

# Tinder Decides: Mate Desirability Influences Votes

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Democracy is premised on voters' ability to identify qualified candidates for office. However, extensive evidence suggests that candidate appearance has a non-trivial impact on voter decision-making. Voters' evaluations of candidates' photos for perceived competence, attractiveness, dominance, and sex typicality predict real election outcomes. Social scientists often argue that the brain's tendency to take cognitive shortcuts explains this phenomenon, but this still fails to explain why the brain takes one shortcut over another. This article provides experimental and observational evidence that, when visual cues are provided, the candidates whom voters believe to be most qualified are those perceived to be most desirable as romantic partners. I find evidence of this "Tinder mentality" even in reasonably high-information real elections where voters see candidates' other qualifications. Voters select female candidates on their physical attractiveness and apparent nurturing ability, and male candidates on their attractiveness and ability to provide for their families. When aggregated, these tendencies regularly affect election outcomes and may have attendant pernicious consequences for descriptive representation of women, as well as for democratic accountability in locales that hold direct elections.

Supplemental materials available at <https://bit.ly/2Mved98>

How do we judge whether candidates are qualified to hold office? Worryingly, research suggests that visually appealing politicians fare better with voters than their qualifications alone would predict (Ahler, Citrin, Dougal, & Lenz, 2016; Banducci et al., 2008; Lawson et al., 2010; Todorov et al., 2005). Other evidence suggests that voters find it especially challenging to assess female candidates' qualifications objectively: even though women tend to be more qualified and more effective in office than men (Anzia & Berry, 2011; Fulton, 2012; Milyo & Schosberg, 2000), voters are more likely to inquire about women's qualifications than men's and to penalize women when their qualifications are in doubt (Ditonto, 2016; Ditonto, Hamilton, & Redlawsk, 2014).

Evaluating candidates' qualifications is hard, which incentivizes the use of heuristics. It may therefore seem unsurprising that we rely on snap judgments of appearance instead. Nevertheless, these empirical findings provide an incomplete picture of the psychological mechanisms behind this heuristic. Looking at faces may be easier than analyzing complex political information, but scholars do not yet understand what makes someone "look" qualified—let alone whether such a heuristic might have different implications for men's and women's candidacies. Moreover, evaluating candidate qualifications appears to be a difficult task whether voters have a great deal of information or insufficient information about the candidates.

When faced with a problem that is difficult to solve, humans often inadvertently substitute an easier one (Tversky & Kahneman, 1974). I argue that when presented with the difficult and unfamiliar problem of evaluating candidate qualifications we instead inadvertently ask a question familiar because humans have had to answer it for millennia. Who do we think would be a good partner? Who would we trust with our kids? Who would we want to see every day?

I present evidence from both survey experiments and analyses of real elections in Oregon that perceived mate desirability—a more familiar heuristic—predicts voting behavior. I find that when shown a photo, voters exhibit a "Tinder mentality," substituting an assessment of the

individual's appeal as a long-term partner for a more holistic evaluation of the candidate's qualifications in both surveys and in real elections. In keeping with other research on mate selection, this means that voters evaluate female candidates primarily on their physical attractiveness and secondarily on their perceived ability to nurture, while voters evaluate male candidates primarily on their perceived ability to provide for and protect others and secondarily on their physical attractiveness (Buss & Schmitt, 1993; Darwin, 1888; Eagly & Wood, 2013).

This behavior has troubling consequences for descriptive representation and democratic accountability. Candidates running for office who do not fit a socially prescribed mold will face a harder road to office, i.e., discrimination. For instance, voters could select a man who is politically inexperienced, but who appears to be a good provider and protector, over a woman who is more politically experienced but lacks sex appeal. Moreover, increasing amounts of available information, as is case in the U.S. in the twenty-first century, may not increase the likelihood that voters make better decisions about which candidate to vote for. If a person-centered evaluation task, rather than a low-information setting, is sufficient to trigger use of heuristics, candidate-centered elections in many polities may be influenced by such cognitive shortcuts.

## THEORY

We base our decisions on superficial information like candidates' appearance because modern direct democratic elections pose a formidable test of citizen competence. In the United States, thousands of offices are now elective, from president down to mayor and tree warden. Scholars of elections dating back to at least Berelson et al. (1954) suggest that under these circumstances most individuals fall short of fully informed, economically rational voting behavior. Instead, our behavior suggests that we are cognitive misers attempting to maximize the utility of the limited information we do have while avoiding the time-consuming search needed for a fully

informed vote (e.g., Conover & Feldman, 1989; Redlawsk, 2004). In many low-salience races, particularly at the state and local levels, sleuthing out information about candidates is the province of only the most sophisticated voters.<sup>1</sup> Moreover, many of these candidates are new to politics and thus have no record. Given this reality, the scholarship on heuristics examines whether and to what extent voters can approximate full information given a limited information environment.

As Tversky and Kahneman (1974) point out, “these heuristics are quite useful, but sometimes they lead to severe and systematic errors” (p. 1124). Heuristics operate by providing simplifying principles; these principles are revealed when framing the same decision problem in different ways leads to different (and predictable) outcomes (Tversky & Kahneman, 1981, p. 453). For instance, a shape that is slightly blurred at the edges will usually be perceived as farther away than one that is crisply outlined; an easy question, “how blurry is the object?” has thus been substituted for the more involved “exactly how far away is the object?” (Tversky & Kahneman, 1974). This process, called attribute substitution, saves time and cognitive effort—without such simplifications, we would be unable to navigate through a busy intersection—but has the potential to produce systematic distortions.

Voters may be even more likely to substitute assessments of other traits for female candidates’ qualifications because women are stereotyped as less qualified. Though a major review of the American literature on gender and politics concluded that “discrimination has fallen out of favor as an explanation for women’s absence from electoral politics. The public’s attitudes toward women in politics have evolved” (Lawless, 2015, p. 352), other work suggests that voters may routinely

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<sup>1</sup> In an era of party polarization, the simplicity and high signal-to-noise ratio conveyed by candidate partisanship and endorsements make for straightforward voting heuristics. Accordingly, political scientists tend to look upon these heuristics more favorably (e.g., Arceneaux & Kolodny, 2009) than they do more complex heuristics like retrospective voting (e.g., Achen & Bartels, 2016; Healy & Malhotra, 2013). Nonetheless, in many—perhaps most—of the electoral races in which Americans are eligible to vote, heuristics based on partisanship are irrelevant or serve little purpose.

overlook female candidates' qualifications. Psychological studies find that women are stereotyped as warm, while men are stereotyped as competent (Fiske, Cuddy, & Glick, 2007; Fiske, Cuddy, Glick, & Xu, 2002). Studies of real elections find that female candidates are typically better-qualified than male candidates (Fulton, 2012; Milyo & Schosberg, 2000), and secure more benefits for their constituents once in office (Anzia & Berry, 2011). In interviews with political elites, Dittmar (2015) finds evidence of a broad conviction that women must prove their credentials while men's are assumed. Experimental studies show that voters doubt women's qualifications and penalize women with dubious qualifications more harshly (Ditonto, 2016; Ditonto et al., 2014). Perhaps most concerningly, providing voters with explicit information about women's qualifications attenuates but does not eradicate bias against female candidates in a significant portion of voters (Mo, 2015). In other words, if voters fail to perceive or focus on a woman's qualifications, they may instead be evaluating other aspects of her person or platform, including appearance.

