



## Physical Attractiveness and Candidate Evaluation: A Model of Correction

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*Voters typically evaluate an attractive candidate more favorably than an (otherwise equivalent) unattractive candidate. However, some voters “correct” for the biasing influence of physical appearance. This reduces, eliminates, or even reverses the physical attractiveness effect. Correction occurs when political experts evaluate a political candidate under non-distracting conditions. Under these “high cognitive capacity” conditions, voters primarily correct for physical unattractiveness. However, correction fails to occur when voters possess low levels of expertise or are distracted. Thus, in most circumstances, attractive candidates are evaluated more favorably than unattractive candidates. Two experiments provide support for this model of appearance-based candidate evaluation.*

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Voters evaluate physically attractive political candidates more favorably than unattractive candidates. This effect has been documented in controlled experiments (e.g., Bailenson, Garland, Iyengar, & Yee, 2006; Budesheim & DePaola, 1994; Keating, Randall, Kendrick, 1999; Ottati, 1990; Ottati & Deiger, 2002; Riggle, Ottati, Wyer, Kuklinski, & Schwarz, 1992; Rosenberg & McCafferty, 1987) and real-world election studies (e.g., Efran & Patterson, 1974; Rosar, Klein, & Beckers, 2008). A vivid example occurred when John F. Kennedy defeated Richard M. Nixon in the 1960 presidential election. Research suggests that

Kennedy's superior image may have tipped the scale in this close election (Druckman, 2003). Effects of appearance on candidate evaluation are due to the "physical attractiveness stereotype." This stereotype leads individuals to presume attractive people are more poised, interesting, well-adjusted, exciting, socially skilled, and successful than unattractive people (Dion, Berscheid, & Walster, 1972; Hatfield & Sprecher, 1986). The visual appearance of a person activates this stereotype in a relatively immediate and automatic fashion (van Leeuwen & Macrae, 2004).

An important question involves the conditions that serve to moderate the physical attractiveness effect. Are attractive politicians evaluated more favorably by all voters, or are some segments of the voting population less strongly influenced by candidate appearance? Do some voters evaluate attractive candidates more *negatively* than unattractive candidates? Is physical attractiveness more likely to influence voters in some situations than others? Questions of this nature are of critical importance to both political strategists and academic researchers who seek to understand the determinants of candidate evaluation and voting behavior.

Although it has been established that appearance influences candidate evaluation, additional research is needed to more fully understand the conditions that moderate this effect. We explore a number of hypotheses that address this concern. First, we hypothesize that some voters "correct" for physical attractiveness in an attempt to arrive at an unbiased evaluation of a political candidate. That is, some voters attempt to "subtract out" appearance-based bias when deriving their evaluation of a candidate. When this correction process is implemented, we hypothesize that the physical attractiveness effect is reduced, eliminated, or even reversed (overcorrection). When voters fail to correct, we hypothesize that the physical attractiveness effect is relatively strong. This "correction" hypothesis has never been considered in research that examines the effect of physical attractiveness on candidate evaluation.

Second, we hypothesize that correction occurs only if voters possess an adequate amount of cognitive capacity, and only if they believe it is inappropriate to evaluate a candidate on the basis of physical appearance. This is because the correction process requires cognitive resources, and because voters will correct for appearance only if they believe it constitutes an inappropriate form of "bias." We propose that the capacity to engage in correction is determined by the voter's level of expertise and the degree to which the voter is distracted when acquiring the candidate information. We propose that voters believe it is inappropriate to rely on physical appearance when the candidate's appearance is negative, but that this is less likely to be the case when the candidate's appearance is positive. As a consequence, correction should be asymmetric. That is, voters should be more likely to correct for physical *unattractiveness* than physical attractiveness. These predictions, particularly those involving "distraction" and "asymmetric correction," have yet to be tested in research that examines the effect of appearance on candidate evaluation.

The present approach extends upon research that indicates the physical attractiveness effect is reduced among political experts and among voters exposed to a small amount of information pertaining to a single candidate (Druckman, 2003; Ottati, 1990; Riggle et al., 1992; see Lau & Redlawsk, 2001, for related evidence). From the current perspective, both of these conditions provide voters with the capacity to correct for appearance. If this is true, a more direct manipulation of cognitive capacity should moderate the physical attractiveness effect. That is, distracting conditions involving high cognitive load should eliminate correction and yield a relatively strong effect of physical attractiveness on candidate evaluation. Conversely, nondistracting conditions involving minimal cognitive load should enable voters to correct for the physical attractiveness effect. Predictions of this nature highlight an important, yet neglected aspect of the candidate evaluation process. Namely, voters often engage in “dual tasking,” attending to personal affairs (e.g., cooking dinner) while learning about a political candidate (e.g., watching the news). It is therefore important to develop models of candidate evaluation that explicitly consider the role of distraction.

### **Capacity to Correct for Physical Attractiveness: Expertise and Distraction**

Suppression or correction for a stereotype requires cognitive capacity (Bodenhausen & Macrae, 1998; Rahn & Cramer, 1996; Wegener & Petty, 1997). Thus, correction should reduce (or reverse) the physical attractiveness effect when characteristics of the voter and situation provide the voter with sufficient cognitive capacity. We hypothesized that this would be the case when expertise of the voter is high and situational distraction is low.<sup>1</sup> This prediction was tested by measuring voter expertise, manipulating cognitive load (distraction), and manipulating candidate physical attractiveness within the context of a candidate evaluation experiment. Under conditions of high or low cognitive load, voters were asked to evaluate an attractive or unattractive political candidate who endorsed a variety of political issue positions. This experimental approach enabled us to make clear causal inferences regarding the effects of physical appearance on voters' evaluations of a candidate (see Druckman, 2003; Druckman, Green, Kuklinski, & Lupia, 2006)

Hypotheses were derived on the basis of a simple process model of appearance-based stereotyping (see Bodenhausen & Macrae, 1998; Wegener & Petty, 1997, for related conceptualizations). Specifically, it was assumed that visual appearance of a candidate is initially *categorized* as “attractive” (or “unattractive”). Next, the physical attractiveness (or unattractiveness) stereotype is

<sup>1</sup> Psychologists commonly assume that distraction (e.g., digit rehearsal) reduces cognitive capacity among all participants who complete a cognitive task (e.g., Bodenhausen & Macrae, 1998). Yet, Rahn and Cramer (1996) propose that televised presentation of candidate information can produce a mild form of distraction that motivates (i.e., challenges) experts to allocate *more* capacity to the candidate evaluation task. This later effect, however, does not emerge when voters are more strongly distracted (Rahn & Cramer, 1996), as was the case in the present experiments.

