

Political partisanship influences perception of biracial candidates' skin tone

Eugene M. Caruso^{a,1}, Nicole L. Mead^b, and Emily Balcetis^c

^aBooth School of Business, University of Chicago, 5807 South Woodlawn Avenue, Chicago, IL 60637; ^bTilburg Institute for Behavioral Economics Research, Department of Marketing, Tilburg University, 5000 LE, Tilburg, The Netherlands; and ^cDepartment of Psychology, New York University, 6 Washington Place, New York, NY 10003

Edited by Richard E. Nisbett, University of Michigan, Ann Arbor, MI, and approved October 13, 2009 (received for review May 14, 2009)

People tend to view members of their own political group more positively than members of a competing political group. In this article, we demonstrate that political partisanship influences people's visual representations of a biracial political candidate's skin tone. In three studies, participants rated the representativeness of photographs of a hypothetical (Study 1) or real (Barack Obama; Studies 2 and 3) biracial political candidate. Unbeknownst to participants, some of the photographs had been altered to make the candidate's skin tone either lighter or darker than it was in the original photograph. Participants whose partisanship matched that of the candidate they were evaluating consistently rated the lightened photographs as more representative of the candidate than the darkened photographs, whereas participants whose partisanship did not match that of the candidate showed the opposite pattern. For evaluations of Barack Obama, the extent to which people rated lightened photographs as representative of him was positively correlated with their stated voting intentions and reported voting behavior in the 2008 Presidential election. This effect persisted when controlling for political ideology and racial attitudes. These results suggest that people's visual representations of others are related to their own preexisting beliefs and to the decisions they make in a consequential context.

bias | psychology | race | voting | Barack Obama

The results of political elections have profound consequences for individuals and societies, and most people strive to make their voting decisions in a deliberate, responsible manner. For example, when asked to explain their reasons for supporting a political candidate, voters mention important factors, such as the candidate's political party, attitudes on important issues, and perceived competence (1, 2). The 2008 United States Presidential election brought another factor to the forefront of American politics and public discourse: the candidate's racial identity. The fact that Barack Obama was born to a White mother and a Black father created ambiguity about how people would view his racial identity (3). In this article, we show that political partisanship can change people's visual representations of biracial candidates' skin tone, and that these skin tone representations are systematically related to their voting decisions.

Particularly during an election year, political partisanship causes people to form groups. Whether from politics or other sources of affiliation, group membership provides a lens through which people generate representations of reality (4). Simply being part of a group triggers basic motivational and cognitive processes to evaluate one's fellow group members positively, especially for groups that individuals choose to join and with which they strongly identify (5, 6). As a result, affiliation with a political party is a particularly powerful group membership that shapes the way people interpret the world (7–9).

Just as motivations bias people toward perceiving nonsocial objects in their environments in ways that support their current desires (10–13), group membership motivates people to perceive other people in a manner consistent with their desires. Group membership affects conscious and unconscious reactions toward

in-group and out-group members (14), and impacts both social judgments of others and visual perception of their physical features (15, 16). For example, people's expectations about the group to which a racially ambiguous face belongs can directly influence their perceptions of how light or dark that face is (17), and negative attitudes toward out-group members lead to more negatively stereotyped mental representations of out-group faces (18). The influence of group membership on social judgment and visual perception is stronger when the information under consideration is ambiguous (15, 16).

Accordingly, we suggest that political partisanship is a form of group membership that may bias interpretations of a biracial political candidate's skin color so that visual representations of the candidate fit coherently with the desire to see one's own group members positively (19). We hypothesized that positive associations with candidates would lead people to believe that lighter skin tone is more representative of them, whereas negative associations with candidates would lead people to believe that darker skin tone is more representative of them. We expected these biased visual representations to reflect nonconscious associations with skin tone, whereby White is associated with good and Black is associated with bad (20, 21). Moreover, because partisanship is so tightly linked to candidate support and voting behavior (e.g., ref. 7), we expected that perception of skin tone would also be related to people's intentions to vote for the political candidate. Specifically, we predicted a correlation such that the more people thought lighter skin tone was representative of the candidate, the more likely they would be to vote for him (and vice versa). We tested these predictions in three studies.