If the nature of modern direct elections makes it challenging for voters to assess numerous candidates' qualifications, and gender stereotypes exacerbate this problem for voters evaluating women, what criteria might be substituted instead? Significant evidence suggests that candidate appearance has a non-trivial impact on voters' behavior. Voters' evaluations of candidates' photos for perceived competence (Todorov, Mandisodza, Goren, & Hall, 2005; Olivola & Todorov, 2010; Lawson, Lenz, Baker, & Myers, 2010; Lenz & Lawson, 2011), attractiveness (Little, Burriss, Jones, & Roberts, 2007; Banducci et al., 2008; Little, Jones, & DeBruine, 2011), dominance (Little et al., 2007), and sex typicality (Carpinella & Johnson, 2013b, 2013a; Hehman, Carpinella, Johnson, Leitner, & Freeman, 2014; Carpinella, Hehman, Freeman, & Johnson, 2015) all predict both experimental and real election outcomes.<sup>2</sup>

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<sup>2</sup> Though some research raises questions about whether this effect reflects strategic candidate entry rather than voter preferences (Atkinson, Enos, & Hill, 2009), more recent experimental work suggests that photos

Researchers frequently ascribe these behaviors to a failure of the brain's System 1/System 2 processing. The intuitive System 1, upon seeing a candidate, offers an automatic, valenced response (e.g., "This candidate is good-looking") that the lazy but rational System 2 fails to detect or correct, influencing subsequent judgments of the candidate (Kahneman, 2011; see Mo, 2015, p. 357 and Todorov et al., 2005, p. 1624). Nevertheless, the appearance literature lacks an explanation for why so many conceptually distinct measures should all meaningfully predict voting behavior. It seems implausible that such findings are compatible because different traits share common physical features: babyfacedness appears to predict competence (Poutvaara, Jordahl, & Berggren, 2009), testosterone-driven sexual dimorphism predicts dominance (Little et al., 2007), and facial symmetry, attractiveness (Little et al., 2011). Yet many of these features are typically incompatible (e.g., babyfacedness and high testosterone expression). Likewise, Spezio et al. (2012) find that when candidates' faces are hidden in photos, respondent evaluations of the non-facial cues in photos still predict election outcomes. One possibility is that each of these traits represents an aspect (of variable importance) of a more complex assessment of socially prescribed partner desirability.

## ARGUMENT

*"Powerful men are sexy, sexy women are powerful, and these propositions are not at all the same." – Kathleen Jamieson (1995, p. 151)*

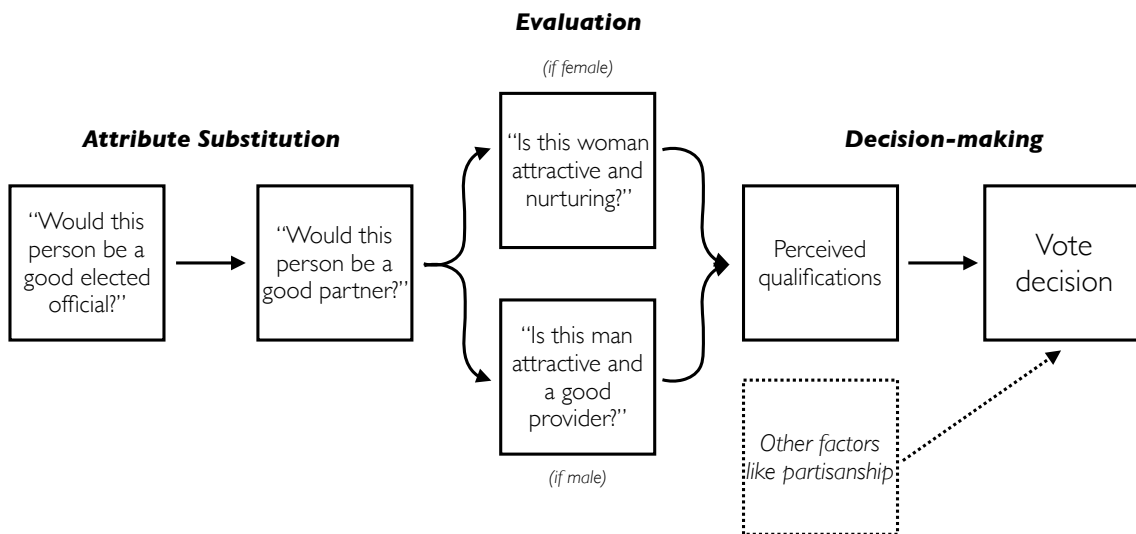
I argue that voters employ a three-step process to evaluate candidates. First, faced with the hard problem of assessing candidate qualifications, voters will engage in attribute substitution, inadvertently assessing instead a more familiar question: how appealing a candidate seems as a long-term partner. Second, during the assessment itself, voters will judge female and male candidates on

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have effects in real-world elections (Ahler, Citrin, Dougal, & Lenz, 2016), and the findings hold across a number of countries and levels of elections (Lawson, Lenz, Baker, & Myers, 2010).

different criteria. Third, this information will be turned back into what the voter believes is an assessment of the candidate’s qualifications, which is then combined with other non-mate criteria (e.g., partisanship) to make a vote decision. Figure 1 outlines the proposed psychological process.

This type of task is not, in fact, unfamiliar to the human brain: to vote for candidates, we must decide whether we want to make some reasonably long-term, albeit impersonal, commitment to a stranger. Whether one believes that the criteria on which we evaluate potential for long-term partnership reflects evolutionary strategy, culturally instilled preference, or some combination of the



two, the reality is that we spend years of our lives evaluating mate potential—not just to find our own partners, but on behalf of friends and relatives as well—and mere days voting. The familiarity of the former task and unfamiliarity of the latter could not be more stark. In other words, we “know” how to evaluate mate desirability. We do not “know” how to assess a candidate’s fitness for office. In the face of uncertainty, our choices will err towards candidates who we believe make appealing partners. This generates the first hypothesis:

**H1: voters will judge candidates’ faces against the traits of an ideal mate.**

Attribute substitution allows our lazy System 2 to reduce a holistic evaluation of a candidate's qualifications to a quick assessment of mate desirability carried out by System 1. In Kahneman and Tversky's nomenclature, an assessment of mate desirability might be termed a representativeness heuristic:<sup>3</sup> "does this person resemble an ideal partner?" Other psychologists call the same phenomenon judgment against a prototype (e.g., Johnson, Murphy, Zewdie, & Reichard, 2008). Regardless of nomenclature, the expectation is that people compare to an ideal, rather than on their own personal preferences.