*activated*. Then, the physical attractiveness (or unattractiveness) stereotype is *applied* as the voter derives an evaluation of the candidate (i.e., evaluation of the candidate is assimilated toward the stereotype). Lastly, the voter *corrects* for the perceived influence of the physical attractiveness stereotype (Wegener & Petty, 1997). If the voter underestimates the magnitude of the initial assimilation effect, the voter will undercorrect and the assimilation effect will be reduced (but not eliminated). If the voter correctly estimates the magnitude of the initial assimilation effect, the voter will accurately correct and the assimilation effect will be eliminated. If the voter overestimates the magnitude of the initial assimilation effect, the voter will overcorrect and the assimilation effect will be reversed (a contrast effect). In this later case, an unattractive candidate will be rated more positively than an (otherwise equivalent) attractive candidate.

The physical attractiveness stereotype activates traits that are relevant to evaluating a candidate. Under these conditions, the first three stages of processing unfold quickly and require minimal capacity (Bodenhausen & MacCrae, 1998; Sherman, MacCrae, & Bodenhausen, 2000; but see Rahn & Cramer, 1996). That is, stereotypes elicit an initial (uncorrected) response to an individual that is assimilated toward the group stereotype (Bodenhausen & MacCrae, 1998; Fazio, Jackson, Dunton, & Williams, 1995; Wegener & Petty, 1997). Thus, initial impressions of the candidate should be assimilated toward an appearance-based stereotype almost immediately (van Leeuwen & MacCrae, 2004). Correction, however, requires an adequate amount of cognitive resources (Bodenhausen & MacCrae, 1998; Sherman et al., 2000; Wegener & Petty, 1997). This is because correction only occurs if the perceiver identifies and becomes aware of the biasing influence of appearance (Strack & Hanover, 1996; Valentino, Hutchings, & White, 2002; Wegener & Petty, 1997). When cognitive resources are occupied with other matters, individuals are not likely to identify or become aware of this form of bias (Wegener & Petty, 1997). In addition, the actual process of correction entails controlled and deliberative processing which consumes cognitive resources (Bodenhausen & MacCrae, 1998; Sherman et al., 2000; Wegener & Petty, 1997). Thus, stereotype correction primarily occurs when perceivers possess an ample amount of cognitive resources. When this is the case, they typically correct for the perceived influence of a stereotype by adjusting their judgment in a direction opposite to assimilation (Fazio et al., 1995; Wegener & Petty, 1997).

We hypothesized that political expertise would increase a voter's capacity to correct. Political experts are extremely familiar with political issues, and as such, process political information with great efficiency (Fiske, Kinder, & Larter, 1983; Judd & Krosnick, 1989; McGraw, Lodge, & Stroh, 1990; see Smith & Lerner, 1986, for nonpolitical evidence). Thus, when asked to evaluate a candidate, experts can assess their agreement with the candidate's issue stances quickly, without exhausting their cognitive resources (Burdein, Lodge, & Taber, 2006). Accordingly, experts possess the supplemental resources needed to engage in corrective elaboration (Ottati & Isbell, 1996). In contrast, novices process political informa-

tion more slowly and less efficiently. As such, novices are more likely to exhaust their resources when considering the candidate's issue stances. Accordingly, they are less likely to possess the supplemental resources needed to engage in corrective elaboration (Ottati & Isbell, 1996). Thus, it was predicted that candidate physical attractiveness would elicit an assimilation effect among novices. Among experts, however, we expected to find evidence of correction (reduced, eliminated, or reversed assimilation effect).

If our "correction capacity" model is correct, a different pattern should emerge in distracting situations involving high cognitive load. Under these conditions, even experts should fail to possess the resources needed to correct.<sup>2</sup> Thus, a second prediction involves moderation by cognitive load. Under low cognitive load, novices were predicted to assimilate their impression of the candidate toward the physical attractiveness stereotype, whereas experts were predicted to display evidence of correction (reduced, eliminated, or reversed assimilation effect). Under high cognitive load, it was predicted that *both* novices and experts would fail to correct. That is, both novices and experts should assimilate their impression toward the stereotype.

### Symmetric Versus Asymmetric Correction

Do voters correct for *both* physical unattractiveness and attractiveness (symmetric correction)? Or do voters engage in an asymmetric correction process in which they predominantly correct for only one of these biases? In some cases, it is obvious that physical appearance constitutes a completely irrelevant, inappropriate, or illegitimate basis for deriving a judgment of person. In such instances, perceivers may correct for *both* physical attractiveness and unattractiveness (Lambert, Khan, Lickel, & Fricke, 1997; see Wegener & Petty, 1997, for a discussion of perceived legitimacy).

When evaluating a political candidate, however, physical appearance might be associated with charisma, a quality that is relevant to leadership effectiveness (Merolla, Ramos, & Zechmeister, 2007; Pancer, Brown, & Barr, 1999). Under conditions of this nature, correction tends to be asymmetric, occurring primarily for negative stereotypes (Lambert et al., 1997). Presumably, this is because social norms encourage individuals to eliminate prejudice against underprivileged groups. Thus, individuals may often believe it is inappropriate to rely on negative stereotypes when they evaluate a group member (Lambert et al., 1997; Wegener & Petty, 1997). On the other hand, social norms rarely discourage positive stereotyping (e.g., positive stereotyping of ingroup members). For this reason, individuals may be less likely to correct for positive stereotypes. Thus, it was anticipated that correction would be asymmetric and that perceivers would predominantly correct for prejudice against a physically *unattractive* candidate.

<sup>2</sup> See footnote 1.

## Experiment 1

Under nondistracting conditions, participants received a printed description of a political candidate's party affiliation (Democrat) and policy positions accompanied by either a physically attractive or unattractive photograph. Although most of the candidate's issue stances were clear and unambiguous, some were intentionally constructed so as to be ambiguous. After examining this information, participants (a) rated their attitude toward the candidate and likelihood of voting for the candidate, (b) recalled the candidate's issue stances, (c) rated their own position on each issue, (d) reported their interpretation (perception) of the candidate's stands on the ambiguous issues,<sup>3</sup> and (e) completed a measure of political expertise. Among novices, we predicted that physical attractiveness would produce an assimilation effect on attitude toward the candidate and voting likelihood. Among experts, we expected to find evidence of correction (reduced, eliminated, or reversed assimilation).

