

Two's a Crowd: Women Candidates in Concurrent Elections

While their numbers are slowly rising, women are still seriously under-represented in public office. Women make up over 50% of the population yet, at the national level, comprise only 19% of the House of Representatives and 20% of the Senate. At the state level, 6 of 50 governors are female, and women make up approximately 25% of state legislatures.¹ While these statistics speak for themselves, it is still unclear exactly why these gender disparities exist. Some scholars point to structural barriers to explain this phenomenon, such as the composition of electoral districts (Palmer and Simon 2008) and the role of political parties as gatekeepers (Sanbonmatsu 2006). Others find evidence that women are less likely than men to express political ambition or run for office (Lawless and Fox 2005; 2010). At the same time, the literature is divided on the influence of voters' attitudes about women. It is generally found that "when women run, women win;" in other words, women candidates are often just as likely to win a given election as are their male counterparts (e.g. Seltzer, Newman and Leighton 1997). On the other hand, gender-based stereotypes and assumptions about women's traditional roles may lead voters to doubt women's ability as leaders (e.g. Eagley and Karau 2002; Alexander and Andersen 1993; Huddy and Terkildsen 1993; Kahn 1996; Leeper 1991; though several newer studies dispute the continued importance of these stereotypes in electoral outcomes [e.g. Brooks 2013, Dolan 2014]).

To our knowledge, all of this research on voters' attitudes toward women candidates and electoral outcomes has considered single elections in isolation (one notable exception is Wolak 2009). Importantly, though, the US is unique in the sheer number of offices that can appear on the ballot at any given time. On Election Day, voters are often asked to choose candidates in multiple contests at the national, state and local levels. For each office on the ballot, voters are faced with multiple candidates, each providing information about him/herself and his/her beliefs (as well as negative information about his/her

¹ All statistics taken from the Center for American Women and Politics (www.cawp.rutgers.edu)

competitors). This creates a complicated political environment that voters must navigate. Amidst all of this competing information, decisions about whom to vote for in each race are likely influenced by the larger electoral context.

Specifically, we posit that the fate of women candidates may be affected by the number of women running in other, concurrent races. The increasing visibility and acceptability of women in public office may mean that doubts about women as leaders may not necessarily play an obvious role in one isolated race, but what happens when voters are faced with the possibility of voting women candidates into multiple offices simultaneously? If the “default” American politician is still male and assumptions about women cast doubt on their leadership potential, voters may be uncomfortable with the prospect of voting for women in multiple offices at the same time. Indeed, a recent article by Hennings and Urbatsch (2015) finds that party elites are unlikely to nominate multiple women on the same ticket so that men at the top of a ticket can have running mates of either gender, but women at the top of a ticket are far more likely to have a male running mate. Hennings and Urbatsch posit that at least part of the reason for this is that party officials assume that an all-female ticket will be less electable than one in which a man also appears. Essentially, we seek to determine the extent to which party officials’ assumptions are well-founded. Are voters less likely to support a woman for office when asked to consider voting for other women simultaneously?

This paper will utilize two computer-based experiments using the Dynamic Process Tracing Environment (DPTE)² to explore whether and how the overall gender composition of an election cycle affects women candidates’ evaluations and election outcomes. We use DPTE to vary systematically the number of women running for office in a single campaign season. DPTE allows subjects to experience a simulated “campaign” and election featuring invented but realistic candidates. Subjects experience a constant “flow” of information about the candidates, allowing them to learn whatever they want about the

² Developed with aid from the National Science Foundation by Richard R. Lau and David Redlawsk. The software is available at www.processtracing.org.

particular candidates in the races, and mimicking the complex information environment that often exists during a campaign season. We find a consistent pattern across both experiments in which female candidates are not adversely affected when they are the only woman that voters see, but they *are* disadvantaged when other women appear on the same party's ballot in other races. Further, this pattern is stronger for women in lower offices, such that women running for the House of Representatives are more disadvantaged than are women running for president, Senate, or governor.

Gender and Voting

Research on the question of whether gender affects female candidates' chances at the ballot box has produced mixed findings. A large literature exists examining the nature and effects of gender-based stereotypes on the fates of women candidates, and much early work in this area found compelling evidence that women candidates were subject to stereotypes based on their gender. In particular, much of this early evidence suggests that female candidates are often assumed to have more feminine and communal characteristics like compassion and trustworthiness and fewer agentic traits, such as competence and leadership, and that these stereotypes can lead to a disadvantage for female candidates in terms of vote choice and candidate evaluations (Huddy and Terkildsen 1993; Kahn 1996; Leeper 1991; Kahn 1996). However, other work has found evidence that prejudice against women in the electorate is no longer a major obstacle to women candidates (Burrell 1994, Seltzer, Newman and Leighton 1997, Darcy, et al 1994, Woods 2000, Dolan 2004), and more recent studies have found evidence that gender stereotypes may not play a major role in voters' evaluations of women candidates, particularly when other politically-salient cues like political party are taken into account (Brooks 2013; Dolan 2014; Hayes 2011). These findings may be a sign that gender-based evaluations are less important than they once were, or it may mean that gender cues are influential in some contexts, but not others.