The literature examining ideal mate criteria is contentious, to say the least. Darwin (1888) originally developed the theory of sexual selection to explain speciation, and subsequent evolutionary biologists and psychologists expanded the theory, arguing that the relative costliness of reproduction for each sex determines mate preferences: men select female partners primarily on their physical attractiveness and secondarily on their apparent nurturing ability, while women select men about equally on their ability to provide for and protect their families and on their physical attractiveness (Buss, 1989; Buss & Barnes, 1986; Buss & Schmitt, 1993). In contrast, some sociologists and psychologists have argued that these criteria are culturally determined and symptomatic of men's structural advantages over women (Eagly & Wood, 2013; Wood & Eagly, 2012; Zentner & Eagly, 2015): if women were the ones holding power, they would prioritize attractiveness and nurturing skills in men, while men would seek powerful women (Zentner & Eagly, 2015). Indeed, some studies find that a society's gender equality correlates with lessened sex differentiation in mate preferences (Zentner & Mitura, 2012). Immense differences in theoretical origin and implications notwithstanding, both sides tend to agree that physical attractiveness and

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<sup>3</sup> "Tversky and Kahneman conjectured that observers expect the statistics of a sample to closely resemble (or 'represent') the corresponding population parameters, even when the sample is small. This 'representation hypothesis' soon led to the idea of a 'representativeness heuristic,' according to which some probability judgments (the likelihood that X is a Y) are mediated by assessments of resemblance (the degree to which X 'looks like' a Y)" (Kahneman & Frederick, 2002, p. 879).



ability to care for offspring, which I term motherliness/fatherliness, are the most predictable criteria on which we select long-term romantic partners. This generates the second hypothesis:

**H1A: voters will judge female candidates' faces primarily on attractiveness and secondarily on perceived motherliness, and male candidates' faces primarily on perceived fatherliness and secondarily on attractiveness.**

Moreover, unlike other theories of appearance cues, mate selection theory predicts an interaction between candidate age and candidate sex. An important subtext of arguments made by biologists about mate desirability is that physical attractiveness functions as a proxy for fertility. For women, fertility declines rapidly, while for men, fertility declines very slightly over the course of the human lifespan (Velde, R, & Pearson, 2002).<sup>4</sup> If mate selection is at work, we should expect that respondents' perceptions of women's qualifications to decline more rapidly as women age than perceptions of men's qualifications do as men age.

**H1B: voters will judge older female candidates as much less qualified than younger female candidates, while male candidates will face only a slight age penalty.**

Finally, prior research demonstrates that appearance cues affect behavior both in the ultra-low-information setting of survey experiments and in the slightly higher information context of real elections. In particular, Todorov et. al (2005) demonstrate that ratings of facial competence, rather than cues like facial attractiveness or facial dominance, best predict election outcomes. Accordingly, any novel theory of appearance cues should explain voting in both low-information (experimental) and high-information (election) contexts, including controlling for competence ratings, to be considered a meaningful contribution.

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<sup>4</sup> It is worth noting that the study of human women's fertility is undergoing rapid change: while older studies seemed to indicate that women's fertility declined precipitously even as early as age 30, more recent research has questioned that account for reasons both historical and methodological. Rather than specify an age of infertility for women to be treated as a quasi-discontinuity, I have opted for a simple sex\*age interaction term.

**H2: voters' assessments of mate desirability should predict votes in both low-information (surveys) and high-information (elections) settings.**

## EMPIRICAL STRATEGY

My proposition makes claims about both underlying psychological processes and observable voting behavior. To address both, I focus on a real-world case, the 2000-2014 Oregon state legislative elections, for which we can readily determine the information voters are likely to have about candidates.

Because Oregon is an entirely vote-by-mail state in which all voters receive a state-issued voting pamphlet, this case substantially improves the study of candidate evaluation in three ways. First, voters are likely to receive these cues (e.g., candidate photos), so inferences do not depend on voters being highly informed or receiving information through the media. Second, voting-by-mail means that we can measure some of the information available to voters; this makes a better case for selection on observables than is true in other contexts. In races with almost no information, voters might be likely to seek out additional information, while voters in high-salience races might be exposed to significant additional information via the media. Either makes omitted variable bias more likely than in the Oregon context. Third, to the extent that voters are better informed about candidates' policy preferences than predicted, the effects of any given heuristic—like appearance cues—should be attenuated, rather than exacerbated.

In turn, this makes three contributions to existing work on descriptive representation of women. First, using real candidates' photos and occupations as experimental stimuli increases external validity over experiments that use more limited realizations of these variables (e.g., factorial designs) or artificial vignettes about candidates. Second, it brings new data to bear: existing work has

**State Senator, 10th District**



**Jackie Pierce**

Democrat (DEM)

**Occupation:** Retired Social Worker

**Occupational Background:** Psychiatric Social Worker, Oregon State Hospital 1989-2006; Fairview Training Center 1987-1989; Navy and Air Force

Family Services Centers 1983-1986

**Educational Background:** B.A. Social Work California State University, MSW University of Southern California.

**Prior Governmental Experience:** Precinct Committee Person, Polk County

**Personal:** Husband Al Pierce

**Community Service:** Volunteer for American Red Cross, World Beat Festival, Friends of Bush Gardens, Member of Marion, Polk, Yamhill Counties Labor Council.

As an Oregonian I believe in respecting every individual. \*(As your State Senator, I will take initiative in fighting for you)\*. We must all work together \*(with integrity)\* to ensure the well being of all of Oregon.

JACKIE PIERCE

A Senator that will work for all Oregonians

As your State Senator my priorities will be:

**Lay a solid foundation to help local small businesses succeed and hire workers**

- Invest in technology and innovation to create green jobs
- Speed up construction jobs to rebuild our aging roads and schools

**Protect vital services like education, senior care, and Head Start**

- Extend unemployment benefits to out-of work Oregonians
- Provide better access to education, health care and jobs to our returning troops
- Make sure seniors and disabled Oregonians can remain in their own homes

**Protect the natural places that make Oregon special**

- Protect Oregon's waterways, parks beaches and watersheds
- Eliminate toxic chemicals from drinking water and our food supply

**Hold Wall Street banks and credit card companies accountable when they break the law**

- Give the Attorney General the power to go after health insurance companies when they break the law
- Provide incentives to reduce nickel-and-dime fees like ATM fees and credit card interest rates

**\*(Human Dignity, Freedom and Choice)\***

- Reproductive Choices
- Choices for Death and Dying issues
- Freedom to choose who to marry

*(This information furnished by Jackie Pierce.)*

**The above information has not been verified for accuracy by the State of Oregon.**

**State Senator, 10th District**



**Jackie Winters** *Figure*

Republican (REP)  
Independent (IND)

**Occupation:** Small Business Owner; Jackie's Ribs, State Senator

**Occupational Background:** Public Agency Administrator

**Educational Background:** Jefferson HS; Portland, Oregon State System of Higher Education Continuing Education

**Prior Governmental Experience:** State Senator, Member; Joint Ways and Means Committee, Human Resources Subcommittee, Emergency Board, Quality Education Model Review Committee, State of Oregon Ombudsman, Assistant to Governor Atiyeh, Oregon State Executive Service, U.S. Air Force Academy Board of Visitors

**A TRUE LEADER:**

"Jackie Winters is committed to improving our economy and supporting Oregon businesses, families, and children. One of Jackie's many strengths is bringing people together to solve challenging issues facing our community and state. Please join us in voting for Jackie Winters." Dick Withnell

- Oregon Building Trades Council
- Oregon Business Association
- National Federation of Independent Business/Oregon
- Oregon Farm Bureau Federation
- Oregon AFSCME Council 75
- Oregon State Fire Fighters Council

**BIPARTISAN SOLUTIONS IN THE FIGHT AGAINST METH**

"Jackie Winters is a strong ally in our fight against the meth epidemic, and is committed to making our neighborhoods and families safer." Walter M. Beglau; Marion County District Attorney

- Jason Myers; Marion County Sheriff
- Oregon State Sheriffs' Association
- Oregon State Police Officers' Association
- Oregon Police Chiefs for Safer Communities

**QUALITY CARE FOR OUR SENIORS AND CHILDREN**

Senator Winters is a tireless advocate for our children, seniors and people with disabilities. She has always done everything possible to take care of the most vulnerable members of our society.