### Participants, Design, and Procedure

One hundred and fifty-nine college students completed the experiment. Standard cautions regarding generalizing from a college student sample apply. College students are more educated than average and therefore may be able to process political information in a more efficient or systematic manner (Zaller, 1992). On the other hand, related research regarding media effects on political attitudes has found that causal processes operate similarly in student and non-student samples (Druckman & Nelson, 2003; Kuhberger, 1998; Miller & Krosnick, 2000; see Druckman & Kam, Forthcoming, for a general defense of student samples in experimental research). Also, use of a college student sample is beneficial insofar as it holds participant education constant when examining the effect of political expertise. In this fashion, the effect of political expertise can be attributed to variation in domain-specific political knowledge as opposed to individual differences in more general knowledge that are associated with level of education.

Attitude toward the candidate and voting likelihood served as the dependent measures. Candidate physical attractiveness (unattractive vs. attractive) and political expertise (continuous variable) served as the independent variables. "Issue agreement" (the degree to which the participant agreed with the candidate's issue stances), respondent party affiliation, and respondent ideology served as control variables.

<sup>3</sup> Visual cues can produce effects on political judgment that are mediated by biased processing of verbally coded information, but under conditions that differ from those currently investigated (Huddy & Gunnthorsdottir, 2000). In the present experiments, effects of candidate appearance were not mediated by selective recall or biased interpretation of the candidate's issues stances. An explicit presentation of these mediational analyses is therefore omitted from the paper.

Participants were introduced to an experiment concerning “how people form impressions of a political candidate.” They spent nine minutes reading a six-and-one-half-page description of a previously unknown, male political candidate. The description included the candidate’s issue stances, birth date (12-14-55), party (Democratic), and either an attractive or unattractive photograph of a white male that appeared on every page.<sup>4</sup> Fifteen of the candidate’s issue stances were clear and unambiguous (e.g., “voted against a bill that would allow school prayer”). Nine of the candidate’s issue stances were ambiguous (e.g., When asked about the death penalty, the candidate responded “the punishment must fit the crime”). As a whole, the issue stances did not convey an extreme ideological orientation. After reading the description, participants completed a form that measured: (a) attitude toward the candidate and likelihood of voting for the candidate, (b) recall of the candidate’s issue stances (five minute surprise recall task), (c) the participant’s personal position on all of the issues, (d) perception of the candidate’s position on the nine ambiguous issues, as well as (e) political expertise, political interest, cognitive effort expended on the task, party identification, and ideology of the participant.

## Measures

### *Control and Independent Variables*

“Issue Agreement,” respondent partisanship, and respondent ideology served as control variables. Participants reported their agreement with each of the candidate’s unambiguous issue stances on a scale ranging from  $-5$  (strongly disagree) to  $+5$  (strongly agree). Following previous research (e.g., Ottati, 1990; Ottati & Isbell, 1996), these ratings were summed to arrive at an overall “issue agreement” score ( $M = 26.72$ ,  $SD = 11.89$ ). Participants reported their party affiliation on a scale ranging from 1 (strongly Republican) to 7 (strongly Democratic;  $M = 3.54$ ,  $SD = 1.94$ ). Participants reported their ideology on a scale ranging from 1 (extremely conservative) to 7 (extremely liberal,  $M = 3.65$ ,  $SD = 1.50$ ).

The independent variables were candidate attractiveness and respondent political expertise. Attractiveness was manipulated (unattractive versus attractive photograph,  $M = .00$ ,  $SD = .50$ ). Expertise was assessed by administering a political knowledge test (see Delli Carpini, 1993; Ottati & Isbell, 1996, for analogous approaches). The test contained 10 multiple-choice items (e.g., “What position is currently held by Colin Powell?: (a) Secretary of State, (b) House Speaker, (c) Vice-President of the U.S., (d) Senator from Vermont”) and five open-ended items

<sup>4</sup> The description included five sentences containing noncontroversial biographical information (e.g., “He resides in a small suburb”). For each participant, the photograph was selected from a pool of three photographs in the unattractive and attractive conditions, respectively. Riggle et al. (1992) performed a manipulation check that confirmed the photographs successfully manipulated physical attractiveness.

(e.g., “Which governmental body decides if a law is constitutional?”). The number of correct responses served as a continuous measure of expertise ( $M = 7.98$ ,  $SD = 3.17$ , Cronbach’s Alpha = .72).

Political interest was measured at the end of the session. This variable was used to examine the possibility that expertise effects were due to an association of political expertise (ability) with political interest (motivation). Participants rated “how much interest do you have in politics” on a scale ranging from 1 (none at all) to 4 (extremely interested,  $M = 1.16$ ,  $SD = 2.82$ ). For the same reason, a measure of “cognitive effort” expended on the task was collected. Because this measure was unrelated to political expertise ( $r < .08$ ,  $p > .36$  in both experiments), it is discussed no further.

### *Dependent Variables*

Participants rated the candidate on a “thermometer” scale ranging from 0 to 100 with higher numbers indicating more favorable feelings toward the candidate ( $M = 63.89$ ,  $SD = 17.77$ ). Next, participants completed two semantic differential ratings of the candidate. One scale ranged from  $-5$  (dislike) to  $+5$  (like;  $M = 1.70$ ,  $SD = 2.10$ ). The other ranged from  $-5$  (unfavorable) to  $+5$  (favorable;  $M = 1.73$ ,  $SD = 2.00$ ).

These three attitude ratings were normalized and then averaged to create an “attitude” score ( $M = .00$ ,  $SD = .92$ , Chronbach’s Alpha = .95). Participants also rated their likelihood of voting for the candidate on a scale ranging from 0 (unlikely) to 10 (likely;  $M = 5.56$ ,  $SD = 2.60$ ). These ratings were normalized to create a “voting likelihood” score. An “overall evaluation” score was computed by averaging the “attitude” and “voting likelihood” scores ( $M = .00$ ,  $SD = .93$ ). This measure reflects the overall evaluative tone of the perceiver’s (attitudinal and behavioral) response to the candidate.

## **Results**

The analyses employed linear regression with interaction terms. Control variables (issue agreement, partisanship, and ideology), political expertise, and physical attractiveness were entered at step 1. The expertise by attractiveness interaction term was entered as an additional predictor at step 2. As prescribed by Cohen and Cohen (1983), “main effects” of expertise and attractiveness were tested at step 1, whereas the expertise by physical attractiveness interaction effect was tested at step 2.