In Study 1, we manipulated political partisanship by leading participants to believe that a political candidate either did or did not support the participants' own political views. In Studies 2 and 3, we measured political partisanship directly by asking participants to report their political ideology. Participants viewed various photographs of a hypothetical (Study 1) or actual candidate (Studies 2 and 3) who was biracial and rated the extent to which each photograph represented the candidate. We gathered multiple photographs of each candidate in different poses. For each pose, we altered the photographs to create two alternative versions: one in which the candidate's skin tone was lighter and one in which it was darker than in the original photograph (see Fig. 1 for examples). For each participant, we randomly selected one lightened, one darkened, and one unaltered version of different poses so that no participant ever saw more than one version of the same pose. By creating lightened and darkened versions of the same photographs (matched on perceived professional quality and clarity) and randomly selecting the specific combination of photographs and poses for each

Author contributions: E.M.C., N.L.M., and E.B. designed research, performed research, analyzed data, and wrote the paper.

The authors declare no conflict of interest.

This article is a PNAS Direct Submission.

¹To whom correspondence should be addressed. E-mail: ecaruso@chicagobooth.edu.



Fig. 1. Sample photographs of a novel political candidate (Study 1) and Barack Obama (Studies 2 and 3).

participant, we were able to ensure that differences in participants' representativeness judgments reflected only variations in skin tone rather than other factors associated with the photographs.

Study 1

Results. In Study 1, participants were led to believe that a biracial candidate for a position in the U.S. Department of Education either did or did not support their views. Subsequently, they evaluated photographs of the candidate. As predicted, participants' representativeness ratings of the candidate's skin tone varied as a function of whether they believed the candidate supported their personal political views, $\chi^2(3, n = 102) = 6.46, P < 0.02, \Phi_c = .25$. Among those who assigned one type of photograph the highest rating, participants who thought the candidate supported their views were more than twice as likely to rate a lightened photograph as most representative of him, whereas participants who thought the candidate opposed their views were more than twice as likely to rate a darkened photograph as most representative of him (Table 1).

To investigate the degree to which participants' perceptions differed, we created a light-advantage score that controlled for participants' representativeness ratings of the unaltered photographs by subtracting darkened representativeness ratings from lightened representativeness ratings and dividing the difference by ratings of the unaltered photographs. This score was higher among participants who thought the candidate supported their

views ($M = 0.17, SD = 0.43$) than among participants who thought the candidate opposed their views ($M = -0.03, SD = 0.39$), $t(100) = 2.50, P < 0.02, d = 0.50$. These data suggest that participants who believed this racially ambiguous candidate supported their views thought that lightened skin tone was more representative of him than did participants who believed this candidate did not support their views. Across all participants, there was a significant correlation between the light-advantage score and reported likelihood of voting for this candidate, $r = 0.21, P < 0.04$, suggesting that the more people considered the lighter versions of the candidate as representative of him, the stronger their stated intentions of voting for him.

Study 2

Study 2 investigated whether the effect of political partisanship on skin tone representations would endure even with a familiar political candidate. To do so, we measured political party affiliation and examined its relationship to the perceived skin tone of a well-known biracial candidate running for public office.

Results. In Study 2, participants evaluated photographs of Barack Obama before the 2008 United States Presidential election. [In Studies 2 and 3, we used representations of John McCain as a comparison. Because there is no ambiguity about McCain's racial background, we did not expect—nor did we find—any relationship between political orientation and representativeness ratings of his skin tone (22).] Conceptually replicating the findings of Study 1, we found that representativeness ratings of Obama varied as a function of participants' political orientation, $\chi^2(3, n = 188) = 10.81, P = 0.01, \Phi_c = 0.24$. As expected, among those who assigned one type of photograph the highest rating, liberal participants were most likely to rate a lightened photograph of Obama as most representative of him, whereas conservative participants were most likely to rate a darkened photograph of Obama as most representative of him (see Table 1).

As in Study 1, we computed a light-advantage score. This score was higher among liberal participants ($M = 0.06, SD = 0.37$) than among conservative participants ($M = -0.18, SD = 0.83$), $t(186) = 2.73, P < 0.01, d = 0.40$.

Next, we assessed whether light-advantage scores predicted reported likelihood of voting for Obama, even when controlling for participants' political orientation. As a continuous measure of political orientation, we created a conservatism score with positive scores indicating stronger conservative orientation. We regressed participants' reported likelihood of voting for Obama on participants' conservatism score and light-advantage score.

