todorov, 2010), a study of Finnish parliamentary elections found that higher babyfaceness predicted electoral success for male candidates, but not female candidates (Poutvaara, Jordahl, & Berggren, 2009). Since babyfaceness has been associated with greater perceived warmth and honesty as well as lower dominance and shrewdness (see Montepare & Zebrowitz, 1998 for a review), the Finnish election results may be due to preferences for the former traits in Scandinavian culture, which, like Japan, tends to value interpersonal harmony to a greater degree than does US culture (Thomsen, Sidanius, & Fiske, 2007). This account can explain why babyfaceness only influenced the electoral success of male candidates, as women are both more babyfaced than men and also viewed

as more warm and trustworthy, thus diminishing the degree to which babyfaceness would augment the perception of those traits in women (Brownlow & Zebrowitz, 1990; Zebrowitz, 1997).

3. Aging, and facial qualities influencing voting behavior

Research indicating that cultural factors affect which traits are associated with electoral success has implications for age differences in the traits that predict voting preferences. Hess and colleagues (Hess & Auman, 2001; Hess, Osowski, & Leclerc, 2005) have found that OA tend to value morality-based traits, such as honesty, to a greater degree than do YA, whereas YA value competence-based traits, such as intelligence, when evaluating others. Extrapolating to the political domain, OA may value trustworthiness in politicians more than YA do, with the reverse for valuation of competence. If so, then OA voting preferences may be more positively influenced by the perceived trustworthiness of candidates than are YA preferences, with the reverse for the influence of perceived competence. Insofar as trustworthiness has more influence on voting preferences for OA than YA, babyfaceness, which is positively associated with trustworthiness, should also have a more positive influence for OA than YA. These results would parallel the preferences of voters from cultures that place a high value on interpersonal harmony vs. those that do not (Poutvaara et al., 2009; Rule et al., 2010). Finally, YA and OA impressions of attractiveness and competence from facial appearance may both accurately predict actual US election outcomes, as these facial qualities have reliably predicted electoral success in previous studies, and OA–YA ratings of them show significant agreement (Franklin & Zebrowitz, 2013; Zebrowitz & Franklin, 2014; Zebrowitz, Franklin, Hillman, & Boc, 2013).

4. Present study

We evaluated the degree to which OA and YA perceptions of US Senatorial candidates' competence, trustworthiness, attractiveness, and babyfaceness predicted the same participants' voting preferences. Further, we examined the degree to which these perceptions predicted actual electoral outcomes. We tested four hypotheses.

(1) Compared with YA, the voting preferences of OA would be less positively influenced by their assessments of the candidates' competence and more positively influenced by their assessments of the candidates' trustworthiness.

(2) Insofar as babyfaceness is positively associated with perceived trustworthiness, it should have a more positive influence on voting preferences of OA than YA.

(3) Both OA and YA impressions of competence would predict actual electoral outcomes.

(4) Both OA and YA impressions of attractiveness would predict their own voting preferences and actual electoral outcomes.

5. Method

5.1. Participants

Twenty-one Caucasian YA participants (8 men), aged 18–24 (M = 19.9, SD = 1.3), were recruited from a university and completed the study for course credit. Seventeen Caucasian OA participants (5 men), aged 68–90, (M = 78.7, SD = 6.7), were recruited from the local community by calling participants from a database of volunteers 65 years and older. OA participants were paid $25 for completing the study. One additional OA (male) was dropped because he accurately recognized politicians from more than half of the elections, whereas all the other participants accurately recognized at most two politicians. OA were screened using the Mini-Mental State Examination, in order to screen for dementia (Folstein, Folstein, & McHugh, 1975). All participants scored in the normal range, above 26 out of 30 (M = 28.7, SD = 1.53).

5.2. Stimuli

We selected stimuli based on elections for the 2010 and 2012 US Senate races. In order to minimize the degree to which participants recognized any candidates, we removed elections for elections in local media markets as well as elections containing candidates who were previously part of

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presidential primary elections (e.g. John McCain and Rick Perry). In addition, we removed elections where candidates were not opposed by a major party candidate. This yielded a total of 54 elections.