- Wes Ediger; Retired Educator, Salem/Keizer School District
- Oregon Health Care Association
- Oregon Nurses Association
- Oregon State Council for Retired Citizens
- Citizens' Alliance for Responsible Education

**SERVING AS YOUR SENATOR IS AN HONOR**

"I learned from Governors Tom McCall and Victor Atiyeh that Oregon's greatest asset are its people and that our role as public servants is to help our constituents solve problems and represent them with honor and dignity. Thank you for the opportunity to serve you in the State Senate. I ask for your vote."

Jackie Winters

[www.jackiewinters.com](http://www.jackiewinters.com)

*(This information furnished by Friends of Jackie Winters.)*

**The above information has not been verified for accuracy by the State of Oregon.**

often been confined to Congressional and gubernatorial races due to the difficulty of collecting data in state and local elections, but the salience of partisanship in such races makes it hard to tell whether voters assess male and female candidates differently (cf. Hayes 2011). Third, state and local races are critical to understanding the pipeline through which women emerge as candidates for higher office, as women are more likely than men to start their political careers in local office (Carroll and Sanbonmatsu, 2013). If voters select for a certain type of female candidate, or impede others, that is worth knowing.

When voters sit down to decide, they see a mix of standardized and optional information. Figure 2, below, shows an example of a voting pamphlet. All candidates are listed with at least one partisan affiliation, an occupation and occupational history, a photo, their education, and their prior government experience. Candidates can also choose to include a statement or other personal information. In general, voters have more comprehensive information about candidates than most survey experiments testing heuristics or stereotyping provide. The standardized inclusion of information on partisanship and candidates' qualifications suggest that reliance on visual cues and stereotypes should be *less* than in environments where this information is not provided.

To create my sample, I scrape the 2000-2014 voting pamphlets to collect the standardized data: candidates' names, partisan affiliation, type of race, photos, occupation, education, and prior government experience. Data on election returns were scraped from the Oregon Secretary of State's website. Candidates were dropped for races that were not contested by both a Democrat and a Republican and for which one or both candidates did not submit photos. This created a pool of 816 candidates, out of which 789 had unique photos. 228 of the candidates are women, and 561 are men. Additional descriptive data on candidates is available in the Supplemental Materials (SM).

I coded education and prior government experience using simple least-to-most scales, with graduate degrees and seat incumbency serving as the top points of their respective scales; details of

the coding schemes are available in the SM. I rated candidates' photos and occupations on multiple traits using large samples of survey respondents. The aggregated ratings give each candidate a mean score for each trait. As I use four surveys and experiments to test **H1-H2**, I describe the procedures study-by-study in the results section. Full details and results for each are available in the SM.

## MATE DESIRABILITY PREDICTS VOTES

### **Design and Procedures**

In Study 1, I assess whether mate desirability predicts vote preferences (**H1**). 3,245 Mechanical Turk (MTurk) respondents were recruited and randomly assigned to rate 30 candidate photos out of a subset (n=529) on one of three measures. One-third rate candidates on the dependent variable, vote choice (“how likely would you be to vote for this individual?”). One-third rate candidates on a single-question measure of the independent variable, mate desirability (“how appealing do you think others would find this person as a long-term romantic partner?”). One-third rate candidates on perceived competence (“how competent do you think this individual is?”), the question best shown to predict voting behavior using appearance cues. All three questions use a seven-point scale (e.g., “extremely unappealing” to “extremely appealing”). Every photo received approximately 57 unique respondents' ratings for each trait (vote choice, partner appeal, competence), which were aggregated into a mean rating for each candidate. For this and subsequent studies, the SM describes the procedures and findings in detail.

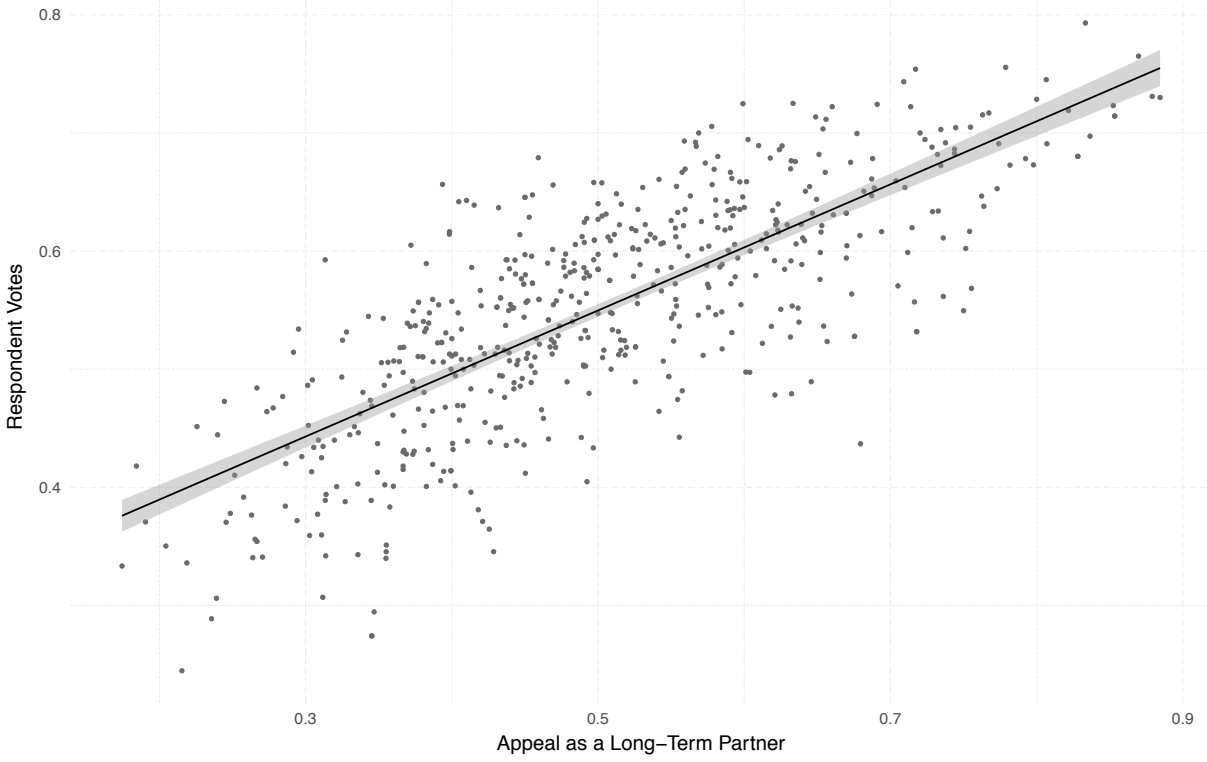
To analyze the results, I regress ratings of willingness to vote for a candidate on ratings of their appeal as a long-term partner. I add ratings of competence from the same study to a second regression model to see if the results hold even after accounting for the most likely alternative explanation.