Indeed, some scholars have found evidence that certain aspects of the political environment can make gender more or less salient to voters. For example, when "feminine," domestic issues are at the forefront of the public's policy agenda, women may do better, while they are disadvantaged when issues like war, terrorism and the economy are primary (Cook, Wilcox and Thomas 1994, Dolan 2004, Lawless

2004; Holman, Merolla and Zechmeister 2011). Further, women appear to be at a disadvantage when running for higher-level, executive offices and may have to downplay their gender when vying for such offices (Huddy and Terkildsen 1993; Lau, et al 2011). There is also evidence that gender stereotypes may only affect evaluations of women candidates when stereotypes are activated through campaign messages (Bauer 2014) and that a female candidate's political party can influence whether and how gender stereotypes are applied (Sanbonmatsu and Dolan 2009; Plutzer and Zipp 1996; Huddy and Capelos 2002).

There is also reason to believe that women in leadership roles (like political candidates and office-holders) may be subject to particular kinds of stereotypes that may not apply to all women. In particular, assumptions that women are higher in communal traits, such as compassion, kindness, sensitivity, and nurturing, while men are ascribed more agentic traits, like assertiveness, ambition, dominance, etc. (Eagly 1987), can lead people to doubt women's leadership capabilities. Role Congruity Theory (Eagly and Karau 2002) posits that traditionally feminine roles and common assumptions about women based on those roles are incompatible with notions of what it takes to be an effective leader. Further, Schneider and Bos (2013) find evidence that female candidates are stereotyped as female candidates, per se; that is, as a sub-type of women. They also find that women candidates may be particularly vulnerable when evaluated on masculine and leadership characteristics such as strength and competence. Finally, two Dynamic Process Tracing studies have examined the role of candidate gender in subjects' information search patterns and find that stereotypes related to competence can be particularly influential for women candidates, depending on the substantive information available about them. First, Ditonto, Hamilton and Redlawsk (2014) find that a candidate's gender affects the kind of information that voters seek out about that candidate, which can, in turn, influence vote choice. In particular, subjects seek out more information related to a female candidate's competence and qualifications than they do for male candidates. Similarly, Ditonto (2016) finds that women candidates who are portrayed as competent fare just as well as male candidates, but that women are more vulnerable to information that casts doubt on their competence than are men.

Another aspect of the political context that may influence the extent to which a candidate's gender matters, and that has not yet been considered, is the gender composition of all of the races being contested at a given time. If voters still harbor doubts about women as political leaders, they may be able to use politically relevant information to overcome those doubts in individual races, especially races in which the candidates are well known. However, because of the underlying assumption that female gender roles and leadership roles are incongruent (e.g. Eagly and Karau 2002, Schneider and Bos 2014), and therefore male politicians are still considered "normal," voters may be less comfortable voting for multiple women at once. Concerns about women's leadership ability may compound as more women enter the electoral context, making it difficult for individuals who (consciously or unconsciously) overcome stereotypes and biases for isolated women candidates to do so when they must evaluate multiple women simultaneously.

The concept of expectancy violation (e.g. Bettencourt, Dill, Greathouse, Charlton and Mulholland 1997) suggests that evaluations of out-group members who violate stereotypic expectations in a positive way may receive exaggeratedly positive evaluations when compared to in-group members with the same traits. The fact that a woman has made it to a general election contest for a high-level political office, then, may be a cue that this individual woman is "special," or is an exception to any stereotypic expectations that voters may have about women being ineffective leaders. A single female candidate may be seen as an atypical "exemplar" of women leaders, thereby preventing her from being categorized with the larger group of women leaders and any stereotypes that accompany it (Bless, Schwarz, Bodenhausen and Thiel 2000). On the other hand, seeing multiple women running for office at the same time may instead override any expectancy violation for individual candidates and simply cue the negative stereotypes that accompany women in leadership roles as a group. Just as Hennings and Urbatsch (2015) find a limit on the number of women that party officials will run on the same ticket, then, we expect that there may be a similar "ceiling effect" for the number of women a particular voter may be willing to cast a vote for.

We also expect that gender may matter more for the candidates that voters know the least about. Gender cues serve as proxies for other information. Because stereotypic information is more salient when less individuating information is incorporated into a person judgment (Locksley, Borgida, Brekke, and Hepburn 1980; Locksley, Hepburn and Ortiz 1982; Ashmore 1981; Eagly and Wood 1982), our best chance to observe the effect of such cues may be in offices where voters are least likely to learn much specific information about the candidates (and thus are less likely to counteract stereotypes/prejudices). Congressional candidates have the lowest average campaign spending and lowest recognition among the major offices and voters tend to spend less effort and attention in learning about congressional candidates than higher-office candidates. Therefore, it may be that the effects of multiple concurrent female candidates will be stronger for congressional candidates, relative to candidates for president, governor or Senate.

On the other hand, women are more likely to serve in office at lower levels—women currently comprise about 20% of Congress, but there has never been a female president, e.g.—so it is also possible that gender will matter more to voters when they are considering higher offices that they care more about, and that Role Congruency Theory will be more salient at these higher levels. Indeed, some experimental evidence also suggests that women candidates do worst when running for high-level and executive offices (Huddy and Terkildsen 1993). Women who “shatter the glass ceiling” may be more strongly scrutinized than those competing for offices where women candidates have won before, leading to gender cues becoming prioritized over alternative information. Rather than speculate on which of these claims is stronger, we leave it to an empirical test of the data.