Not surprisingly, participants' conservatism score negatively predicted intentions to vote for Obama, $\beta = -0.81, t(185) = 19.27, P < 0.001, \text{partial } r = -0.82$. However, even when controlling for conservatism, the light-advantage score for Obama was a marginally significant predictor of intentions to vote for him, $\beta = 0.07, t(185) = 1.76, P = 0.08, \text{partial } r = 0.13$. Consistent with Study 1, these results suggest that the more

Table 1. Percent of participants, as a function of political partisanship, who assigned the highest representativeness rating to a lightened, darkened, unaltered, or none ("tied") of the photographs of a novel political candidate (Study 1) and Barack Obama (Studies 2 and 3)

	Study 1		Study 2		Study 3	
	Shares candidate's views, %	Opposes candidate's views, %	Liberal, %	Conservative, %	Liberal, %	Conservative, %
Lightened	25	11	19	10	33	21
Darkened	10	26	15	25	7	42
Unaltered	15	19	14	27	13	11
Tied	50	44	52	38	47	26

Table 2. Percent of participants who voted for Obama or McCain as a function of which photograph they rated as most representative of Obama at Time 1 (Study 3)

	Lightened, %	Darkened, %	Unaltered, %	Tied, %	Total, %
Obama	75	11	60	61	55
McCain	25	89	40	39	45

people considered the lighter skin tone as representative of a candidate who shared their own ideology, the stronger their stated intentions of voting for that candidate.

Study 3

It is possible that people highly prejudiced against Blacks were both likely to see the darkened photograph as representative of Obama and unlikely to vote for him. If so, the relationship between the light-advantage score and voting likelihood in Study 2 may have simply been a product of prejudice. Therefore, in Study 3 we tested whether the effect of lightness perceptions would persist even when controlling for racial attitudes. Additionally, we examined whether perceived representativeness of the photographs were related to reported voting behavior in the 2008 Presidential election.

Results. One week before the election, participants rated the representativeness of lightened, darkened, and unaltered photographs (as in Study 2). To assess whether the representativeness ratings accounted for unique variance above well-established indicators of racial attitudes, participants completed two measures of bias toward African Americans. We measured implicit prejudice using the Black-White implicit association test (IAT) (23). IAT scores reflect the ease with which participants associate Blacks with negative concepts and Whites with positive concepts, compared to the reverse pairings. Explicit prejudice was measured with the Attitudes Toward Blacks (ATB) scale (24). Participants indicated their agreement with 20 statements, such as “Generally, Blacks are not as smart as Whites.” Immediately following the election, participants were asked via an online survey to indicate for whom they voted and the strength of their voting preference.

Preelection results. Replicating Study 2, representativeness ratings of Obama varied as a function of participants’ political orientation, $\chi^2(3, n = 49) = 9.09, P < 0.03, \Phi_c = 0.31$. Among those who assigned one type of photograph the highest rating, liberal participants were five times as likely to rate a lightened photograph as most representative of him, whereas conservative participants were twice as likely to rate a darkened photograph as most representative of him (see Table 1). Again, the light-advantage score for Obama was higher among liberal participants ($M = 0.08, SD = 0.20$) than among conservative participants ($M = -0.13, SD = 0.39$), $t(47) = 2.23, P < 0.04, d = 0.73$.

We next examined the relationship between political orientation and light-advantage scores. For Obama, political orientation was a significant predictor of light advantage scores, $\beta = -0.33, t = 2.10, P < 0.05$, partial $r = -0.30$, such that the more liberal participants were, the more they rated the lightened photographs as representative of him, even when controlling for implicit prejudice ($\beta = -0.18, t = 1.30, P > 0.10$) and explicit prejudice ($\beta = -0.02, t < 1.0$).

We then used conservatism, light-advantage scores, implicit prejudice, and explicit prejudice to predict voting intentions for Obama. As expected, conservatism was negatively related to intentions to vote for Obama, $\beta = -0.80, t = 10.26, P < 0.0001$, partial $r = -0.83$. In addition, the more that participants thought the lightened photographs were representative of Obama, the more they intended to vote for him, $\beta = 0.15, t = 2.14, P < 0.04$,

partial $r = 0.30$. Neither implicit nor explicit prejudice was a significant predictor of intentions to vote for Obama, $\beta_s < 0.10, t_s < 1.10, P_s > 0.30$.