## Results

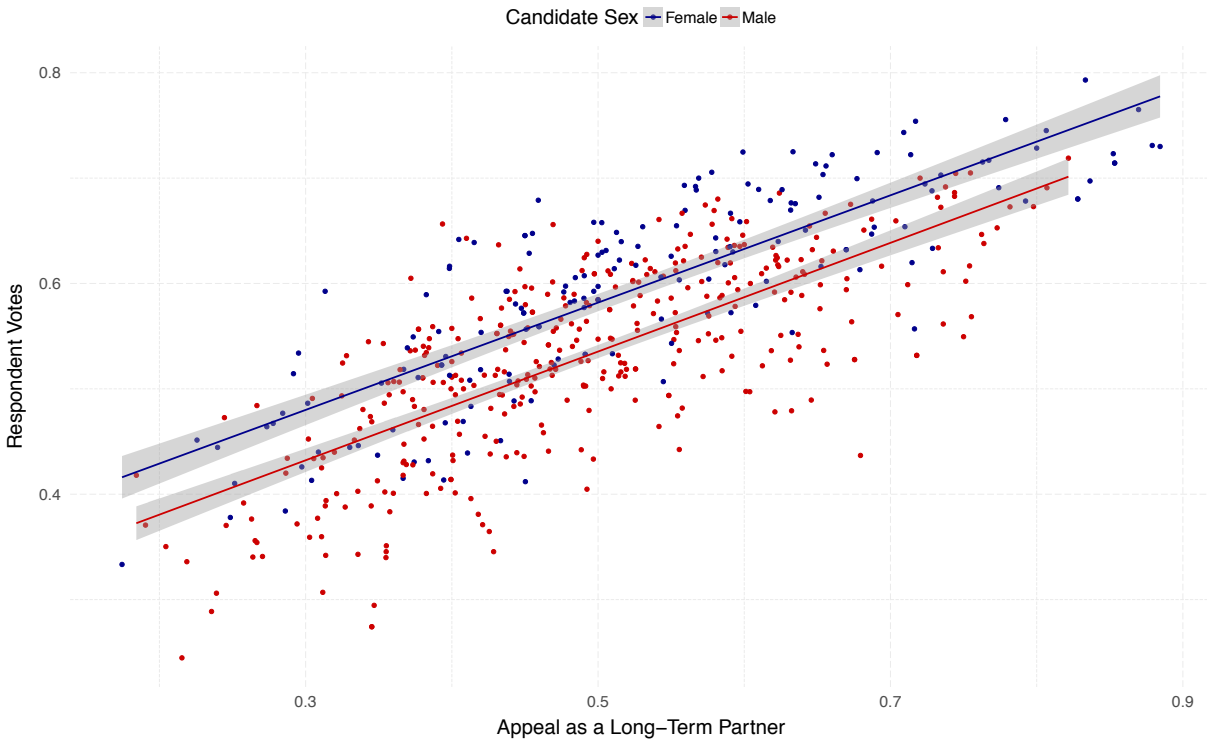
I test **H1** by regressing respondents' vote choices on ratings of candidates' mate desirability. Figure 3 shows evidence that each candidate's photographic partner appeal strongly predicts respondents' vote choice in surveys ( $p < .001$ ). In Figure 3, each point represents a single candidate. Table 1 shows the same data for individual candidates broken out by candidate sex. Partner appeal predicts vote choice for both male ( $B = .34$ ) and female ( $B = .29$ ) candidates even after I control for facial competence, the strongest alternative explanation provided by existing literature on appearance cues as a predictor of vote preference. However, in a multivariate regression, the coefficient for competence for both sexes of candidates ( $B = .48$ ) is significantly larger than that for mate appeal ( $B = .35$ ),  $\chi^2(1, N = 551) = 10.24, p < .01$ . As my theory argues that partner appeal *influences* perceptions of competence, we should not be surprised to see that the coefficients for both decline in a joint regression, nor to see instability in the coefficients (which occurs when two variables are substantially correlated). Nonetheless, mate desirability continues to meaningfully predict variation in respondent vote choice.

*Figure 3.*

**Relationship Between Partner Appeal and Vote Choice**



**Relationship Between Partner Appeal and Vote Choice, by Candidate Sex**



**Table 1.**

<b>Partner Appeal vs. Competence</b>						
<i>Dependent variable:</i>						
Willingness to Vote for Candidate						
	Female Candidates	Male Candidates	Female Candidates	Male Candidates	Female Candidates	Male Candidates
Appeal as a Partner	.509*** (.026)	.516*** (.025)			.288*** (.029)	.343*** (.022)
Perceived Competence			.806*** (.040)	.735*** (.035)	.486*** (.045)	.491*** (.031)
Constant	.327*** (.015)	.277*** (.012)	.059* (.027)	.050* (.023)	.120*** (.022)	.041* (.018)
Observations	172	381	172	381	172	381
R <sup>2</sup>	.688	.539	.705	.541	.815	.720
Adjusted R <sup>2</sup>	.686	.538	.704	.540	.813	.718
Residual Std. Error	.054 (df = 170)	.062 (df = 379)	.052 (df = 170)	.062 (df = 379)	.042 (df = 169)	.048 (df = 378)
F Statistic	374.425*** (df = 1; 170)	443.360*** (df = 1; 379)	407.059*** (df = 1; 170)	447.434*** (df = 1; 379)	371.816*** (df = 2; 169)	485.523*** (df = 2; 378)

*Note:* Coefficients are scaled 0-1. \*p<0.05; \*\*p<0.01; \*\*\*p<0.001

## MATE DESIRABILITY PREDICTS TRAIT RATINGS

### Design and Procedures

Studies 2 and 3 create photo ratings for each candidate by asking survey respondents to evaluate a set of faces on a trait or traits. In Study 2, 7,036 MTurk survey respondents rated the 789 unique photos on attractiveness, competence, dominance, and gender typicality (which I refer to as femininity throughout), plus motherliness (for women) or fatherliness (for men). Each respondent rated approximately 25 unique, randomly selected candidate photos on a single, randomly assigned trait (e.g., competence). Every photo received at least fifty unique respondents' ratings for each trait (competence, attractiveness, dominance, gender typicality, motherliness/fatherliness); these ratings were then aggregated into a mean rating for each candidate (e.g., mean attractiveness). Competence, attractiveness, and gender typicality were measured on seven-point scales (e.g., very incompetent to



very competent), while dominance and motherliness/fatherliness were measured on five-point scales (e.g., not at all dominant to very dominant).

In Study 3, I replicated these ratings for a subset of photos ( $n=187$ ) on a sample of 4,551 registered voters recruited through Survey Sampling International. Respondents again rated candidates' faces for competence, attractiveness, dominance, gender typicality, and motherliness/fatherliness, using the same question wordings and scales. Each respondent rated four candidate photos (two male, two female) on each trait; the four photos were drawn randomly for each trait. All respondents rated photos on competence and gender typicality; half of respondents rated sets of photos on dominance, attractiveness, and motherliness/fatherliness (hereafter referred to as parentliness for brevity).<sup>5</sup> Traits rated by all respondents (e.g., competence) received approximately 94 unique ratings each, while traits rated by half of respondents (e.g., attractiveness) received approximately 47 unique ratings each. As with Study 1, ratings were aggregated into a mean trait rating score for each candidate. All significant results from Study 1 replicate in Study 2 (for details, see SM).

The trait ratings from Study 2 and 3 form the independent variables of this analysis. I assess which traits (attractiveness, dominance, gender typicality, and parentliness) predict vote choice (willingness to vote for this person, collected in Study 1) using a multivariate OLS regression.