Hypotheses

To sum up our main hypotheses, we expect to see that the number of women running concurrently in different elections will affect the electoral fates of those women. We believe that most Americans care predominantly about political party and other politically relevant characteristics when evaluating candidates, and that the effects of gender may or may not be visible in any single race considered in isolation. However, as more women run for office at the same time, we expect that gender

cues will begin to have a larger effect on evaluations of women candidates, and that the effects of gender will become more pronounced. We examine these expectations within a subject's preferred political party in order to examine the effects of an overall election's gender composition on candidates that voters will actually consider voting for (i.e. for out-party candidates, voters already largely dismiss them and negative evaluations likely hit a floor effect). Thus:

H1: When one female candidate runs within a voter's preferred party, and no other female candidates appear on the ballot, any negative effects of gender should be small or nonexistent, mirroring findings from recent studies that political party cues will drown out concerns about gender.

H2: When a female candidate runs within a voter's preferred party, and other in-party women candidates appear elsewhere on the ballot, she will be evaluated more negatively and will have a lower likelihood of obtaining a subject's vote. The greater the number of in-party women appearing in other races, the worse she will do.

We also have competing expectations as to whether these effects will be most prominent among candidates competing for lower office, about which voters presumably know and care less, or among candidates running for higher office, where women have tended to serve least often and where negative stereotypes may be most applicable. So, we expect to find evidence of *either* H3 or H4:

H3. The negative effects of the presence of multiple female candidates will be most pronounced for women running in for the House of Representatives, since stereotypes are applied more readily when less individuating information is available and subjects should care more/seek out more information about higher-level candidates. Feeling thermometer ratings will be lower for women House candidates who appear alongside other women, and their likelihood of receiving a subject's vote will also be lower.

H4: Alternatively, because voters tend to care more about high level offices, such as the presidency, they may be least comfortable voting for women in these races. If doubts about women in leadership roles are most prevalent in high-level and executive contexts, as some prior

evidence suggests, we would expect female presidential candidates who appear alongside other women candidates to receive lower feeling thermometer scores and have a lower likelihood of winning people's votes than those who appear without other women on the ballot.

Dynamic Process Tracing

To test our hypotheses, we run two computer-based experiments using dynamic process tracing. DPTE has been described in detail elsewhere (Lau and Redlawsk, 2001; 2006; Redlawsk & Lau, 2013) so this description will be brief. Process tracing presents subjects with an abundance of information related to a number of alternatives (in this case, realistic yet fictitious candidates) and allows researchers to follow a subject's choices as s/he examines whatever information s/he chooses. These experiments are "dynamic" because participants face an ever-changing information environment that mimics the ebb and flow of a real-world election campaign.

[Figure 1 about here]

DPTE campaigns include the kinds of information that voters might expect to learn about candidates and assign sets of these attributes to a series of invented candidates. These attributes include personal traits, background information, a wide range of issue positions, polls, and endorsements. During a DPTE campaign, individual pieces of information scroll down the subject's computer screen, each remaining available for a period of time (in both of these experiments, 12 seconds). As one piece of information (an "information box") moves off of the bottom of the screen, it is replaced by a new piece of information at the top of the screen. Each scrolling information box contains a brief synopsis of the information provided inside the box (e.g. Patrick Turner's stance on Education), as well as a small picture of the candidate to whom the information refers, and a colored border corresponding to the party of the candidate to whom the information refers (red for Republicans, blue for Democrats). When subjects want to access the information available in the information box, they click on it, at which point the box expands to fill up the entire screen, and allows subjects to read the information available inside. While subjects read the information in a particular box, the other pieces of information continue to scroll behind it, so they must choose which information is most important for them to learn. Subjects can choose to learn as

much, or as little, information as they wish. Because the candidates were invented, participants knew nothing about them at the beginning; anything they learned must have come from the information available to them in the campaign.

While dynamic process tracing is often used to examine the amount and type of information that subjects search for, it has the added benefit of allowing researchers to present an experimental stimulus within a much more realistic information environment than many other survey experiments. Rather than presenting subjects with only brief descriptions of, or newspaper articles about, the candidates in our experiment, we allow subjects to learn as much information as they choose about each of the candidates. Therefore, any effects of candidate gender that we find have been put through a “tough case,” as subjects had a wealth of other politically-relevant information to consider when they were making their evaluations and vote choices. Particularly in a study like this, where we seek to mimic a complicated electoral scenario, DPTE creates a much more realistic environment and, we believe, provides much more externally valid results.

We run similar analyses on both experiments to test our hypotheses. Our dependent variables are the feeling thermometer ratings of each subject’s in-party candidate for a particular race and whether they voted for their in-party candidate in that race. We focus on evaluations and vote choice for the House of Representatives and the presidency, since both of those races appear in both experiments and we expect the biggest differences in evaluations between the offices at the top and bottom of the ballot. We use OLS regressions to analyze our feeling thermometer scores and logistic regressions to examine the effects of our manipulations on in-party vote choice. We use the sex of the in-party candidate in a given race, as well as interactions between candidate sex and the number of other women candidates running for other offices as our predictors of interest. We also control for other non-relevant manipulations, described in more detail below.