Postelection results. Consistent with the results for voting intentions, the percentage of people who reported voting for Obama varied as a function of the representativeness ratings that they assigned to the Obama photographs at Time 1, $\chi^2(3, n = 44) = 9.25, P < 0.03, \Phi_c = 0.46$. Participants who thought a lightened photograph was the most representative of Obama 1 week before the election were more likely to report having actually voted for Obama than McCain, whereas participants who thought a darkened photograph was the most representative of Obama were more likely to report having voted for McCain than Obama (Table 2).

We then tested whether Time 1 light-advantage scores predicted strength of reported voting preference even when controlling for political orientation, implicit prejudice, and explicit prejudice. [These measures of racial attitudes capture global assessments of stored associations that can be altered by specific targets in specific contexts (e.g., ref. 25). Controlling for such generalized associations provides a measure of participants’ evaluations of Obama specifically, which we expected to vary as a function of political partisanship.] The model revealed the expected effect of participants’ political orientation, $\beta = -0.84, t = 10.85, P < 0.0001$, partial $r = -0.88$, indicating that voting for Obama increased as conservatism decreased. In addition, the model revealed a main effect of the Time 1 light-advantage score, $\beta = 0.19, t = 2.69, P < 0.02$, partial $r = 0.41$, indicating that the more participants saw a lightened photograph as representative of Obama at Time 1, the more likely it was that they reported having actually voted for him in the election. No other effects or interactions were significant. Thus, the degree to which participants saw a lightened photograph of Obama as representative of him was significantly related to reported voting behavior 1 week later, even after controlling for political orientation, explicit prejudice, and implicit prejudice. These results refute the alternative explanation that biased perceptions of skin tone are solely the result of prejudicial attitudes.

Discussion

The results from three studies suggest that political partisanship can shape which perceptual depictions of a biracial candidate people see as most representative of who he really is. Our data suggest that people’s perceptions of skin tone for both novel and known candidates are systematically related to their stated voting intentions and reported voting behavior, such that both are positively correlated with the extent to which people see lighter skin tone as representative of the candidate. Across the three studies reported here, we found that partisans not only “darken” those with whom they disagree, but also “lighten” those with whom they agree. Future research should aim to clarify the specific relationship between skin tone perception and voting behavior, to determine whether “coloring” a biracial candidate’s skin tone plays a causal role in the relationship between political partisanship and voting behavior.

Although the number of Blacks holding public office has increased dramatically over the years, light-skinned Blacks have consistently been over-represented, and dark-skinned Blacks consistently under-represented, as elected officials (26). Some

have even suggested that a successful strategy for Black candidates who are running for office would be to look “more white” in appearance (27). During the 2008 Presidential campaign, there was some suspicion that Obama’s opponents tried to capitalize on this phenomenon by highlighting his “blackness.” Much attention was given to Obama’s history with Reverend Jeremiah Wright and the controversy surrounding a television ad run by Hillary Clinton’s campaign, in which a video of Obama was artificially darkened. This tactic invited comparisons to the much-publicized *Time* magazine cover in which an illustrator purposefully darkened the police photograph of O.J. Simpson following his arrest in 1994, which many saw as a clear attempt to capitalize on the negative associations that people have with darker skin. Such examples suggest that other people may deliberately try to alter perceptions of a rival candidate’s racial appearance to win the support of voters. Our results suggest that voters themselves may alter how they see a racially ambiguous candidate, depending on their own level of support and their corresponding desire to see the candidate favorably.

Materials and Methods

Study 1. Stimuli. We selected four photographs of Jarome Iginla, a 32-year old biracial male whose father was a Black Nigerian and whose mother was a White American. The photographs were taken from a professional photography session before an awards ceremony in which Iginla (a professional hockey player) took part. (When asked during debriefing, no participant accurately recognized or identified Iginla.) All aspects of the photographs—the clothing, lighting, and background—were the same, except for the pose and distance from the camera. Using Adobe Photoshop CS3 (version 10.0) software, we created two alternative versions of each photograph: one in which his skin tone was artificially lightened, and one in which it was artificially darkened. We accomplished this by isolating any exposed areas of skin (i.e., the head and hands) and adjusting the brightness and contrast settings by ~15% in the appropriate direction. All other aspects of each pose were identical except for the darkness of the candidate’s skin (see Fig. 1 for examples).