Linear transformations were performed on the control and independent variables before running the analyses. The control variables were normalized. Physical attractiveness was coded as  $-.5$  (unattractive) or  $+5$  (attractive). Political expertise was rescaled to range from  $-.5$  (novice) to  $+5$  (expert). Given this coding scheme, the coefficient for the physical attractiveness effect reflects the mean difference in



**Table 1.** Predicting Overall Candidate Evaluation Using Hierarchical Regression in Experiment 1 (N = 148)

Variable	Model 1		Model 2	
	B	SE B	B	SE B
Constant	.03	.07	-.02	.07
Party ID	-.17*	.08	-.16*	.08
Ideology	.16 <sup>†</sup>	.08	.16*	.08
Issues	.42***	.07	.44***	.07
Expertise (E)	-.41***	.15	-.39**	.15
Attractiveness (A)	-.09	.13	-.03	.13
E x A			-.92**	.29
R <sup>2</sup>	.29***		.33***	
F for change in R <sup>2</sup>	11.32***		9.92**	

*Note.* Entries are unstandardized regression coefficients and standard errors.

\* $p < .05$ . \*\* $p < .01$ . <sup>†</sup> $p < .10$ .

the dependent variable when comparing the “attractive” and “unattractive” conditions ( $M_{Att} - M_{Unatt}$ ). Similarly, the coefficient for the expertise effect reflects the mean difference in the dependent variable when comparing “experts” to “novices” ( $M_{Exp} - M_{Nov}$ ).<sup>5</sup>

### *Effects of Expertise and Attractiveness on Candidate Evaluation*

The predicted expertise by attractiveness interaction did not significantly differ when predicting “attitude” and “voting likelihood” scores ( $p > .16$ ). Findings are therefore reported using “overall evaluation” as the dependent measure (see Table 1). At step 1, expertise was negatively associated with overall evaluation,  $B = -.41$ ,  $S.E. = .15$ ,  $t(142) = -2.67$ ,  $p = .01$ ,  $\eta^2 = .04$ ,  $.05_p$ .<sup>6</sup> This might indicate experts possess a more negative (baseline) evaluation of politicians in general (see Capella & Jamieson, 1997; de Vreese, 2004, 2005). Step 2 yielded the predicted two-way interaction between expertise and attractiveness,  $B = -.92$ ,  $S.E. = .29$ ,  $t(141) = 3.15$ ,  $p = .002$ ,  $\eta^2 = .05$ ,  $.06_p$  (see Figure 1, Study 1). Physical attractiveness yielded an assimilation effect among novices and a contrast effect among experts. Novices evaluated the attractive candidate ( $M = .39$ ,  $SE = .13$ ) more favorably than the unattractive candidate ( $M = -.04$ ,  $SE = .17$ ),  $B = .43$ ,  $S.E. = .21$ ,  $t(141) = 2.06$ ,  $p < .05$ ,  $\eta^2 = .02$ ,  $.03_p$ . Conversely, experts evaluated the

<sup>5</sup> In both experiments, the linear transformation of expertise scores produced a score of  $-.5$  at the 15<sup>th</sup> percentile (“novice”) and  $+.5$  at the 85<sup>th</sup> percentile of expertise (“expert”). Predicted means (and simple effects) for “novices” and “experts” were estimated at the 15<sup>th</sup> and 85<sup>th</sup> percentile of expertise, respectively.

<sup>6</sup>  $\eta^2$  values without a subscript reflect the eta-squared statistic (or semi-partial correlation squared).  $\eta^2$  values with a “p” subscript reflect the partial eta-squared statistic (or partial correlation squared).

attractive candidate ( $M = -.46$ ,  $SE = .15$ ) more negatively than the unattractive candidate ( $M = .03$ ,  $SE = .11$ ),  $B = -.50$ ,  $S.E. = .18$ ,  $t(141) = -2.70$ ,  $p = .008$ ,  $\eta^2 = .03$ ,  $.04_p$ .

### *Are Expertise Effects Due to Political Interest?*

Political expertise is determined by both cognitive ability and motivation (Bennet, 1995; Prior & Lupia, 2008). Thus, it is not surprising that expertise was associated with political interest ( $r = .37$ ,  $p = .001$ ). When substituting “political interest” for “expertise” in the predictive model, an analogous two way interaction between political interest and attractiveness achieved borderline significance,  $B = 23$ ,  $S.E. = .14$ ,  $t(141) = 1.65$ ,  $p = .102$ ,  $\eta^2 = .01$ ,  $.02_p$ . However, the previously reported interaction between expertise and attractiveness remained significant when controlling for political interest and its interaction with attractiveness,  $B = 90$ ,  $S.E. = .31$ ,  $t(138) = 2.92$ ,  $p = .004$ ,  $\eta^2 = .04$ ,  $.06_p$ . Also, the expertise by attractiveness interaction was *not* significantly reduced when controlling for interest and its interaction with attractiveness ( $p = .48$ ). Thus, the expertise by attractiveness interaction does *not* appear to be due to an association of expertise with political interest (see Rhee & Capella, 1997; for evidence suggesting “expertise” and “interest” are distinct).

## **Discussion**

Previous research suggests that the effect of appearance on voters' evaluations of a candidate is reduced among experts (Druckman, 2003). Study 1 extends upon this work by demonstrating that experts actually *correct* for the physical attractiveness stereotype. Specifically, Study 1 revealed that novices evaluated the attractive candidate more positively than the unattractive candidate (assimilation). Experts overcorrected, evaluating the attractive candidate more *negatively* than the unattractive candidate (contrast). Because experts *overcorrected*, it is clear that they did not merely suppress or ignore physical appearance. If experts merely suppressed or ignored appearance, the attractiveness effect would have been reduced or eliminated, but not reversed among experts. Importantly, this data pattern was not due to an association of expertise with motivation. Thus, it appears that experts possessed the capacity to correct because they were *able* to process the issue information with greater efficiency.