Study 1 - DPTE Pilot Experiment

Sample and Procedure

The first experiment comes from a pilot DPTE experiment using 279 undergraduate research subjects recruited from a large northeastern university.³ Because they were college students, the average age of the sample was 22 years old, though ages ranged from 18 through 44. The sample was also 6% African American, 15% Hispanic, 58% female and 17% Republican. Subjects participated either as a course requirement or to receive extra credit, depending on the course in which they were enrolled. The student sample took the experiment in a campus computer lab over a three-week span, and participation typically took about 1 hour.⁴ Additional demographic details about the demographics of the pilot (and follow-up) study can be found in the Appendix.

³ Using college students as subjects is always a risky proposition in experimental research and has its positives and negatives (Sears 1986). When looking at strictly cognitive or neurological functions college students can often be considered representative of the population as a whole, because such functions are typically outside of conscious control and thus factors such as age and experience become irrelevant. When asking subjects to make conscious choices, however, including choosing how to search for information about political candidates, factors such as age and experience can make a difference. Because younger and more educated Americans are less likely to possess gender bias, however, this sample presents a “tough case” for finding effects of gender on our dependent variables. We would expect them to be more prevalent in more representative samples.

⁴ Of those original 279 subjects, data from 12 subjects were eliminated from the final data set; 4 because they experienced a “flawed” election⁴ and 8 because they apparently discovered the ability to access the internet from the computers and did not actually participate in the campaign scenario, opening fewer than 10 information boxes over the course of the 20 minute campaign.

Subjects in this experiment experienced either a 2- or 3-race election cycle. Subjects first completed a pre-election questionnaire in which they were asked to provide some demographic information, as well as various political attitudes. They then viewed a “synopsis page,” which was a single screen containing the basic information for the races being contested, including candidate names and pictures (which, of course, provided gender cues) and party affiliations. Following this, subjects entered a dynamic information board, where boxes containing further information about the candidates scrolled in random order down the computer screen. The candidate information in this study was all substantive in nature (i.e. it was all designed to convey some policy or background information about one of the candidates in the race in a non-biased and non-controversial manner). A full list of the information items that subjects could access is available in the appendix. After 20 minutes, the “campaign” ended, and subjects were asked to evaluate the candidates and cast their votes.

Design

The basic design of this experiment systematically varied the number of offices on the ballot, the gender of subjects’ in-party candidates for two of the possible offices, and the nature of the information environment in the campaign. In each version, a race for the House of Representatives was contested, as well as an election for an executive office (either the President or Governor, simulating the difference between presidential and midterm cycles). Candidate gender was always manipulated in the House races and, while the gender of the subject’s in-party executive candidate was manipulated for subjects who experienced a presidential race, the subjects who saw a gubernatorial race instead of a presidential race did not receive this manipulation, meaning that only half the sample could have had two women candidates campaigning simultaneously. For this reason, our analyses of House candidates utilize a sample twice the size of our analyses of presidential candidates. Additionally, some subjects viewed a Senate race, varying the total number of campaigns subjects could see between two and three.⁵

⁵ These four offices—the House, Senate, President and Governor—were chosen because they are typically the most “visible” races on a given ballot, providing voters with the most available information.

Candidate gender was manipulated for subjects' in-party, only, since we expected subjects would always be more likely to vote for and care about candidates in their own political parties. The out-party candidate was always male, and the information about both candidates was always held constant. That is, the information for the Republican candidate was always the same, regardless of whether that candidate was in-party or out-party, male or female. The same is true of the Democratic candidate. The only thing that changed from condition to condition was the gender of the in-party candidate.

Manipulating the in-party candidate was meant to ensure that subjects would grapple with any gender-based expectations without dismissing women candidates based on political party. A final manipulation varied whether subjects saw a campaign information environment that was "realistic" in nature, or more egalitarian. In other words, half of the sample saw a campaign in which information about presidential candidates was presented more frequently than information about House candidates, mimicking real-world campaigns, while the other half experienced a campaign in which the information about all candidates was presented with the same frequency. In the equal information condition, subjects saw the 25 pieces of information about each candidate in every election scroll by twice. In the realistic information condition, information about presidential candidates scrolled by 4 times, while information about House candidates only scrolled by once. Because part of our argument rests on the expectation that gender will have more influence when less individuating information is available about female candidates, we test to see whether having less information available about House candidates (as in the real world) alters the relationship between gender and concurrent elections.

Thus, the study consists of a $2 \times 2 \times 2 \times 2$ experimental design in which the gender of the subject's in-party presidential candidate, the gender of the subject's House in-party candidate, the total number of offices on the ballot, and the nature of the information environment are varied simultaneously. The number of women appearing in a subject's set of campaigns varied from 0 to 2, and women candidates were always from the subject's declared party. Importantly, neither the realistic information manipulation nor the number of offices manipulation had an effect on evaluations or vote choice. We

include them as controls in our models, but the interaction terms that test their effects on female candidates, specifically, have been left out of our final models for the sake of parsimony.