## Results

A mate selection argument suggests that voters will evaluate women primarily on attractiveness and secondarily on apparent nurturing qualities, and men about equally on

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<sup>5</sup> I had photos rated on other traits, including the Bem Sex Role Inventory, to address two sets of alternative explanations: first, that voters might engage in gender stereotyping rather than prototype judgments, and second, to rule out alternative explanations based on survey wording. I describe the results in the SM.

**Table 2.**

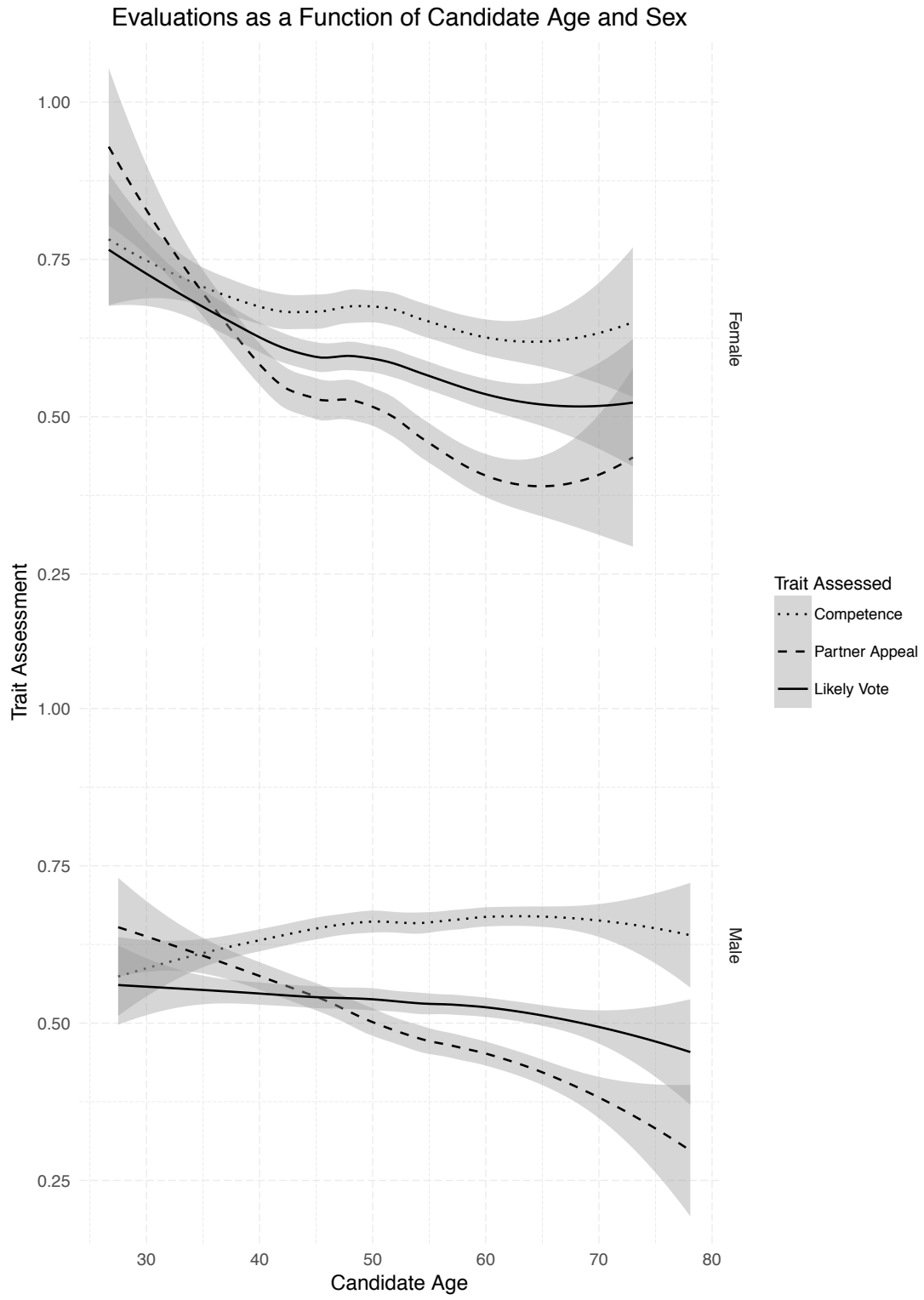
<b>Facial Traits as Qualifications for Office by Candidate Sex</b>		
<i>Dependent variable:</i>		
	<b>Willingness to Vote for Candidate</b>	
	<b>Female Candidates</b>	<b>Male Candidates</b>
Attractiveness	.740 <sup>***</sup> (.055)	.481 <sup>***</sup> (.031)
Dominance	-.076 (.066)	-.151 <sup>***</sup> (.036)
Femininity	-.061 (.036)	.019 (.034)
Parentliness	.178 <sup>**</sup> (.059)	.274 <sup>***</sup> (.030)
Constant	.182 <sup>***</sup> (.042)	.198 <sup>***</sup> (.027)
Observations	133	331
R <sup>2</sup>	.661	.528
Adjusted R <sup>2</sup>	.650	.522
Residual Std. Error	.055 (df = 128)	.063 (df = 326)

*Note:* Coefficients are scaled 0-1. \* p<0.05; \*\* p<0.01; \*\*\* p<0.001

attractiveness and ability to provide. Put another way, both sexes but especially women should benefit from high scores on attractiveness, while both but especially men should benefit from high scores on parentliness. In contrast, if existing research is correct that competence is what voters search for, and competence is “constructed from facial cues of attractiveness, masculinity, and confidence” (Todorov, 2017, p. 127), we should see that high scores on attractiveness and dominance, and low scores on femininity, benefit candidates of both sexes.

I find strong evidence that mate selection predicts which traits voters will evaluate candidates on, and that male and female candidates are evaluated on different traits as hypothesized in **H1A**. Attractiveness and motherliness significantly predict willingness to vote for female candidates, and

**Figure 4.**



**Table 3.**

	<i>Dependent variable:</i>		
	<b>Partner Appeal</b>	<b>Perceived Competence</b>	<b>Likely Vote</b>
Age	-.011*** (.001)	-.003*** (.001)	-.005*** (.001)
Male	-.227*** (.056)	-.240*** (.045)	-.242*** (.043)
Male*Age	.005*** (.001)	.005*** (.001)	.004*** (.001)
Constant	1.050*** (.047)	.811*** (.037)	.851*** (.036)
Observations	548	548	548
R <sup>2</sup>	.326	.052	.191
Adjusted R <sup>2</sup>	.322	.047	.187
Residual Std. Error (df = 544)	.114	.092	.087

*Note:* Age is in years. \* p<0.05; \*\* p<0.01; \*\*\* p<0.001

Figure 4 and Table 3 show the results are similar for all three traits assessed. As predicted in **H1B**, the positive, significant effect of *Male\*Age* across all three assessments suggests that women face a steeper penalty in evaluations as they age than men do, though age has a negative effect on evaluations for both men and women. Women face the strongest penalty for each additional year when respondents are rating partner appeal ( $B=-.011$ ), as expected, but there is clear evidence that perceptions of women's competence and willingness to vote for women decline as women get older. This occurs even though candidates are likely to have significantly more government experience as they age ( $p<.01$ , see SM for details). In contrast, though men never receive the desirability "boost" that young, attractive women receive, respondents' attitudes towards men stay static as they age. For each year, perceptions of men's competence increase slightly ( $B=.002$ ), effectively remaining static over the lifetime. Willingness to vote for older men is barely net negative ( $B=-.001$ ) with each year.