Participants and procedures. In exchange for entry into a \$50 lottery, 108 people from a Chicago-based participant pool completed an online study in which they were asked to evaluate a potential candidate for a position in the U.S. Department of Education. Participants read a brief biography of this candidate, accompanied by a single unaltered photograph of him. Participants were given no information about his racial identity, other than the photograph. They read six issues concerning the United States education system and indicated which of two positions they personally supported more. For example, participants indicated whether the school year should be lengthened (to allow students to learn more material) or kept the same (to allow students to pursue summer activities outside of school). After selecting the position they personally supported and rating the importance of each issue, participants were randomly assigned to one of two conditions. Participants learned that, based on his public remarks on these topics, the candidate agreed with them on either one of the six issues or on five of the six issues. To maintain believability, we picked an issue that was pretested to be relatively unimportant (i.e., whether administrative deadlines should be coordinated nationally or left to the discretion of each state) and informed participants that this was the one issue on which they disagreed with the candidate or the one issue on which they agreed with the candidate. A manipulation check confirmed that participants who believed the candidate agreed with them on five issues reported that the candidate better represented the views of their political party ($M = 4.17$, $SD = 0.69$) than did participants who were told the candidate agreed with them on only one issue ($M = 1.33$, $SD = 0.48$), $t(100) = 24.26$, $P < 0.001$.

Following this manipulation, participants read instructions describing that photographs can differ in how well they “represent a politician” and capture his or her “true essence.” They then rated how much each of three photographs—one lightened, one unaltered, and one darkened—represented the candidate on scales ranging from 1 (not at all) to 7 (a great deal). Each photograph appeared on a separate page, and each was a different pose from the photograph that accompanied the candidate’s biography. Following the representativeness ratings, participants indicated the likelihood that they would vote for this candidate if they had a chance to elect him to this position using a scale ranging from 1 (very unlikely) to 7 (very likely). They indicated how many issues on which they and the candidate agreed. Six participants who failed to answer this question correctly were excluded from all analyses.

Finally, participants completed a number of demographic measures, none of which had a significant effect on any of the measures reported here.

Representativeness ratings. To assess whether there was a difference in the percentage of participants in the two experimental conditions who rated a lightened, darkened, or unaltered photograph as most representative, we coded participants’ representativeness ratings categorically. The coding scheme indicated to which type of photograph (unaltered, lightened, or darkened) each participant gave the highest representativeness rating. If the highest rating was tied among different types of photographs, representativeness ratings were coded as “tied” to indicate no relative preference.

Study 2. Stimuli. We selected four photographs each of Barack Obama (the Democratic candidate) and John McCain (the Republican candidate). Photographs were selected from the official campaign Web sites of the respective candidates and from The Associated Press photographs taken at the 2008 United States Presidential Debates. Using the same method as Study 1, we created one lightened and one darkened version of each photograph (see Fig. 1 for examples).

Participants and procedures. In exchange for course credit, 221 undergraduates at Arizona State University participated in an online study in which they viewed six photographs (selected at random from the set of eight total photographs): one lightened, one darkened, and one unaltered photograph of each candidate. Across participants, the order in which the photographs appeared was random.

Participants indicated skin tone representativeness ratings as in Study 1, then described their own political ideology following procedures used in previous research (28–30). Participants indicated the degree to which five terms (Democrat, Liberal, Republican, Conservative, and Independent) described themselves using scales ranging from 1 (weak) to 7 (strong), with the option of stating that the term was not applicable to them. To form an aggregate measure of conservative ideology, endorsement of the sum of “Democrat” and “Liberal” was subtracted from the sum of “Republican” and “Conservative.” Because most participants indicated that “Independent” did not apply to them, endorsement of this item was not included in the assessment of political ideology. A positive conservatism score is indicative of stronger conservative ideology, whereas a negative score is indicative of stronger liberal ideology.