Faces were selected from Internet sources and we attempted to use official campaign portraits where available. If these were not available, we used images selected to be as close to campaign portraits as possible. Images were cropped to 300 × 300 pixel size (6.7 cm) and backgrounds were removed and replaced with a standard taupe background.

5.3. Dependent measures

5.3.1. Face ratings
Participants made four evaluations of candidates in each pair. First, they were asked to choose which of the two candidates was more competent, trustworthy, attractive, and babyfaced.[1] Next, they were asked to indicate how much more of that attribute they thought that candidate had on a seven-point scale, with 1 indicating a little more, 4 indicating somewhat more, and 7 indicating much more. Following these trait ratings, participants chose which candidate they would vote for in a hypothetical election.

In the analysis, these ratings were scored from −7 to +7. For each pair of politicians, one was arbitrarily assigned to the positive end of the scale and one assigned arbitrarily to the negative end of the scale. Thus, if a person rated the politician assigned to the negative end of the scale to be much more competent than the one assigned to the positive end of the scale, the rating would be scored as −7. Likewise, if a person rated the politician arbitrarily assigned to the positive end of scale as somewhat more competent than the one assigned to the negative end of the scale, the rating would be scored as +4.

5.3.2. Control measures
Measures of vision, affect, and cognitive function were administered to assess age differences. Results are consistent with previous studies of community-dwelling OA, demonstrating the representativeness of our sample (see Table 1). As none of the control measures significantly predicted the dependent measures, they will not be discussed further.

5.4. Procedure
After obtaining informed consent, participants completed a rating task where they were shown photographs of pairs of politicians and were asked to rate them on various attributes. Participants rated each pair of candidates relative to the other candidate. Participants were told that these were real politicians running for office and that if at any point in the study they recognized any of the

Table 1. Scores on control measures between OA and YA participants						
Measure	**Older adults**		**Younger adults**		**t-value**	**p-value**
	M	*SD*	*M*	*SD*		
Snellen visual acuity (denominator)	33.89	12.9	24.79	15.1	1.97	0.057
Mars letter contrast sensitivity	1.54	0.17	1.73	0.06	4.51	<0.001
Benton facial recognition test	44.4	4.42	47	4.59	1.72	0.094
Pattern comparison test	27.4	5.34	41.4	7.34	6.62	< 0.001
Shipley vocabulary test	35.2	4.25	32.9	3.05	1.82	0.079
Mind in eye test	21.38	4.62	26.31	5.39	2.78	0.009
BCST correct responses	28.41	10	36.8	4.57	3.18	0.004
Level of education*	4.88	1.53	2.37	0.5		

*Level of Education was coded for highest level attained: 1—no high school diploma, 2—high school diploma, 3—some college, 4—Bachelor's degree, 5—some graduate work, 6—Master's degree, 7—Doctorate degree.

politicians, they were to write down who that politician was. Since none of the participants retained in the study recognized more than two politicians, we included all the elections in the analysis.

Participants evaluated the politicians on four dimensions presented in one of two orders, (trustworthy, competent, attractive, and babyfaced or competent, trustworthy, babyfaced, and attractive). Each trait rating used the following format. Participants saw the two faces of the politicians on the computer screen, with one politician randomly placed on the left and indicated as Politician X and the other politician on the right of the screen and indicated as Politician Y. Participants were asked to choose which politician was more of the trait adjective (e.g. more trustworthy). Participants had as long as they needed to make this choice. After making this choice, participants were then presented with a rating scale, stating that "you chose Candidate (X or Y) as more trustworthy. Please indicate the degree to which you feel Candidate (X or Y) is more trustworthy than the other candidate". Participants rated all of the pairs of politicians using this format for one trait adjective before moving to the next trait adjective. Following the trait ratings, participants chose which candidate they would vote for by making a dichotomous choice between the two candidates, using the same format as above.

6. Results

6.1. Overview of analysis

We used a series of multilevel models to assess how participants' rating of traits and facial appearance predicted their own voting preferences as well as the actual election results. Since each rating rated each pair of candidates relative to one another, we scored ratings from −7 to 7. As discussed above, we arbitrarily assigned one candidate to the negative half of the scale and one to the positive half of the scale. The trait ratings for each candidate were scored from −7 to +7, with −7 indicating the highest rating for the candidate assigned to the negative half of the scale, whereas +7 indicated the highest rating for the candidate assigned to the positive half of the scale.