Results

[Insert Table 1 here]

Table 1 shows our analysis of subjects' feeling thermometer evaluations for both House and Presidential candidates.⁶ We find support for two of our hypotheses, and possible support for a third. For both House and Presidential races, seeing a single woman on the ballot does not affect subjects' evaluations of their in-party candidate (both coefficients are positive and not statistically significant). However, the interaction between seeing a woman in the House race and a woman in the presidential race is negative and significant for both offices ($B=-10.403$, $p=.56$ for the House and $B=-14.977$, $p<.05$ for the presidency). A difference of 10 and 15 points, respectively, on a 100-point scale is a fairly sizable effect, and moves evaluations of female candidates in each race from the high 60s (constant= 65.408 , $p<.001$ for the House and 68.891 , $p<.001$ for the presidency) to the low to mid 50s. Keep in mind that all of the information about these candidates was held constant, and the only gender manipulation was provided via pictures that subjects saw when introducing the candidates and that were available during the dynamic information board, as well as the candidates' names. Simply seeing another female candidate running for office at the same time provoked a massive change in how our subjects evaluated their in-party House candidate when she was also a woman.

[Insert Table 2 here]

This effect is carried over to the vote choice, though for the House candidate, only (Table 2). We find that subjects seeing only an in-party congressional woman candidate were actually more likely to

⁶ For ease of interpretation we include a list a variables and their correct interpretation in the Appendix. Because this study relies on interactions, the coefficients produced are not always directly interpretable as marginal effects of the listed variable on the dependent variable, but are often conditional marginal effects and contingent upon the value of a third variable. This is explained in Appendix Tables 3 and 4 (Brambor, Clark and Golder 2006)

vote for her than when the in-party candidate was male ($B=1.285$, $p<.05$), but that when a female candidate joined her on the ballot for the presidency, these effects were reversed ($B=-1.879$, $p<.10$). Calculating the predicted probabilities for all of the possible candidate gender permutations (Figure 2) reveals that subjects who saw a male candidate from their preferred party in both contests were 80% likely to vote for their House candidate. That rose to 86% if a woman ran for the presidency, and rose again if the House candidate was a woman and the presidential candidate was a man. However those who saw two female candidates had only a 77% chance of voting for their in-party House candidate, a sharp decline.

[Insert Figure 2 here]

Conclusions from Pilot Study

Our pilot study largely confirms our expectations. We see that having multiple in-party women running for office at the same time produces a backlash from voters. Subjects rate female House candidates lower when a woman also runs for president, and are less likely to vote for female House candidates in this scenario, as well. Women candidates for president are also rated lower when another woman accompanies them on their party's side of the ballot. This shows clear support for Hypotheses 1 and 2. It is not clear from these results, though, that these dynamics necessarily affect women candidates in certain offices more than others. Women in both House and presidential races are negatively affected when other women appear on the ballot in terms of evaluation, but the only evidence that this affects ultimate vote outcomes occurs at the House level. Even though subjects like female presidential candidates less when they run alongside another woman, other considerations seem to be winning out when they actually cast a vote. This may be evidence that candidates for lower office are more susceptible to gender dynamics than those for higher office (possible support for Hypothesis 3), or it may simply be that the smaller sample size for the presidential analysis led to non-significant findings. We take up this question again in Study 2.

Study 2 - DPTE Follow-up Study

Sample and Procedure

The second data source comes from another DPTE experiment, which recruited 431 online adult subjects through Amazon Mechanical Turk (MTurk).⁷ MTurk provides a good follow-up to our student sample in Study 1, as it allows for a different and more diverse (though not representative) sample with which to test our theory. While some concerns about the use of MTurk for political experiments have been raised, most evidence suggests that findings from MTurk studies do not differ in important ways from those conducted on other kinds of samples (See Mullinix, Leeper, Druckman and Freese, 2016; Clifford, Jewel and Waggoner 2015; Berinsky, et al 2012; Weinberg et al, 2014; Buhrmester, Kwang and Gosling 2011; Paolacci, et al; Crump et al 2013, but see Kahan 2013 and Krupnikov, and Levine 2014 for evidence to the contrary). Further, many concerns about MTurk sample demographics center around the fact that MTurkers tend to be more liberal and Democratic than nationally representative samples (Berinsky, et al 2012; Huff and Tingley 2015), which can pose a problem for certain kinds of studies. In the case of gender, a more liberal/Democratic sample presents a tougher case than one that is more conservative, as conservatives are more likely to hold traditional views on gender, and Republican women tend to fare worse than Democrats (King and Matland 2003; Dolan 2010). Finally, several studies have found similar stereotyping effects between MTurk samples and the general population (Craig and Richeson, 2014; Crawford, Brady, Pilanski, and Erny, 2013; Crawford and Pilanski, 2013; Hopkins, 2014).

Each respondent was paid \$4 for participating in an approximately 45-minute experiment that simulated a presidential election cycle while varying the number of other offices appearing on the ballot simultaneously. All of the Mechanical Turk subjects took the experiment on their own computers, and it took us 3 days to recruit our subject pool. This sample had a median age was 35, was 25% Republican, 55% male, 4% African American and 6% Hispanic (more on the demographics of the sample can be found in the Appendix).