Next, participants indicated whether they were eligible to vote in the November 2008 election. All participants indicated that they were. Finally, participants indicated the likelihood that they would vote for Barack Obama and John McCain using separate scales ranging from 1 (very unlikely) to 7 (very likely).

At the end of the study, participants indicated their media consumption habits by rating the frequency with which they (i) watch television in general, (ii) follow political news in general, (iii) follow political news on television, (iv) read *The New York Times*, (v) watch *The Daily Show*, and (vi) watch *Fox News*. They then indicated their own racial identity, gender, and age.

Demographics. The mean conservatism score in this sample was -1.15 ($SD = 6.53$). Fifty percent of the sample had a negative conservatism score, 35% had a positive conservatism score, and 15% had a score of 0.

To form the categorical variable for political partisanship, we separated participants into three political groups based on their conservatism score. Participants with a positive score were classified as “conservatives”; participants with a negative score were classified as “liberals”; the remaining participants had a score of 0. Because of the multiple ways in which someone could receive a score of 0, the precise meaning of this score is unclear; it could reflect ambivalence, indifference, highly liberal yet highly Republican identification, and so forth. Given this ambiguity, we have excluded their data from all analyses. None of the results meaningfully changes when all participants are included in the analyses.

Study 3. Participants. In exchange for entry into a \$50 raffle, 53 undergraduates from Florida State University participated in the study. Participants completed the first part of the study approximately 1 week before the 2008 United States Presidential Election, and completed the second part of the study 1 day after the election.

Time 1 measures and procedure. Higher scores on the IAT reflect a stronger association of “pleasant” and African American. The mean IAT score in this study was -0.34 ($SD = 0.39$). To produce the final ATB score, appropriate responses were reverse-scored before being averaged across the items. Higher scores indicate higher levels of prejudice. The mean ATB score in this study was 2.42 ($SD = 0.90$). We analyzed the relationships between the light-advantage score and these two measures of prejudice separately for liberal and conservative participants. The only significant correlation was between the light-advantage score and the IAT among conservative participants, $r = 0.55$, $P =$

0.01, suggesting that the more they associated African American with unpleasant, the more likely they were to rate darker photographs as more representative of Obama.

Between the IAT and the photograph ratings task, participants completed 5 min of filler questionnaires. Participants were told that the different experimental tasks were unrelated to one another and were being run at the same time for convenience.

Finally, participants rated the representativeness of six photographs: one lightened, one darkened, and one unaltered photograph of each candidate, as in Study 2. They then indicated their political ideology, voting intentions, and media consumption habits.

Time 2 measures and procedure. Immediately after the election results were announced on November 4th, 2008, participants were sent an email containing a link to an online survey in which they indicated whom they voted for (Obama; McCain; Did not Vote) and the strength of their preference (1 = Definitely McCain; 7 = Definitely Obama). Participants were given 24 h from the time the election results had been announced to complete the Time 2 measures. Two participants who failed to complete the Time 2 measures and seven others who did not vote in the election were excluded from the analyses.

Demographics. The mean conservatism score in this sample was -1.53 ($SD = 8.33$). Fifty-five percent of the sample had a negative conservatism score, 36% had a positive conservatism score, and 7% had a score of 0.

Given the small percentage of Black participants in Studies 2 (4%) and 3 (10%), we did not have enough Black participants to test reliably for differences between Black and White participants. Because we base our predictions on the participants' political group membership (and not their race), we have not excluded any participants based on race in the results we report here. None of the results meaningfully changes when Black participants are excluded from the analyses.

Alternative Explanations. Consumption of biased media. Given the overt attempts of some media outlets to shape perceptions of Obama, it is possible that the effects we find were driven by different patterns of media consumption. It is possible that liberal media outlets tended to depict lighter images of Obama relative to conservative media outlets. For example, if liberal participants were exposed to systematically different images of Obama depending on the source of the news, they may have rated lightened versions of him as more representative because lighter versions do, in fact, better represent the images to which they were typically exposed. If this were the case, we would expect those who consumed liberal news more often to show relatively stronger belief that lightened images are representative of Obama, and those who consumed conservative news more often to show relatively stronger belief that darkened images are representative of Obama.