Using these variables, we computed two series of models. The first used each participant's trait and appearance ratings to predict which candidate the participant chose to vote for in each election, with a score of 0 assigned to votes for the candidate on the negative side of the scale and 1 to votes for the candidate on the positive side of the scale. The second series of models used the same trait and appearance ratings to predict the percentage of votes received by the candidate assigned to the positive side of the scale. The percentage of votes received was computed after excluding all votes for any other candidates than the ones pictured. To account for both subject-level and election-level variance, participant and election were included as random effects in the models predicting participants' voting preferences, with election-level factors nested within subject-level factors. However, election was not included as a random effects variable in models predicting actual vote share since it was co-linear with the dependent variable of vote outcome.

6.2. Relationships among the ratings

Table 2 shows the correlations among the mean four face ratings separately for OA and YA as well as the inter-age correlations. Correlations were computed by taking the mean ratings for each election across participants separately for OA and YA participants. As expected, attractiveness ratings were positively correlated with ratings of competence and trustworthiness for raters of both ages. In addition, ratings of competence and trustworthiness were highly correlated. Contrary to expectation, babyface ratings were not significantly correlated with any of the other measures for either OA or YA. Finally, OA and YA showed strong agreement for all four ratings. We also computed correlations between the ratings and the difference in age between the two politicians in each election for the 48 elections where age data were readily available for both candidates. Age was negatively correlated with ratings of babyfaceness for OA and YA raters. However, age was negatively correlated with attractiveness ratings by YA but was not significantly correlated with attractiveness ratings by OA.

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Table 2. Correlations among face ratings averaged across raters. Part A shows correlations within rater age with older adult raters above the diagonal and younger adult raters below the diagonal. Part B shows correlations between older and younger adult raters

Part A

	Competence	Trustworthiness	Attractiveness	Babyfaceness	Face age
Competence	–	0.721***	0.626***	−0.279*	0.134
Trustworthiness	0.619***	–	0.756***	−0.050	0.060
Attractiveness	0.606***	0.642***	–	0.214	−0.227
Babyfaceness	−0.155	0.075	0.272*	–	−0.344*
Face age	0.068	−0.096	−0.402**	−0.305*	–

Part B

Younger adult	Older adult				
	Competence	Trustworthiness	Attractiveness	Babyfaceness	
Competence	0.700***	0.617***	0.689***	−0.084	
Trustworthiness	0.480***	0.705***	0.721***	0.115	
Attractiveness	0.301*	0.499***	0.809***	0.310*	
Babyfaceness	−0.252+	−0.053	0.174	0.849***	

Note: DF = 52 for all correlations except correlations with face age, with DF = 48.

+$p < 0.1$.

*$p < 0.05$.

**$p < 0.01$.

***$p < 0.001$.

6.3. Facial ratings predicting participants' own voting preferences

6.3.1. Trait impressions (Hypotheses 1)

To examine the influence of perceived competence and trustworthiness on participants' voting preferences, we tested a series of stepwise multilevel logistic models. The first step tested whether perceived competence and trustworthiness ratings predicted participants' voting preferences and whether these effects were moderated by rater age (see Table 3, left). The results revealed that both perceived trustworthiness and competence predicted participants' voting choices. An interaction between rater age and voting preference for competence ratings revealed that competence was a stronger predictor of the voting preferences of YA than OA, as predicted by Hypothesis 1. However, contrary to prediction, the effect of trustworthiness was not moderated by rater age.