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Subjects experienced the same procedure as those who participated in the pilot study. They first completed a pre-election questionnaire, which collected data on demographic characteristics and political attitudes, then saw a “synopsis page” which presented them with the candidates they would be asked to consider. After viewing this page, they entered the dynamic information board where they were able to click on as many of the scrolling boxes as they chose. A total of 20 boxes were available about each candidate and the campaign lasted up to 35 minutes. After experiencing the campaign, subjects were asked to cast a vote for the candidate of their choice in each race and evaluate the various candidates.

Design

In our 2nd study, we alter our political environment to allow two candidates for up to four offices to campaign simultaneously. We do this by constructing a stacked manipulation in which all of our subjects saw a contest between major party presidential candidates, with 25% also saw a House race run concurrently, 25% saw both the House and a Senate race, and a further 25% saw the full complement of presidential, House, Senate and Governor races. In each of these races, both the Democrat and the Republican had a 50% chance of being a woman, meaning that subjects could see as many as 8 women candidates, or as few as 0, and those candidates could appear in either their in- and out-party. This is a major difference from the first study, when only the in-party candidates could be women. Again, every piece of information of the candidates remained the same, except for their gender. They were otherwise designed to be very typical Democratic or Republican candidates for office. This provides a full (and as of yet not seen in reality) dynamic environment in which to examine how the sex of candidates influences voter behavior. As before, the only factor that changed between subjects in regards to the candidate was whether they were given a male or female name and picture, while all other information about the candidates remained static between subjects.

We constructed this experiment in such a way that we are able to replicate our earlier analyses for House and presidential candidates. We ran similar analyses for Senate and gubernatorial candidates in this study, since candidate gender also varied in these offices, and found a similar though non-significant

pattern of results, suggesting that candidates at the top and bottom of a ticket may be affected by gender dynamics more than those in the middle. We present our results for House and Presidency below.

Results

[Insert Table 3 here]

Table 3 displays our results for the feeling thermometer evaluations of in-party congressional and presidential candidates, and again supports our expectations. We find that candidate sex does affect how subjects evaluate those candidates, though this time for House candidates, only. Women House candidates, when running as the only woman from their party, actually receive a boost, gaining approximately 10.5 thermometer points over identical male in-party candidates ($b=10.571$, $p<.05$). As in Study 1, though, when other women candidates also run within the subject's party, thermometer ratings for the female House candidate plummet by nearly 5.5 points *for each in-party woman appearing simultaneously* ($b=-5.491$, $p<.05$). In this scenario, as many as three additional women could appear as in-party candidates, translating into a maximum decrease of almost 17 thermometer points for a congressional woman candidate. Considering that the in-party House candidates typically had thermometer ratings in the low 70s, this reduction is severe, and turned good ratings for a candidate into rather poor scores.

Unlike Study 1, we do not find significant effects for the presidential candidate's feeling thermometer scores here, though the direction of the coefficients remains in the expected direction. This may be further evidence that the gender composition of an election cycle has a greater effect on lower-level candidates than those at the top of the ticket.

[Insert Table 4 here]

Table 4 shows the results of our vote choice analysis for Study 2. Again, the pattern of results is the same, though only one of the results reaches statistical significance – the number of In-Party Female Candidates. As a conditional marginal effect, this tells us that, for men in-party House candidates, as the number of women in-party candidates in other races increases, the likelihood of that man receiving the vote of a partisan supporter also increases. Figure 3 charts the predicted probabilities for the likelihood of

voting for an in-party man, depending on how many women are seen running for other offices. With no women on the ballot alongside him, men are about 80% likely to win the vote. But as more women run concurrently, it becomes increasingly likely that he will win the vote, peaking here at 97% when three women run!

[Insert Figure 3 here]

Out-Party Candidate Gender

One possible explanation for why many of the results in Tables 3 and 4 are not significant, while the previous study did return significant results, is the gender difference that we allowed in the out-party candidates. Unlike the pilot study, where subjects always saw men running as the out-party candidate, Study 2 allows the out-party candidate's gender to vary. Implicitly, our theory suggests that women candidates will do worse when compared or evaluated against men, but it could be that when they are compared to out-party women these effects are attenuated. The simplest way to check this is to rerun the regressions for study two, restricting the samples based upon the sex of the out-party candidates.⁸

[Insert Table 5 here]

Table 5 shows the results of OLS regressions on in-party feeling thermometer scores when the samples are divided into those who saw out-party men and those who saw out-party women. The results are quite different. In the out-party women sample, none of the variables of interest are significant in either regression, and the magnitude of the coefficients is generally quite small. In the out-party men condition, however, the magnitude of coefficients is quite large, and significant for our key variables. For house candidates, all of the variables of interest reach statistical significance, even though the sample size is cut in half from Table 3. The magnitude of effects also clearly spikes, indicating that candidates are strongly influenced by the overall electoral context.