To address this question, we first calculated a general media consumption score by summing the self-reported frequency with which participants watch television in general, follow political news in general, and follow political news on television. Even when controlling for participants' conservatism and their general media consumption, there was no relationship between Obama's light-advantage score and exposure to liberal media outlets such as *The New York Times* [Study 2: partial $r(218) = 0.05, P > 0.40$; Study 3: partial $r(49) = 0.23, P > 0.10$] or *The Daily Show* [Study 2: partial $r(218) = 0.02, P > 0.80$; Study 3: partial $r(49) = 0.17, P > 0.20$], or to the conservative media outlet *Fox News* [Study 2: partial $r(218) = -0.01, P > 0.80$; Study 3: partial $r(49) = -0.08, P > 0.60$].

Perceived quality and clarity of photographs. It is possible that altering the skin tone of the photographed candidates inadvertently altered other features, such as the professional quality of the photograph itself. If lightening Obama's skin tone improved the perceived quality of the photograph, this might provide an alternative explanation for why liberal participants would be inclined to report that the lightened (i.e., the more professionally composed) photographs were more representative of Obama and conservative participants would be inclined to report that the higher quality photographs were less representative of him.

To test this alternative, a separate group of participants ($n = 72$) from the same participant population rated the professional composition of the photographs used in Studies 2 and 3. We defined a professionally composed photograph as one that balanced richness with shading in its use of color, contrasted brightness or darkness well, and was technically executed without flaw. Participants indicated how professionally composed each photograph was on a scale ranging from 1 (not at all) to 7 (extremely). Participants rated one lightened, one darkened, and one unaltered photograph of each candidate (randomly selected from the set of four photographs used in Studies 2 and 3), and then indicated their political ideology.

First, we assessed whether the professional quality of the photographs of Obama changed as a function of the manipulated skin tone and participants' political partisanship. We ran a 2 (participants' partisanship: conservative or liberal) \times 3 (skin tone: lightened, darkened, or unaltered) repeated-measures ANCOVA, controlling for exposure to *Fox News*, *The New York Times*, and *The Daily Show*. In this analysis, there was no effect of partisanship, skin tone, or the interaction between the two, $F_s < 1.5$.

Another possibility is that the facial features of Obama were distorted when we altered the skin tone. If liberal participants typically see his features clearly, and the lightened photographs increase the clarity of features relative to the darkened photographs, liberal participants may simply infer that the lightened photographs are more representative because those depictions more accurately reflect the images to which they are most often exposed.

To investigate this possibility, a separate group of participants ($n = 107$) from the same participant population rated how clearly they could see the facial features of Obama (using the same procedure as the professional quality ratings) on a 7-point scale ranging from 1 (not at all clear) to 7 (extremely clear), and then indicated their political ideology.

To test whether perceived clarity of Obama's facial features varied as a function of manipulated skin tone and political partisanship, we subjected the ratings to a 2 (participants' partisanship: conservative or liberal) \times 3 (skin tone: lightened, darkened, or unaltered) repeated-measures ANCOVA, controlling for exposure to *Fox News*, *The New York Times*, and *The Daily Show*. Results indicated that perceived clarity of Obama's facial features did not vary as a function of manipulated skin tone, $F < 1.0$. That is, participants did not report that Obama's features were significantly clearer in the lightened ($M = 5.96$), darkened ($M = 6.03$), or unaltered photographs ($M = 5.82$). Photograph skin tone did not interact with political partisanship, $F < 1.0$.

ACKNOWLEDGMENTS. We thank Ashley Angulo, Brittani Baxter, Noah Goldstein, Jasmine Kwong, Brooke Lerner, Matt Liebert, and Jennifer Omoregie for their assistance in executing these experiments, and Mahzarin Banaji, Heather Caruso, Joshua Correll, Jane Risen, Jay Van Bavel, and members of our various laboratory groups and research workshops for their insightful comments on this work. This research was supported by The University of Chicago Booth School of Business (E.M.C.) and a Doctoral Fellowship from the Social Sciences and Humanities Research Council of Canada (N.L.M.).