Although Experiment 1 yielded results that are consistent with the proposed model, it possesses two important limitations. First, it is possible that the content or valence of the physical attractiveness stereotype differs among novices and experts. Novices may stereotype attractive candidates more positively (e.g., competent) than unattractive candidates, whereas experts may stereotype attractive candidates more negatively (e.g., vain) than unattractive candidates (Eagly,

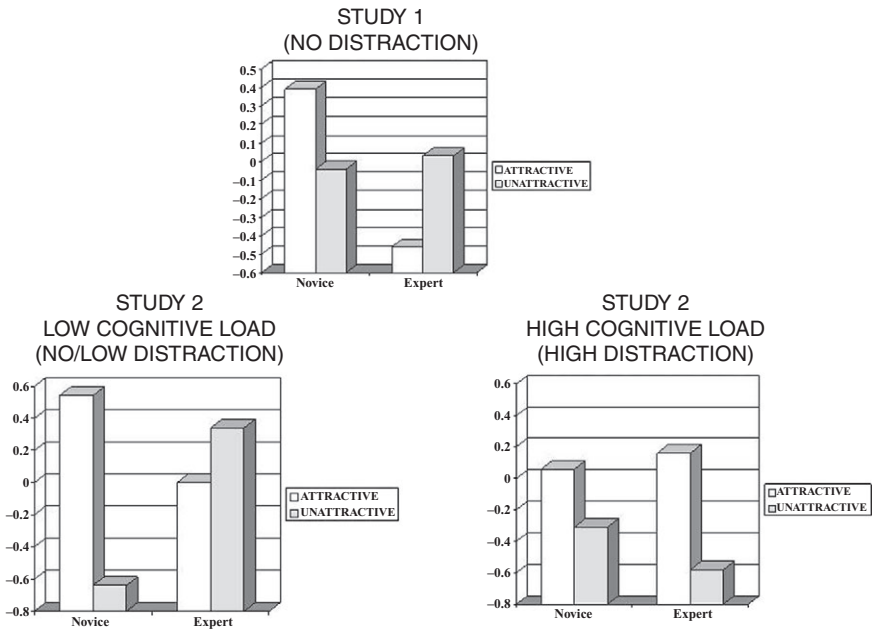
Ashmore, Makhijani, & Longo, 1991). If this is the case, the results of Experiment 1 can be interpreted in an alternative fashion. Namely, novices assimilated their judgment toward a more positive stereotype of attractive (than unattractive) candidates, whereas experts assimilated their judgment toward a more positive stereotype of unattractive (than attractive) candidates. According to this interpretation, correction was not at play in Experiment 1. This limitation is addressed in Experiment 2.

A second limitation associated with Experiment 1 involves the locus of correction. It is not clear whether experts corrected for attractiveness, unattractiveness, or both. It is possible that baseline evaluations of the candidate are equal among experts and novices who are provided with no photograph. If this is true, Figure 1 (Study 1) implies experts corrected for attractiveness and failed to correct for unattractiveness. That is, experts evaluated the attractive candidate less favorably than did novices (i.e., experts corrected for attractiveness), but experts and novices evaluated the unattractive candidate similarly (i.e., experts failed to correct for unattractiveness). On the other hand, it is also possible that experts possess a more negative baseline evaluation of a candidate when provided with no photograph. This possibility is compatible with related research that indicates experts are more cynical and derive more negative character assessments of political figures (Capella & Jamieson, 1997; de Vreese, 2004, 2005). Thus, for reasons that have nothing to do with appearance, experts may evaluate the candidate more negatively in *both* the attractive and unattractive condition. This *main* effect of expertise is positively confounded with correction in the attractive candidate condition, and negatively confounded with correction in the unattractive condition. In Figure 1 (Study 1), this can produce the illusion of correction in the attractive condition, and the illusion of no correction in the unattractive condition. Post-Test 1a and Experiment 2 were designed to illuminate this possibility and provide a more appropriate test of the asymmetric correction hypothesis.

### Post-Test 1a

Although it is doubtful that expertise elicits negative evaluations of a candidate in all circumstances (e.g., Ottati & Isbell, 1996), research confirms that expertise is associated with political cynicism under some circumstances. Because this effect involves a tendency for experts to be critical of a candidate's character (Capella & Jamieson, 1997; de Vreese, 2004, 2005), it may be most evident when unethical political practices are highlighted by the media. This was indeed the case in Experiment 1, which was conducted in the state of Illinois at a time when Governor George Ryan faced accusations of corruption that ultimately landed him in jail.

Post-Test 1a, also conducted during a notable political scandal (Governor Spitzer's involvement with a prostitute), directly assessed the relation between political expertise and baseline evaluations of a political candidate. Under



**Figure 1.** Predicted mean candidate evaluation as a function of distraction, political expertise, and physical attractiveness.

nondistracting conditions, 35 participants received a printed description of a political candidate containing a mixture of information that was designed to produce neither a strongly positive or negative impression of the candidate. Information pertaining to the candidate's visual appearance, specific issue stances, and party membership was *not* presented. This provided participants with a "blank screen" on which baseline expectations could be "projected." After reading about the candidate, participants completed the same outcome measures assessed in Experiment 1. "Overall candidate evaluation" scores were predicted using partisanship and ideology as control variables and political expertise as the independent variable.

Political expertise exerted a strong negative effect on candidate evaluation, with experts ( $M = -.49$ ,  $SE = .27$ ) evaluating the candidate much more negatively than novices ( $M = .53$ ,  $SE = .36$ ),  $B = -1.02$ ,  $S.E. = .49$ ,  $t(31) = -2.07$ ,  $p < .05$ ,  $\eta^2 = .12$ ,  $.12_p$ . Thus, under conditions similar to those associated with Experiment 1 (i.e., presence of a notable political scandal), experts possessed more negative baseline evaluation of a political candidate. As previously noted, this can produce the illusion that experts correct for attractiveness and fail to correct for unattractiveness. Clearly, the results of Experiment 1 do *not* enable one to conclude that correction effects are localized or limited to the attractive condition.

## Experiment 2

Experiment 2 added a manipulation of distraction (cognitive load) to the design. This was done to address four objectives. The first was to demonstrate that a more direct manipulation of cognitive capacity would reveal that correction is eliminated when cognitive resources are compromised (high distraction/load). The second was to discount the stereotype content interpretation of Experiment 1, an interpretation that suggests correction was not at play. A third objective was to more directly assess whether experts correct for attractiveness, unattractiveness, or both. A fourth objective was to explore the possibility that cognitive load might reduce stereotype *activation* among novices.

The alternative (stereotype content) interpretation suggests that novices and experts both assimilated their impressions toward a physical attractiveness stereotype (albeit of opposite valence). According to this interpretation, novices and experts *both* failed to correct for the stereotype. If this is true, the pattern that emerged in Experiment 1 (low distraction/load) should also emerge under conditions of high distraction (high load). That is, if both novices and experts failed to correct under conditions of low load, this should continue to be the case under conditions of high load. A cognitive load manipulation should fail to moderate this pattern.