For instance, the interaction between having a in-party woman candidate for the House, and the number of in-party women running in other offices is strong and negative (-10.333, sig $p < .01$). Given that

⁸ This can also be accomplished by using interactions, but restricting the samples permits an easier comparison and much easier interpretation of results.

there are three other offices, this means that a woman running for Congress might be downgraded by over 30 points on the 100-point feeling thermometer, simply based upon who else is running in other offices – something she has no control over. Granted, these results do show that women House candidates do start out with an 18-point benefit over their male counterparts, when no other women are on the ballot (“Female In-Party House Candidate”). However, as the number of in-party female candidates increase, male candidates are upgraded by over 6-points for each woman they see (“Number of In-Party Female Candidates” reports this, as the interaction variable reports the effect when the in-party candidate is a woman). So while House women candidates are punished when other women run, House men candidates benefit!

The results for women presidential candidates is not so stark. Individual presidential women benefit by a 10-point bump when the out-party candidate is a man, but the negative effect of other women on the ballot is not statistically significant, and one-third the strength of the congressional version (-3 vs. -10). We take this as confirmation of our expectation that the effects of having multiple women on the ballot are felt more strongly by the lower office candidates.

[Insert Table 6 here]

Turning to Table 6, and the logistic regressions for vote choice, we find much the same pattern. When the out-party candidate is a woman, there are no significant effects for also having an in-party woman candidate in either the House race or the presidential race, nor significant interactions with the number of other women on the ballot. Further, when the out-party candidate is a man, the effect of the congressional or presidential candidate being a woman is also not significant, indicating that women in these offices do not significantly differ from men in their likelihood of receiving the vote of their in-party supporters, *when other women do not appear on the ballot.* , However, men and women’s fates differ based upon who runs in other races, with men receiving a positive coefficient for in-party women running (0.931, $p < .10$), and women receiving a negative coefficient (-1.228, $p < .10$).

[Insert Figure 4 here]

Figure 4 plots the predicted probabilities for men and women House candidates' receiving the vote of their in-party supporters, based simply upon the gender composition of the rest of the other races on the ballot. The patterns are obvious – men's chances improve, while women's chances decline as more women run for other offices. Figure 5, below, supports this general assertion by plotting the predicted probabilities for the presidential candidate when she is a woman. It again shows that when more women appear on the ballot, the likelihood of a supporter voting for her drops precipitously, in this case from 98% to just 74%.

Conclusions from Study 2

Our second experiment largely confirms our expectations and our previous findings. In terms of candidate evaluation, female congressional candidates do just as well as, or even have an advantage over their male counterparts *as long as* she is the only woman that subjects are asked to consider. As soon as other in-party women are added to the ballot, their evaluations decrease dramatically in relation to identical male candidates. Importantly, her evaluations decreased linearly⁹ with each new woman that appeared on the ballot, suggesting that it is not just the appearance of other women generally that leads to lower evaluations, but that she does progressively worse as more women appear in the electoral environment. Conversely, men running for the House do better when more women appear in other races, boosting their electoral fortunes. This suggests that election scenarios which move closer to gender parity may actually be detrimental for women running for Congress (or those in the lowest office on the ballot), even while being a positive accomplishment normatively and descriptively.

It is unclear why the vote choice results for female presidential candidates reach statistical significance while the results for the feeling thermometer score do not. It is important to note, however, that the pattern of results is the same for all of our analyses in both experiments. Coefficients for female candidates in both offices are positive when no other women run concurrently. As soon as any other women are added to the ballot, though, coefficients become negative. Examining two different offices, in

⁹ These results from the OLS analysis are replicated when plotting estimated means from both ANOVA and GLM analyses.

two different studies, using two different types of samples we find nearly identical patterns emerge in the data. Candidate sex matters, and the gender composition of the entire ballot affects individual candidates on the top and bottom of that ballot.

General Discussion and Conclusion

Our analyses provide evidence that the number of women participating as candidates in concurrent elections has implications for the women in those races, as does the office for which they are running. Our results indicate that women running for Congress, in particular, seem to be disadvantaged and subject to more negative evaluations when other women are simultaneously running for higher office. Women candidates for the House are less likely to receive votes from members of their in-party and receive lower feeling thermometer ratings when the subject also sees other in-party women running for higher offices. Our expectation is that the effects demonstrated here are not limited to Congress, per se, but would theoretically continue down the ballot, serving as an obstacle to women running for all types of lower offices, assuming women appear in races for higher offices. A test of this broader hypothesis would involve analyzing state legislative races, or other statewide executive offices, but we currently lack the data necessary to do so.

Considering that we are currently witnessing our first presidential major-party run for a female candidate, our findings give us pause. While a female major-party presidential nominee (and possible president) signifies incredible progress for women in politics, our findings suggest that such a candidacy may not be a universal benefit to all women candidates. If a woman candidate breaks the glass ceiling of presidential politics, our findings suggest that lower-office candidates may be punished, either through more negative evaluations or lost votes. 2016 will likely provide the first opportunity to examine this possibility in the real world and we hope that we, or others, will do so.