Table 3. Multilevel models for face ratings as predictors of participants' own electoral preferences, with and without attractiveness and babyfaceness in the model

	Step 1				Step 2			
	M	*SE*	*t*	*P*	*M*	*SE*	*t*	*P*
Intercept	−0.01	0.10	−0.10	0.92	0.03	0.08	0.31	0.75
Rater age	0.18	0.11	1.62	0.108	0.22	0.12	1.85	0.064
Competence	0.28	0.02	12.21	<0.001	0.26	0.02	11.02	<0.001
Trustworthiness	0.22	0.02	9.43	<0.001	0.18	0.02	7.62	<0.001
Competence × rater age	−0.07	0.03	−2.23	0.026	−0.07	0.03	−2.06	0.04
Trustworthiness × rater age	−0.03	0.03	−0.81	0.41	−0.03	0.03	−1.05	0.296
Attractiveness					0.18	0.03	5.79	<0.001
Attractiveness × rater age					0.02	0.03	0.68	0.51
Babyfaceness					0.01	0.02	0.50	0.614
Babyfaceness × rater age					−0.06	0.03	−1.89	0.059

The second step of the analysis added attractiveness and babyfaceness to examine whether controlling for these qualities affected the predictive influence of perceived trustworthiness and competence. The results revealed that controlling for these traits did not substantially reduce the predictive power of competence or trustworthiness, nor did it substantially alter the competence by rater age interaction. When controlling for attractiveness and babyfaceness, YA showed a stronger competence effect ($\beta = 0.259$, $SE = 0.023$, $p < 0.001$) than OA ($\beta = 0.184$, $SE = 0.021$, $p < 0.001$) (see Figure 1).

6.3.2. Appearance qualities (Hypothesis 2)

Step 2 of the analysis further showed that, with all other facial qualities controlled, attractiveness positively predicted voting preferences for both OA and YA, as predicted, and this preference was not moderated by rater age. Babyfaceness had no overall effect on electoral preference. However, there was a marginally significant rater age × babyfaceness interaction. OA showed a negative association between babyfaceness and the candidate for whom they would choose to vote, which is contrary to Hypothesis 2, ($\beta = -0.056$, $SE = 0.022$, $p = 0.011$) while YA showed no relationship ($\beta = 0.008$, $SE = 0.023$, $p = 0.72$ (see Figure 2).

6.4. Facial ratings predicting actual electoral success (Hypotheses 3 and 4)

6.4.1. Trait impressions (Hypothesis 3)

Stepwise regressions examining whether facial qualities predicted electoral success used the same approach described above with the dependent variable changed to vote share. Higher perceived competence predicted greater electoral success, as predicted, and this effect was not moderated by rater age (see Table 4). Greater perceived trustworthiness was not associated with greater electoral success. Including attractiveness and babyfaceness at Step 2 did not alter these results.

Figure 1. The interaction between competence and rater age predicting participants' vote preferences.

Notes: Values are plotted based on Step 2 in Table 3. Values for competence are plotted at −7 for low competence and +7 for high competence.
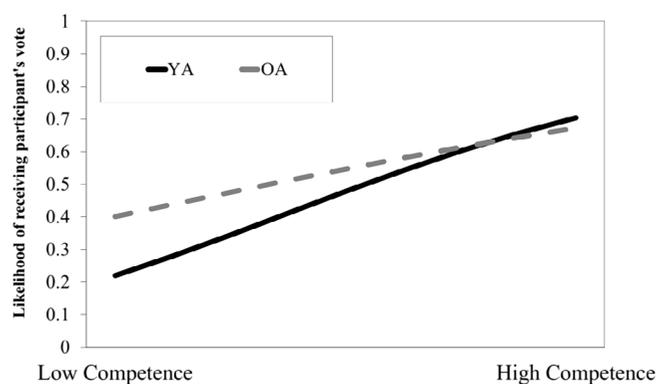

Figure 2. The interaction between rater age and babyfaceness ratings predicting participants' vote preferences.

Notes: Values are plotted based on Step 2 in Table 3. Values for babyfaceness are plotted at −7 for low babyfaceness and +7 for high babyfaceness.