In contrast, the originally proposed model presumes that novices and experts both share a more positive stereotype of attractive than unattractive people. Novices assimilate their impressions toward this stereotype, and fail to possess the capacity to correct. Experts initially assimilate their impressions toward this stereotype, but possess the capacity to correct for this bias. Under low load conditions, this produces a physical attractiveness assimilation effect among novices and a reduced, eliminated, or reversed assimilation effect among experts. Under high cognitive load, however, experts should lose their capacity to correct. Thus, under high cognitive load conditions, *both* novices and experts should fail to correct. That is, *both* novices and experts should assimilate their impressions toward a stereotype that is more positive for attractive than unattractive candidates. Thus, cognitive load should moderate the pattern of results.

Experiment 2 also provides a more appropriate test of the asymmetric correction hypothesis. As noted previously, Experiment 1 does not enable one to determine if experts correct for attractiveness, unattractiveness, or both. This is because, when examining the simple effect of expertise within the attractive or unattractive condition, it is impossible to disentangle “correction” effects from the effect of political cynicism. Experiment 2 circumvents this problem by focusing on the simple effect of cognitive load among political experts within the attractive and unattractive condition. This enables one to test the asymmetric correction hypothesis while holding individual differences in expertise constant. Specifically, if experts correct for attractiveness, they should evaluate the attractive candidate more positively under high load (no capacity to correct) than low

load (capacity to correct). Alternatively, if experts correct for unattractiveness, they should evaluate the unattractive candidate more negatively under high load (no capacity to correct) than low load (capacity to correct). As previously noted, we originally anticipated that experts would primarily correct for physical unattractiveness.

Experiment 2 also explored the possibility that cognitive load might reduce stereotype *activation* among novices (see Rahn & Cramer, 1996). In an impression formation task, cognitive load frequently reduces stereotype correction or inhibition, but rarely reduces stereotype activation (Bodenhausen & MacCrae, 1998). Cognitive load can reduce stereotype activation, but this only occurs when the stereotype is irrelevant to the perceiver's objective (Bodenhausen & MacCrae, 1998). For example, cognitive load reduces activation of the Asian stereotype when the perceiver's objective is to complete word fragments appearing on cards held by an Asian card turner (Gilbert & Hixon, 1991). In the present case, however, a candidate's appearance conveys information that is relevant to deriving an impression of the candidate. For example, the perceiver might use the candidate's appearance to infer the candidate's level of charisma, a characteristic that is relevant to leadership effectiveness (Merolla et al., 2007; Pancer, Brown, & Barr, 1999). Under conditions of this nature, cognitive load commonly fails to reduce stereotype activation (Bodenhausen & MacCrae, 1998).

What occurs, however, when voters encounter conditions of *massive* cognitive load? Perhaps massive load can reduce activation of the physical attractiveness stereotype even though it is relevant to the voter's candidate evaluation objective. This might occur when novices are placed in a high distraction condition. Under these circumstances, novices are "doubly loaded." Political information pertaining to the candidate is difficult for them to process, and therefore, resource depleting. In addition, situational distraction depletes the novices' resources even further. Perhaps, under these massively loaded conditions, stereotype activation will be inhibited. If this is the case, distraction should *reduce* the attractiveness effect among political novices.

### Participants, Design, and Procedure

120 college students completed the experiment. The procedure and design were the same as Experiment 1 with one major exception. A manipulation of "cognitive load" (i.e., distraction) was incorporated into the design. Participants assigned to the "low distraction" condition acquired the candidate information under nondistracting conditions as in Experiment 1. However, participants assigned to the "high distraction" condition rehearsed an 8-digit number string (e.g., 6927-1473) while reading the candidate information, ostensibly for purposes of later recall. Distraction (low versus high) served as an additional independent variable in the design ( $M = .00$ ,  $SD = .50$ ).

## Results

In the regression analyses reported below, the control variables were issue agreement ( $M = 26.58$ ,  $SD = 12.24$ ), partisanship ( $M = 4.10$ ,  $SD = 2.18$ ), and ideology ( $M = 3.66$ ,  $SD = 1.61$ ). The independent variables were cognitive load (low versus high), expertise ( $M = 8.66$ ,  $SD = 3.18$ ,  $\text{Alpha} = .73$ ), and attractiveness ( $M = .00$ ,  $SD = .50$ ). The dependent measures were identical to those used in Study 1. Thermometer ( $M = 63.11$ ,  $SD = 17.97$ ), liking ( $M = 1.57$ ,  $SD = 2.33$ ), and favorability ratings ( $M = 1.48$ ,  $SD = 2.18$ ) were normalized and averaged to create an “attitude” score ( $M = .00$ ,  $SD = .93$ ). The “attitude” and “voting likelihood” scores ( $M = 5.54$ ,  $SD = 2.47$ ) were normalized and averaged to create an “overall evaluation” score ( $M = .00$ ,  $SD = .93$ ).

The control and independent variables were entered and tested at step 1. Two way interactions involving load, expertise, and attractiveness were entered and tested at step 2. The three-way interaction between load, expertise, and attractiveness was entered and tested at step 3 (Cohen & Cohen, 1983). All variables were rescaled in the same manner as in Study 1. Cognitive load was coded as  $-.5$  (low) and  $+.5$  (high).

### *Effects of Load, Expertise, and Attractiveness on Candidate Evaluation*

Findings were virtually identical when predicting “attitude” and “voting likelihood” scores. Effects involving attractiveness did not differ when comparing these dependent measures ( $p > .39$  in all cases). Thus, results are reported using “overall evaluation” as the dependent measure (see Table 2). At step 1, attractiveness was positively associated with candidate evaluation,  $B = .43$ ,  $S.E. = .17$ ,  $t(105) = 2.59$ ,  $p = .011$ ,  $\eta^2 = .05$ ,  $.06_p$ . In addition, a negative effect of load on candidate evaluation achieved borderline significance,  $B = -.29$ ,  $S.E. = .16$ ,  $t(105) = -1.77$ ,  $p = .08$ ,  $\eta^2 = .02$ ,  $.03_p$ . Interestingly, in contrast to Experiment 1, expertise did not produce a negative effect on candidate evaluation at step 1. This may be because, in contrast to Experiment 1, Experiment 2 was not conducted during any notable political scandal.