## MATE DESIRABILITY PREDICTS VOTING BEHAVIOR

### Design and Procedures

I conduct one additional study to gather ratings of candidates' occupations, which are the only outstanding item of information from the voting pamphlets remaining, before proceeding to an analysis of voting behavior. Study 4 uses similar procedures to Studies 1-3 to create ratings of candidates' listed occupations rather than photos. Due to the complexity of occupation as a signal, I created three measures of occupation. The first two, occupational class (a three-point scale) and political feeder profession (a binary variable) I coded myself, again detailed in the SM. These are coarse measures, so I also asked respondents to assess whether someone holding a given occupation would make an effective legislator if they had no other political experience (a five-point scale, from "not at all effective" to "very effective"). 906 MTurk respondents each rated 10 of the 99 unique occupations derived from the data on this measure, and the ratings were aggregated into a mean score using the same procedure described above for the photo ratings.<sup>6</sup> Each occupation's state legislator qualifications were rated by 91 respondents on average.

I use this data to assess whether citizens vote in real elections for candidates they regard as desirable mates. I use the accumulated data from Studies 1-4 in a multivariate fixed-effects regression to assess real voting behavior. Two-party vote share, scraped from the election returns, is the dependent variable. I use the aggregated ratings of the information from the voting pamphlets—photo, prior government experience, occupation, and education—collected in Studies 1-4 as independent variables. I use ratings of partner appeal as my main explanatory variable.<sup>7</sup> For

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<sup>6</sup> Study 4 also contained an experiment that compared ratings of occupations for legislators against ratings of occupations for prospective romantic partners or dates. The design and results are described in the SM.

<sup>7</sup> Some candidates use the same picture in more than one election cycle. All rated pictures have the aggregate ratings imputed for each use of that photo: e.g., a candidate who uses the same photo in 2004 and 2008 will have the same competence, attractiveness, etc. ratings for both years. This means that in analyses where real election vote share is the dependent variable, some candidates will appear more than once, with the same values of the independent variable but different values of the dependent variable.

occupation, I present models both with hand-coded measures (class and feeder profession) and ratings of occupational qualification to be a state legislator as an alternative measure. Fixed effects for party-district, year, and office (state senate or legislature) are included. As with the first study, I then re-run the models after including perceived competence as a control to assess whether the partner appeal findings are robust to its inclusion.

## Results

Finally, I evaluate whether mate desirability predicts actual election outcomes. In Table 4A, I show fixed-effects regression models with partner appeal alone. In Table 4B, I show the same regressions, but controlling for perceived competence as well. In all models, it is important not to consider the coefficients generated as treatment effects: moving from a 0 to 1 on a seven-point scale of (for instance) perceived competence is not the same as counting out pills in a medical trial. The coefficients represent real-life associations between the variables of interest, not experimental manipulations.

Table 4A suggests that judgments of candidates' appearance on mate desirability, as well as candidates' previous government experience, meaningfully predict real votes for both male and female candidates regardless of which model is used. Candidates garner around 15% more vote share when they are rated as the most appealing partners, compared to those rated as the least appealing partners. A candidate with one standard deviation ( $SD=.20$ ) more partner appeal than an opponent at the mean would receive about 3.2% more vote share than their opponent. This may sound small, but 29 (7%) of the 407 races in the dataset were decided by a smaller margin. Candidates who are sitting incumbents garner around 20% more vote share than those with no prior government experience. Occupation and education do not predict votes in any of the regressions.

**Table 4A.**

	Relationship of Cues to Vote Share					
	<i>Sex of Candidate</i>					
			Subset			
	Women	Men	Women	Men	Women	Men
Desirable Partner Based on Photo	.172** (.062)	.115* (.049)	.164** (.051)	.147*** (.040)	.159** (.052)	.149*** (.041)
Prior Government Experience			.202*** (.049)	.202*** (.023)	.211*** (.048)	.208*** (.023)
Professional Class			-.043 (.086)	.050 (.038)		
Feeder Profession			.008 (.029)	.007 (.016)		
Beneficial Profession					.098 (.136)	.097 (.052)
Education			-.046 (.051)	-.026 (.021)	-.072 (.045)	-.027 (.019)
Constant	.514*** (.066)	.330*** (.040)	.380*** (.047)	.370*** (.046)	.366*** (.051)	.353*** (.050)
Party-District, Office, and Year Fixed Effects?	Yes	Yes	Yes	Yes	Yes	Yes
Observations	172	381	168	380	167	380
R <sup>2</sup>	.856	.700	.906	.793	.908	.793
Adjusted R <sup>2</sup>	.727	.577	.814	.704	.818	.704
Residual Std. Error	.070 (df = 90)	.081 (df = 270)	.059 (df = 84)	.068 (df = 265)	.058 (df = 84)	.067 (df = 266)

Note: Coefficients are scaled 0-1. Standard errors are robust (HC1) SEs. \* p<0.05; \*\* p<0.01; \*\*\* p<0.001

**Table 4B.**

	Relationship of Cues to Vote Share					
	<i>Sex of Candidate</i>					
			Subset			
	Women	Men	Women	Men	Women	Men
Desirable Partner Based on Photo	.169* (.067)	.068 (.051)	.164** (.052)	.114** (.042)	.159** (.053)	.121** (.043)
Perceived Competence Based on Photo	.101 (.087)	.152** (.056)	.015 (.078)	.107* (.047)	.009 (.074)	.098* (.047)
Prior Government Experience			.199*** (.054)	.198*** (.023)	.209*** (.052)	.203*** (.022)
Professional Class			-.044 (.088)	.054 (.038)		
Feeder Profession			.007 (.029)	.004 (.016)		
Beneficial Profession					.096 (.138)	.081 (.053)
Education			-.047 (.052)	-.030 (.021)	-.073 (.046)	-.028 (.019)
Constant	.447*** (.088)	.271*** (.047)	.373*** (.060)	.330*** (.051)	.363*** (.059)	.316*** (.054)
Party-District, Office, and Year Fixed Effects?	Yes	Yes	Yes	Yes	Yes	Yes
Observations	172	380	168	379	167	379
R <sup>2</sup>	.860	.711	.906	.799	.908	.798
Adjusted R <sup>2</sup>	.731	.592	.812	.711	.816	.711
Residual Std. Error	.070 (df = 89)	.079 (df = 268)	.059 (df = 83)	.067 (df = 263)	.058 (df = 83)	.067 (df = 264)

Note: Coefficients are scaled 0-1. Standard errors are robust (HC1) SEs. \* p<0.05; \*\* p<0.01; \*\*\* p<0.001

This supports the argument that judgments of mate desirability play a role in real voting behavior.

Table 4B tells a more complex story. Estimates of the effect of partner appeal on vote share for female candidates are significant and consistent with estimates from Table 4A, even with competence included. However, for male candidates, both competence and partner appeal seem to be significant predictors. The coefficients for partner appeal and competence are not significantly different for male candidates except in the first model, which uses the appearance cues only. For male but not female candidates, competence seems to play a meaningful role in voters' considerations as well. Per the results in the previous section, attractiveness plays a much larger role in voters' evaluations of female candidates for both partner appeal and competence; accordingly, there may be little other variation for "perceived competence" to explain.