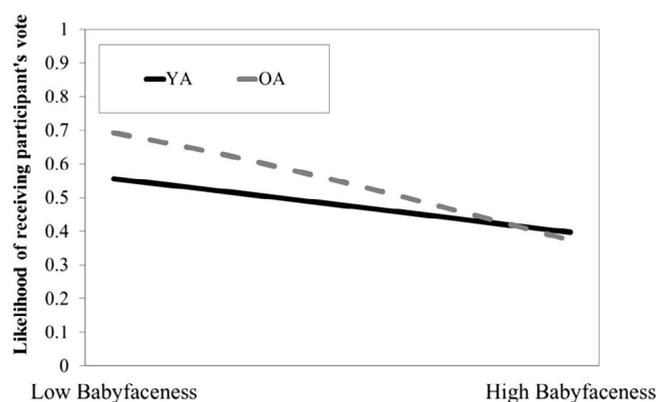cogent ·· psychology

	Step 1				Step 2			
	M	*SE*	*t*	*P*	*M*	*SE*	*t*	*P*
Intercept	50.25	0.35	140.5	<0.001	50.24	0.36	140.2	<0.001
Rater age	−0.07	0.54	0.14	0.89	−0.05	0.54	0.10	0.92
Competence	0.27	0.10	2.61	0.009	0.34	0.11	3.14	0.002
Trustworthiness	0.03	0.11	0.27	0.79	0.09	0.11	0.82	0.41
Competence × rater age	0.00	0.14	0.02	0.98	−0.10	0.15	0.64	0.52
Trustworthiness × rater age	0.00	0.15	0.01	0.99	−0.09	0.16	0.55	0.58
Attractiveness					−0.22	0.11	2.04	0.042
Attractiveness × rater age					0.29	0.15	1.94	0.053
Babyfaceness					0.09	0.10	0.94	0.35
Babyfaceness × rater age					−0.15	0.14	1.12	0.26

Table 4. Multilevel models for face ratings as predictors of candidates' actual electoral success with and without attractiveness and babyfaceness in the model

Figure 3. The interaction between rater age and attractiveness predicting percentage of actual election votes received by a candidate.

Notes: Values are plotted from the regression in Step 2 of Table 4. Values for attractiveness are plotted at −7 for low attractiveness and +7 for high attractiveness.
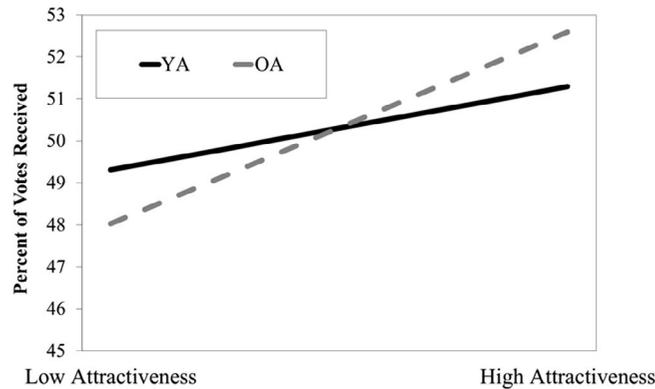
6.4.2. Appearance qualities (Hypothesis 4)

Step 2 of the analysis further revealed that, with all other facial qualities controlled, babyfaceness had no effect on electoral success. However, greater attractiveness predicted worse electoral success with a significant rater age × attractiveness interaction that reflected a marginally significant positive influence on electoral success for OA attractiveness ratings ($\beta = 0.162$, $SE = 0.088$, $p = 0.062$), but no significant effect for YA ratings ($\beta = −0.052$, $SE = 0.095$, $p = 0.58$) (Figure 3). The counter-intuitive negative main effect of attractiveness on electoral success resulted from controlling for the interaction between rater age and attractiveness. If the model is run with all factors except for the interaction between rater age and attractiveness, the main effect of attractiveness is not significant, $\beta = −0.067$, $SE = 0.074$, $t = 0.66$, $p = 0.37$

7. Discussion

The present study investigated OA and YA impressions of US Senatorial candidates' facial appearance as predictors of their candidate preferences and the candidates' electoral success. We found that both OA and YA impressions of candidates' attractiveness, competence, and trustworthiness predicted their personal voting choices. Confirming our first hypothesis, judgments of competence were stronger positive predictors of YA than OA voting intentions. However, contrary to our second hypothesis, judgments of babyfaceness were negative predictors of OA with no effect on YA preferences. The effects of each of these appearance qualities held true with the other appearance qualities controlled. Confirming our third hypothesis, actual electoral success was predicted by both OA and YA judgments of competence, replicating previous research that examined only YA ratings (Todorov et al., 2005). The strength of this effect did not vary by rater age and it held true with the

other appearance qualities controlled. On the other hand, OA, but not YA, judgments of attractiveness positively predicted electoral success, which only partially supports our fourth hypothesis.