At step 2, the two-way interactions were nonsignificant ( $p > .16$  in all cases). Step 3 yielded the predicted interaction between cognitive load, expertise, and attractiveness,  $B = 1.90$ ,  $S.E. = .84$ ,  $t(101) = 2.27$ ,  $p = .025$ ,  $\eta^2 = .04$ ,  $.05_p$  (see Figure 1, Study 2). The low load condition replicates Experiment 1. In this condition, the expertise by attractiveness interaction was significant,  $B = -1.52$ ,  $S.E. = .58$ ,  $t(101) = 2.61$ ,  $p = .01$ ,  $\eta^2 = .05$ ,  $.06_p$ . Novices assimilated under low load, evaluating the attractive candidate ( $M = .54$ ,  $SE = .24$ ) more favorably than the unattractive candidate ( $M = -.64$ ,  $SE = .32$ ),  $B = 1.18$ ,  $SE = .41$ ,  $t(101) = 2.91$ ,  $p = .004$ ,  $\eta^2 = .06$ ,  $.08_p$ . Under low load, experts evaluated the attractive candidate ( $M = .00$ ,  $SE = .25$ ) less favorably than the unattractive candidate ( $M = .34$ ,  $SE = .22$ ). However, these means did not significantly differ ( $p = .31$ ). This means

**Table 2.** Predicting Overall Candidate Evaluation Using Hierarchical Regression in Experiment 2 (N = 112)

Variable	Model 1		Model 2		Model 3	
	<i>B</i>	<i>SE B</i>	<i>B</i>	<i>SE B</i>	<i>B</i>	<i>SE B</i>
Constant	-.02	.08	-.02	.08	-.06	.08
Party ID	-.17	.12	-.13	.13	-.07	.13
Ideology	.12	.12	.10	.12	.08	.12
Issues	.25**	.09	.27**	.09	.28**	.09
Load (L)	-.29 <sup>+</sup>	.16	-.23	.17	-.23	.17
Expertise (E)	.08	.21	.05	.21	.07	.21
Attractiveness (A)	.43*	.17	.47**	.17	.49**	.17
L x E			-.22	.42	-.31	.42
L x A			.26	.34	.14	.33
E x A			-.60	.43	-.57	.42
L x E x A					1.90*	.84
<i>R</i> <sup>2</sup>	.19***		.21**		.25***	
<i>F</i> for change in <i>R</i> <sup>2</sup>	4.03***		.91		5.17*	

*Note.* Entries are unstandardized regression coefficients and standard errors.

\* $p < .05$ . \*\* $p < .01$ . + $p < .10$ .

the assimilation effect was eliminated (but not significantly reversed) among experts in the low load condition. Nevertheless, as was the case in Study 1, novices assimilated whereas experts clearly displayed evidence of correction in the low load condition. A completely different pattern emerged in the high load condition. As predicted, the expertise by attractiveness interaction was *not* significant in the high load condition ( $p = .53$ ). Assimilation occurred regardless of voter expertise, with the attractive candidate ( $M = .11$ ,  $SE = .17$ ) being evaluated more favorably than the unattractive candidate ( $M = -.45$ ,  $SE = .17$ ),  $B = .56$ ,  $S.E. = .24$ ,  $t(101) = 2.34$ ,  $p = .02$ ,  $\eta^2 = .04$ ,  $.05_p$ .

Did experts correct for attractiveness, unattractiveness, or both? If experts corrected for attractiveness, they should have evaluated the attractive candidate less favorably in the low load condition (high capacity to correct) than in the high load condition (low capacity to correct). In fact, the effect of load was nonsignificant for experts in the attractive condition ( $p = .63$ ). Thus, it appears that experts failed to correct for attractiveness in the low load condition. If experts corrected for unattractiveness, they should have evaluated the unattractive candidate more favorably in the low load condition (high capacity to correct) than in the high load condition (low capacity to correct). This effect did indeed emerge,  $B = -.93$ ,  $S.E. = .36$ ,  $t(101) = 2.57$ ,  $p = .012$ ,  $\eta^2 = .05$ ,  $.06_p$ . This suggests that experts *did* correct for unattractiveness in the low load condition.<sup>7</sup>

<sup>7</sup> Under conditions that differ from those presently investigated, stereotype correction is primarily prompted when the stereotype contradicts individuating issue information (Rahn & Cramer, 1996). If



If load reduced stereotype activation among novices, it should reduce the stereotype assimilation effect among novices. The assimilation effect was significant for novices in the low load condition,  $B = 1.18$ ,  $S.E. = .41$ ,  $t(101) = 2.91$ ,  $p = .004$ ,  $\eta^2 = .06$ ,  $.08_p$ . The assimilation effect was reduced to a nonsignificant level for novices in the high load condition ( $p = .37$ ). But, these two effects did *not* significantly differ ( $p = .16$ ). Thus, although the pattern of means suggests load reduced stereotype activation among novices, this effect did not achieve a conventional level of significance.

### *Are Expertise Effects Due to Political Interest?*

Political interest ( $M = 2.00$ ,  $SD = .61$ ) was associated with expertise ( $r = .52$ ,  $p = .001$ ). However, when substituting “interest” for “expertise” in the predictive model, a three way interaction between load, interest, and attractiveness completely failed to emerge ( $p = .54$ ). Thus, the interaction between load, expertise, and attractiveness does not appear to be due to an association of expertise with interest.

## **Discussion**

The results of Experiment 2 suggest that expertise and cognitive load are associated with the capacity to correct for the physical attractiveness stereotype, and that correction primarily occurs for physical *un*attractiveness (not attractiveness). This asymmetric pattern was predicted to emerge because stereotype-correction processes are primarily initiated when a stereotype is perceived to be an inappropriate basis of judgment. Thus, it appears that reliance upon a candidate’s appearance is perceived as inappropriate primarily when the candidate is physically *un*attractive (not attractive). Expertise did not produce a direct, negative effect on candidate evaluation in Experiment 2. Perhaps this is because Experiment 2 was conducted at a time that was relatively free of political scandal. Under such circumstances, concerns about personal character and integrity may be less prominent among political experts.

### **Post-Test 2a**

Perhaps the “attractive” photographs failed to activate a positive stereotype that differed from the typical or average political candidate. If this was the case, correction may have failed to emerge in the attractive condition simply because there was no need to correct for any “bias” in the attractive condition. Post-Test 2a

this occurred in the present study, experts should have corrected for attractiveness when they disagreed with the candidate’s issue stances, but corrected for unattractiveness when they agreed with the candidate’s issue stances. This pattern did not emerge in the present study. Correction effects were not moderated by issue agreement among experts ( $p > .75$  in both the attractive and unattractive condition).

confirmed this was *not* the case. Twenty-eight participants were presented with the attractive photographs used in Experiments 1 and 2, accompanied by no additional information. Participants rated their “first impression” of the politician depicted in each photograph using the attitude and voting likelihood scales. Participants also rated the “average politician” on these scales. Ratings of the attractive photographs and “average” politician were counterbalanced to control for order effects.