1. Penrock JR (1979) *Democratic Political Theory* (Princeton Univ Press, Princeton, NJ).
2. Todorov A, Mandisodza AN, Goren A, Hall CC (2005) Inferences of competence from faces predict election outcomes. *Science* 308:1623–1626.
3. Zogby Poll, November 1–2, 2006. Poll questions retrieved March 13, 2009, from <http://www.zogby.com>.
4. Hastorf AH, Cantril H (1954) They saw a game: A case study. *J Abn Soc Psychol* 49:129–134.
5. Brewer MB (1979) Ingroup bias in the minimal intergroup situation: A cognitive-motivational analysis. *Psychol Bull* 86:307–324.
6. Tajfel H, Turner JC (1979) in *The Social Psychology of Intergroup Relations*, eds Austin WG, Worchel S (Brooks/Cole, Monterey, CA), pp 33–48.
7. Cohen GL (2003) Party over policy: The dominating impact of group influence on political beliefs. *J Pers Soc Psychol* 85:808–822.
8. Graham J, Haidt J, Nosek B (2009) Liberals and conservatives use different sets of moral foundations. *J Pers Soc Psychol* 96:1029–1046.
9. Jost JT (2006) The end of the end of ideology. *Am Psychol* 61:651–670.
10. Balcetes E, Dunning D (2006) See what you want to see: Motivational influences on visual perception. *J Pers Soc Psychol* 91:612–625.
11. Balcetes E, Dunning D (2007) Cognitive dissonance reduction and perception of the physical world. *Psychol Sci* 18:917–921.
12. Bruner JS, Goodman CC (1947) Value and need as organizing factors in perception. *J Abn Soc Psychol* 42:33–44.
13. Voss A, Rothermund K, Brandstädter J (2008) Interpreting ambiguous stimuli: Separating perceptual and judgmental biases. *J Exp Soc Psychol* 44:1048–1056.
14. Fiske ST (1998) in *The Handbook of Social Psychology*, eds Gilbert DT, Fiske ST, Lindzey G (McGraw-Hill, Boston), pp 357–411.
15. Darley JM, Gross PH (1983) A hypothesis-confirming bias in labeling effects. *J Pers Soc Psychol* 44:20–33.
16. Pauker K, Rule NO, Ambady N in *The Social Psychology of Visual Perception*, eds Balcetes E, Lasserre GD (Psychol Press, New York), in press.
17. Levin DT, Banaji MR (2006) Distortions in the perceived lightness of faces: The role of race categories. *J Exp Psychol: Gen* 135:501–512.
18. Dotsch R, Wigboldus DHJ, Langner O, van Knippenberg A (2008) Ethnic out-group faces are biased in the prejudiced mind. *Psychol Sci* 19:978–980.
19. Smith-McLallen A, Johnson BT, Dovidio JF, Pearson AR (2006) Black and White: The role of color bias in implicit race bias. *Soc Cog* 24:46–73.
20. Maddox KB, Gray S (2002) Cognitive representations of African Americans: Re-exploring the role of skin tone. *Pers Soc Psychol Bull* 28:250–259.
21. Pauker K, et al. (2009) Not so Black and White: Memory for ambiguous group members. *J Pers Soc Psychol* 96:795–810.

22. Hogg MA (2000) Subjective uncertainty reduction through self-categorization: A motivational theory of social identity processes. *Eur Rev Soc Psychol* 11:223–255.
23. Greenwald AG, McGhee DE, Schwartz JKL (1998) Measuring individual differences in implicit cognition: The Implicit Association Test. *J Pers Soc Psychol* 74:1464–1480.
24. Brigham JC (1993) College students' racial attitudes. *J App Soc Psychol* 23:1933–1967.
25. Mitchell JP, Nosek BN, Banaji MR (2003) Contextual variations in implicit evaluation. *J Exp Psychol: Gen* 132:455–469.
26. Hochschild JL, Weaver V (2007) The skin color paradox and the American racial order. *Soc Forces* 86:643–670.
27. Strickland RA, Whicker ML (1992) Comparing the Wilder and Gantt campaigns: A model for Black candidate success in statewide elections. *PS: Political Sci Politics* 25:204–212.
28. Ferguson M, Hassin R (2007) On the automatic association between America and aggression for news watchers. *Pers Soc Psychol Bull* 33:1632–1647.
29. Green DP, Palmquist B, Schickler E (2002) *Partisan Hearts and Minds* (Yale Univ Press, New Haven, CT).
30. Miller WE, Shanks JM (1996) *The New American Voter* (Harvard Univ Press, Cambridge, MA).