The finding that OA were less influenced by facial competence in their voting decisions is consistent with evidence that OA value competence-based traits to a lesser degree than do YA (Hess & Auman, 2001; Hess et al., 2005) and indicate that OA may be seeking different qualities in their politicians than are YA. Hess et al. also found that OA value morality-based traits more so than competence-based traits, but we found no age differences in the degree to which looking trustworthy predicted voting choices.

Evidence to support the argument that age differences in the influence of perceived competence on voting preferences reflect differences in the valuation, rather than the assessment of that trait is provided by the strong OA and YA agreement in competence ratings, consistent with OA-YA agreement in ratings of competence from facial appearance in other studies (e.g. Zebrowitz et al., 2013). Thus, although OA and YA see competence similarly in faces, OA voting preferences suggest that they may care less about this trait.

It is also possible OA use competence to a lesser degree than YA when making voting decisions because they are less swayed by the type of heuristic processing which may lead to YA preferring competent-looking politicians. OA are more involved and knowledgeable about the political process when compared to YA (Goerres, 2007), and as such may be more likely to desire different traits in potential politicians. Those traits may not fit the general ratings of competence that YA prefer. This is a hypothesis which warrants future investigation.

When examining the appearance qualities of attractiveness and babyfaceness, we found that OA and YA personal candidate preferences showed equal attractiveness halo effects, or the degree to which attractiveness correlates with other positive social cues such as competence. This is consistent with evidence that OA and YA have shown similar halo effects in trait impressions from faces in previous research (Larose & Standing, 1998; Zebrowitz & Franklin, 2014) as well as in the present study, where attractiveness was positively correlated with rated competence and trustworthiness (see Table 2). However, an interaction between babyfaceness and participant age revealed that OA showed a preference for more mature-faced candidates whereas YA did not, an age difference that was sustained when controlling for the other ratings. This pattern of results was contrary to the prediction that OA would prefer more babyfaced candidates, due to higher valuation of trustworthiness. However, babyfaceness was not significantly related to impressions of trustworthiness or other face ratings by either OA or YA, an unexpected result that may be due to the negative correlation between babyfaceness and perceived age, as discussed below.

As greater perceived dominance has been the strongest correlate of facial maturity in previous research (Montepare & Zebrowitz, 1998), it is possible that OA valued facial maturity to a greater degree than do YA due to its association with dominance. Research has shown that dominance is another facial characteristic that is related to voting behavior. Specifically, Riggio and Riggio (2010) found that facial dominance may serve as a cue to competence and influences voting behavior in lab studies. Since our study did not examine preferences for dominance per se, additional research is necessary to determine whether OA lesser preference for more babyfaced candidates reflects a preference for more dominant-looking politicians.

It is also possible that OA valued more mature-faced candidates because OA preferred older-looking candidates and babyface ratings served as a proxy for the age of candidates. This may be the case since participants rated the candidates' babyfaceness absent instructions to make their ratings of each face relative to others of the same age, which differs from instructions in previous research when faces varied in actual age (Zebrowitz, Olson, & Hoffman, 1993). In fact, there was a moderate negative correlation between politicians' actual age and babyface ratings (see Table 2). There also was strong OA and YA agreement in babyface ratings, which indicates that the differences in their

voting preferences reflect differences in their valuation of candidates' facial maturity rather than in its assessment. This may reflect the fact that mature-looking candidates are more similar to OA participants than YA participants and OA participants prefer more mature-looking candidates because of this self-similarity. An OA preference for older-looking candidates would be consistent with research showing preferences for people similar to oneself (e.g. Bailenson, Garland, Iyengar, & Yee, 2006). This is a hypothesis warranting future investigation.