Overall Evaluation scores were computed for the “attractive” and “average” candidate. Using a linear transformation, these scores were rescaled to possess a standard deviation equal to 1.00, with values of .00 reflecting the neutral midpoint of the scale (“Rescaled Overall Evaluation”).<sup>8</sup> Politician Type (attractive versus average) served as a within subject independent variable and “Rescaled Overall Evaluation” served as the dependent variable. As expected, evaluation of the “attractive” politician was more favorable ( $M = 1.14$ ,  $S.D. = .93$ ) than evaluation of the “average” politician ( $M = .07$ ,  $S.D. = .85$ ),  $F(1,26) = 23.70$ ,  $p < .01$ ,  $\eta^2 = .48$ ,  $.48_p$ . Clearly, the attractive photographs activated a positive stereotype that differs from the average or typical politician. Thus, the attractive condition did *not* fail to provoke correction simply because it failed to activate a positive stereotype.

### Post-Test 2b

Post-Test 2b demonstrates that participants are more likely to believe physical appearance is an inappropriate basis for judging a political candidate when the candidate’s appearance is unattractive (than attractive). Participants were instructed: Sometimes we may deliberately use a piece of information as a basis for judgment. Other times we may try to avoid using this information. Assume you are provided with information about a male political candidate that includes his photograph, party membership, positions on the issues, age, marital status, number of children, and place of residence. Assume that the photograph conveys an *UNATTRACTIVE* [*ATTRACTIVE*] *PHYSICAL APPEARANCE*. To what extent would you use or avoid using, the candidate’s *UNATTRACTIVE* [*ATTRACTIVE*] *PHYSICAL APPEARANCE* when rating the degree to which you like versus dislike the candidate?

Participants responded on a scale ranging from 0 (“I would try to avoid using this information”) to 10 (“I would use this information a great deal”). Participants

<sup>8</sup> Participants rated the “average” and the three “attractive” politicians. Each target was rated using three attitude items and one voting likelihood item. Each rating was averaged across the three “attractive” politicians. By collapsing the data in this fashion, the “attractive” and “average” politician conditions each contained four scores per participant (three attitude scores and one voting likelihood score). Using this data configuration, a linear transformation was performed on each score. Specifically, each score was rescaled to possess a standard deviation of 1.00, with values of .00 reflecting the neutral midpoint of the scale. The rescaled attitude scores were averaged to produce a summary attitude toward “attractive” and “average” politicians, respectively. Within each Politician Type condition, an “overall evaluation” score was computed by averaging the summary attitude score with the voting likelihood score.

made this rating twice, once for “unattractive” and once for “attractive” physical appearance. Then, participants completed a (historically updated) measure of political expertise that was virtually identical to that used in Experiments 1 and 2.

Political expertise served as a continuous, between subjects predictor ( $M = 10.42$ ,  $SD = 2.80$ ). Physical attractiveness (attractive versus unattractive) served as a within subject independent variable. Appropriateness ratings served as the dependent variable. Effects of expertise, physical attractiveness, and their interaction were tested. Participants indicated they would be more likely to avoid using unattractive appearance ( $M = 3.41$ ,  $SD = 2.57$ ) than attractive appearance ( $M = 4.51$ ,  $SD = 2.77$ ) when evaluating a political candidate,  $F(1,59) = 9.46$ ,  $p = .003$ ,  $\eta^2 = .14$ ,  $.16_p$ . No other significant effects emerged. Thus, participants were more likely to believe physical appearance is an inappropriate basis for evaluating a political candidate when the candidate’s appearance is *unattractive* (than attractive).

### General Discussion and Conclusion

Voters initially evaluate an attractive political candidate more favorably than an (otherwise equivalent) unattractive candidate. In some cases, however, voters correct for this effect in an attempt to arrive at an unbiased evaluation of a political candidate. The physical attractiveness effect is reduced if the voter undercorrects, eliminated if the voter adequately corrects, and reversed if the voter inadvertently overcorrects. Correction occurs when voters possess both the ability and motivation to correct. This condition exists when voters possess adequate amounts of cognitive capacity (high ability) and they believe it is inappropriate to rely on physical appearance (high motivation). The capacity to correct is high among political experts who learn about a political candidate under nondistracting conditions. Moreover, voters believe it is inappropriate to rely on appearance primarily when they encounter an *unattractive* (not attractive) political candidate. Thus, correction occurs when experts evaluate an unattractive candidate under nondistracting conditions. Under these circumstances, the physical attractiveness effect was eliminated in one experiment and reversed in the other experiment.

Does this mean that campaign strategies designed to optimize a candidate’s visual appearance are unnecessary or counterproductive? It most certainly does not. In this regard, it is important to note that correction required the *conjunction* of high voter expertise, low distraction, and unattractive appearance in Experiment 2. Correction failed to occur when *any one* of these conditions was absent. That is, political novices failed to correct regardless of the circumstances, distraction eliminated correction regardless of voter expertise, and so on. Thus, although the present work identifies specific conditions in which the physical attractiveness effect is eliminated or reversed, it also identifies multiple conditions in which candidate appearance will serve as a notable determinant of voters’ attitudes

toward a political candidate. For the most part, political analysts are probably correct when they assume that voters evaluate attractive candidates more favorably than unattractive candidates.

Future work is needed to extend the present findings to different contexts and populations. For example, a different pattern of findings might emerge when manipulating the physical attractiveness of a female candidate. Research suggests that physically attractive women lose their perceived advantage when performing masculine tasks (Cash, 1990), and politics has been traditionally regarded as a male-dominated field. Moreover, although attractiveness is advantageous for females applying to nonmanagerial positions, it provides no advantage to women applying for managerial positions that require leadership ability within a work organization (Heilman & Saruwatari, 1979). Physical attractiveness also fails to increase the status or power of females within social groups that engage in face-to-face interaction (Cameron, Oliver, Leltner, & King, 2001). For these reasons, physical attractiveness may fail to yield more favorable evaluations of a female political candidate, especially if she seeks a high-level political office (but see Chiao, Bowman, & Gill, 2008; Lewis & Bierly, 1990).

It is also important to consider the effect of physical attractiveness in other segments of the voting population. In the present experiments, use of a college sample enabled us to control for general education when examining the effect of political expertise. Nevertheless, ability and motivation to correct for physical attractiveness might differ when considering other segments of the population (e.g., older or less educated voters). Additional work is needed to address these and related questions.

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