## DISCUSSION

Broadly, mate desirability seems to predict both citizens' survey responses and real voting behavior. We should not be surprised. Even the most thoughtful and careful souls among us may quail at the thought of opening a two-hundred-page voting pamphlet (as mine was in California in November 2016). Voters overwhelmed with high information may be just as likely to look for clues—a competent face, a gendered first name—to get the chore of voting done as voters who have little other information in front of them. "In the great blooming, buzzing confusion of the outer world we pick out what our culture has already defined for us" (Lippmann, 1922, p. 81). However, the data presented are subject to several caveats and limitations.

Causal identification (i.e., does increasing mate desirability cause increasing willingness to vote for the individual) is a perennial challenge when studying sensitive topics like gender or appearance. In the present case, social desirability bias limits the possibilities for survey experiments: respondents tend to alter their responses to "would you be willing to vote for this candidate?" after



being asked to rate the same person on attractiveness so as not to seem superficial. Accordingly, I use between-subjects designs intended to minimize this bias. Social desirability bias is also a chronic problem for studies of gender and other stereotypes; when observed in the context of an experiment or survey, voters worry they may seem sexist and revise their responses accordingly. In both cases, there is a tendency to find a null effect when there may be a true pattern of behavior. Nonetheless, future work would be improved by identifying experimental ways to test the theory.

Analyses of survey data are always subject to generalizability concerns. In many of the studies, I use convenience samples from Mechanical Turk, which we know to be an unrepresentative population already. However, I expect these results to be fairly universal; prior work finds that Indian and Brazilian raters can predict U.S. and Canadian election outcomes (Lenz & Lawson, 2011). Study 2, which used a sample of registered voters, recreated many of the findings presented (see SM), which suggests that the convenience sample may not be unduly unusual compared to a similar online (but more representative) sample. Moving forward, machine learning using these (or similar) ratings as a training set might enable improved measurement of such variables. Until then, the current case represents a large influx of new data on descriptive representation and voting behavior that would be difficult to construct otherwise.

Underlying both the survey and election data is an additional problem of candidate selection and strategy. Even if the estimated effects are accurate, in whatever sense we might mean that, it is hard to assess whether a given result (e.g., for candidate age and attractiveness for women) reflects selection issues. For instance, if younger women who run for office know they face a hurdle to being seen as qualified, more capable candidates in this category may put intensive effort into looking more appealing—an argument for a common cause (candidate preparation) for both mate desirability and voting behavior. Similarly, all the survey data reflects whatever idiosyncrasies of candidate selection exist in the real Oregon data. If Oregon has more skydivers running for office

than is representative of the general Oregon population, all the aggregate ratings from surveys are also skydiver heavy.

However, using the real data in surveys and experiments comes with a positive trade-off, which is that it allows immediate testing of the generalizability of one's findings. Unclear or limited generalizability of findings is a chronic concern of survey and experimental work, which the present empirical strategy addresses by collecting the data needed to make the comparison as part of the analysis. The use of both survey and experimental data and election returns attempts to address this concern.

## **BROADER IMPLICATIONS**

Inadvertent reliance on mate desirability criteria in lieu of more thorough assessments of candidates' qualifications has real-world political implications. Voters may select candidates perceived to be desirable mates over those with greater qualifications, especially when the candidates are older women. For instance, voters could select a man who is less politically experienced, but who appears to be a good provider and protector, over a woman who is more politically experienced but lacking maternal or physical appeal. The results suggest that reliance on direct elections in which voters select individuals, especially with few other relevant cues, maximizes voters' unconscious propensity to err in favor of mate desirability.

What does our tendency to follow cognitive shortcuts mean for democracy? Broadly, this tendency mounts a challenge to getting good representation. Canonically, we break representation into four components: descriptive, substantive, symbolic, and formalistic representation (Pitkin, 1967). The behavior described has potential implications for each form of representation. First, an unconscious preference for certain types of people (e.g., nurturing women) affects descriptive representation; some types of people will have little chance of acquiring a representative that "looks

like them,” and in turn individuals running for office who do not fit a desirable pattern will face a harder road to office, i.e., discrimination. Second, theory and data both suggest that lack of descriptive representation can affect substantive representation—for instance, female representatives spend more time on bills that affect women’s health (Swers, 1998, 2002)—and symbolic representation: a recent study, for instance, finds that citizens trust government less and are more likely to see a decision on sexual harassment as illegitimate if it is made by an all-male committee than a mixed-sex committee (Clayton, O’Brien, & Piscopo, n.d.). To the extent that unconscious preferences shift citizens’ decisions away from qualified legislators in favor of attractive legislators, they may receive less capable substantive representation, which in turn may make them feel that government does not work for them, even if we assume there is no failure of descriptive representation. Finally, the flip side of the unconscious preferences’ effect on descriptive representation is that they can also affect democratic accountability, the cornerstone of formalistic representation: legislators who do a bad job, but can make themselves look appealing to voters, may escape the consequences of bad performance where a less appealing-looking representative cannot.

Critically, this behavior creates the most severe problems in a democracy with many candidate-centered elections, such as the United States—and these problems may occur whether voters have lots of information about candidates, as in the Oregon state legislative elections, or very little information about candidates, as they do in survey experiments. The twenty-first century finds us at a unique moment where we are more overwhelmed with potential sources of information about candidates than ever before at the same time that we are less likely to know candidates personally than ever before. Each of these elections is an opportunity for us to default to shortcuts over scrupulousness. In contrast, a democracy in which voters select parties, not officials, and for fewer offices, requires less information and may trigger less pattern-seeking (e.g., based on visual appearance), though these benefits may not be costless.

Looking beyond politics, these findings suggest a need to reexamine the role of psychologically reductive strategies more broadly, given the wide range of decision-making tasks in which a lazy System 2 might abdicate its responsibility. Social and evolutionary psychologists debate whether gender socialization or evolutionary strategies explain mate preferences (Conroy-Beam & Buss, 2016; Eagly & Wood, 2013; Schmitt, 2014; Zentner & Eagly, 2015); this research agenda is even more critical if mate preferences influence non-relationship outcomes. Mate selection criteria appear to affect political choices, opening the possibility that they also influence other evaluative tasks like hiring and salary decisions. Moreover, while I find that low-information environments with visual cues may exacerbate inadvertent reliance on this “Tinder mentality,” this behavior likely extends to other environments. The broader literatures on motherhood and evaluations of women in the workforce or in politics (see e.g., Deason, Greenlee, & Langner, 2015; Eagly & Karau, 2002; Hochschild & Machung, 2012) suggest that these are far from the only circumstances under which we substitute evaluations of partner desirability for leadership assessments of women.

The most critical area for future investigation is to determine what conditions or interventions may circumvent the attribute substitution process. Moving democracies away from direct elections of candidates to party lists to circumvent implicit bias is a tall order; it may be more fruitful to identify interventions amenable to experimental testing and pursue those changes in voting policy. For instance, removing candidate photos from voting pamphlets might lessen the likelihood that voters with little other information about the candidates will rely on appearance as a visual cue. Envisioning how to address differences in perceptions of men’s and women’s qualifications based on their professional experience remains especially problematic. The apparent relevance of occupational history to real qualifications to hold office, as well as Mo’s (2015) finding that providing explicit information about women’s qualifications does not eradicate bias, mean that more work must be done to discover effective interventions.

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