Whereas OA ratings of competence were less predictive of their own voting choices than were YA ratings, OA and YA competence ratings were equally predictive of actual electoral success. These findings are consistent with previous research showing that OA trait impressions from faces are just as accurate at predicting actual traits as are ratings by YA (Boshyan, Zebrowitz, Franklin, McCormick, & Carre, 2014; Zebrowitz et al., 2014). On the other hand, only OA attractiveness ratings were predictive of electoral success, an unexpected finding that may have implications for the prediction of future election outcomes.

Although we have no certain explanation for the greater prediction of candidates' electoral success by OA than YA attractiveness ratings, it is noteworthy that OA attractiveness ratings also better predicted the choices of voters of all ages in the present study. Specifically, OA attractiveness ratings predicted OA and YA vote choices with equal strength, respective rs (52) = 0.827 and 0.788, age difference z = 0.57, p = 0.56, whereas YA attractiveness ratings were marginally less predictive of OA than YA vote choices, respective rs (52) = 0.521 and 0.734, age difference z = 1.82, p = 0.068. The fact that YA attractiveness ratings were weaker predictors of OA vote choices can explain their weaker prediction of outcomes in actual elections, where OA vote at higher rates than do YA (Binstock, 2006). The question remains as to why OA attractiveness ratings are more robust. One possibility is that they are less biased by negative reactions to older faces. Consistent with this suggestion, OA attractiveness ratings in the present study were not significantly influenced by candidate age, whereas YA attractiveness ratings showed a significant negative relationship to age (see Table 2). Similarly, other research has found that when participants were asked to rate the attractiveness of large sets of older or younger faces as compared with others of the same age, YA nevertheless rated older faces as significantly less attractive than younger faces, while OA did not (Zebrowitz & Franklin, 2014). These results suggest that YA are less sensitive to relatively high attractiveness in older faces, which may render their ratings less diagnostic of the voting preferences of OA in actual election outcomes.

8. Conclusions and future directions

OA form an important and growing voting population and understanding influences on OA voting preferences is crucial to predicting future electoral results. Although both OA and YA candidate preferences were influenced by how competent, trustworthy, and attractive the contenders look, perceived competence had a weaker effect on OA preferences, consistent with other evidence that OA value competence-based traits to a lesser degree than do YA. Facial maturity ratings had a positive effect only on OA preferences, which may reflect more positive responses to more dominant-looking or older candidates. Finally, only OA attractiveness ratings predicted actual electoral success, which may reflect less biasing effects of candidate age on OA ratings.

These findings have significant implications for age differences in voting behavior as well as predicting election outcomes. Specifically, these findings are relevant in examining what characteristics are preferred by different segments of the voting public. As politicians target different advertisements to different demographics, it is important to highlight facial appearance characteristics to certain populations which would be most swayed by this characteristic. For instance, our findings indicating OA prefer less babyish-looking politicians would suggest that babyfaced politicians should try to minimize their babyish features in advertisements targeted toward OA. Likewise, politicians could enhance their competence more prominently in advertisements targeting YA.

Future research is necessary to examine what variables may underlie the age-related differences we find here. For instance, as mentioned earlier, differences in political knowledge may cause OA participants to see the political process differently and thus be drawn to different facial characteristics. Further, other age groups, such as middle-aged individuals, need to be examined to fully understand how aging moderates the relationships examined here. In addition, future directions also involve examining how other individual differences may moderate the relationship between candidate appearance and voting behavior. For instance, it is possible that political ideology and/or party affiliation may lead to preferences for different facial appearance candidates. Further, certain personality types may be drawn to competence or trustworthiness in candidates. These are questions for future research.

Competing interests
The authors declare no competing interest.

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Note
1. It should be noted that previous research not only has shown a strong consensus in judging all these qualities from faces, but also babyface ratings have been validated by facial measurements showing that people judged as more babyfaced have more babyfaced features, such as larger eyes and rounder faces. The consensus judgments of babyfaceness also have been validated by computer modeling. We are using rated babyfaceness in the present study both to be consistent with our other predictors that cannot be measured and also because rated babyfaceness has been shown to predict many significant social outcomes (see Zebrowitz & Montepare, 2008, for a review).

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