Importantly, though, the story we find here is not universally dour. Our findings do suggest that women candidates who appear on the ballot by themselves often have an advantage over their male counterparts. In effect, we find support for the adage “when women run, women win,” but with an important caveat. Women can run, and they can win, provided they are running as the only woman on a

ballot. However, there does seem to be a “ceiling effect” in terms of the number of women voters want to have representing them at once, or at least are comfortable seeing on the ballot. Based on our data, we can only speculate as to why this is, but it is probable that the juxtaposition of gender stereotypes with expectations about what constitutes a “normal” candidate (i.e. being white and male, among other things) or an effective leader, in general, is part of the explanation. The fact that lower-level candidates seem to be most affected by the overall gender composition of an election cycle is also suggestive that stereotypes are part of the problem here, since we would expect candidates who have a harder time getting information about themselves out to voters would be more subject to stereotyping. When voters take the time to learn about candidates, this allows them to become familiar with them and see that they are not so novel, but are in fact normal. This takes effort however, and voters do not expend effort equally upon all offices, or all candidates.

Our findings speak to the larger literature on gender stereotypes, as well, in that they lend more support to studies that have argued that gender stereotypes play an important role in particular electoral contexts (e.g. Bauer 2015; Holman, Merolla and Zechmeister 2011). Recent studies that have found little effect of gender stereotypes on the fortunes of women candidates (e.g. Brooks 2013; Dolan 2014; Hayes 2015) do not take into account the ways in which subtle differences in campaigns and elections can change the ways in/extent to which voters employ stereotypes in their voting calculus. We believe that our study adds to the literature advocating a “middle ground” when it comes to gender stereotypes and voting. That is, our findings suggest that we cannot assume a woman candidate will always be disadvantaged by gender-based stereotypes. In fact, we find the opposite when a woman runs as the only woman. However, our findings also suggest that we cannot rule out the importance of gender stereotypes, wholesale, since they do seem to matter when multiple women run at the same time.

We further believe that our findings may shed more light on why women continue to be under-represented in politics. Women, by and large, have been increasing descriptive representation from the bottom-up. Women hold state legislative offices at higher rates than federal legislative offices, and (until recently) have been better represented in the House than in the Senate. Based on our results, it is possible

that part of the explanation as to why there has been such slow progress is that, as one woman blazes a path into higher office, her advancement impedes the advancement of other woman running for other, lower offices, This, we believe, happens state by state, and office by office. As more women are successful in winning election to higher and higher offices, we believe that this will continue to change the perception that white, male candidates are the norm in those offices. The path towards parity will likely be a slow, non-linear one, then, but we hope that the negative effects of multiple women running for office are temporary and will be alleviated through the steady increase of women who campaign for and win office.

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Table 1.
OLS Regressions for Feeling Thermometers, Pilot Study

Variables	<u>Congressional In-Party Feeling Thermometer Rating</u>	<u>Presidential In-Party Feeling Thermometer Rating</u>
Constant	65.408*** (2.607)	71.336* (4.416)
Senate Race	-1.094 (2.354)	-3.512 (3.467)
Presidential Race	4.854 [†] (2.832)	--
Realistic Information	-1.947 (2.347)	4.462 (3.404)
Female In-Party House Candidate	1.456 (2.686)	1.131 (4.805)
Female In-Party Presidential Candidate	-4.424 (4.338)	3.607 (4.839)
Multiple In-Party Women	-10.403 [†] (5.443)	-14.977* (6.815)
R-Squared	0.029	0.056
N	261	130

[†]p<.1, *p<.05, **p<.01, ***p<.001

Table 2.
Logistic Regressions for Vote Choice, Pilot Study

	<u>Congressional</u> <u>In-Party Vote</u> <u>Choice</u>	<u>Presidential</u> <u>In-Party Vote</u> <u>Choice</u>
Variables	<u>B</u>	<u>B</u>
Constant	2.220*** (0.492)	1.556* (0.623)
Senate Race	-0.040 (0.450)	-0.172 (0.507)
Presidential Race	0.114 (0.579)	-
Information Availability	-0.891 [†] (0.471)	0.207 (0.494)
Female In-Party House Candidate	1.285* (0.572)	0.505 (0.726)
Female In-Party Presidential Candidate	0.413 (0.803)	-0.173 (0.665)
Multiple In-Party Women	-1.879 [†] (0.977)	-0.011 (0.998)
R-Squared	0.066	0.015
N	261	131

[†]p<.1, *p<.05, **p<.01, ***p<.001

Table 3.
OLS Regressions for Feeling Thermometers, Study 2

Variables	<u>Congressional</u> <u>In-Party</u> <u>Feeling</u> <u>Thermometer</u> <u>Rating</u>	<u>Presidential</u> <u>In-Party</u> <u>Feeling</u> <u>Thermometer</u> <u>Rating</u>
Constant	50.773*** (4.242)	56.076*** (3.177)
Strength of Party ID	7.573*** (1.538)	7.070*** (1.256)
Senate Race	0.617 (2.742)	-0.744 (2.341)
Governor Race	-0.037 (2.865)	3.434 (0.583)
Number of In-Party Female Candidates	2.686 (1.983)	0.137 (.933)
Female In-Party House Candidate	10.571* (4.643)	--
Female House Candidate X Number Female Candidates	-5.491* (2.501)	--
Female In-Party Presidential Candidate	--	4.942 (3.546)
Female Presidential Candidate X Number Female Candidates	--	-2.695 (2.020)
R-Squared	0.083	0.075
N	276	352

†p<.1, *p<.05, **p<.01, ***p<.001

Table 4.
Logistic Regressions for Vote Choice, Study 2

Variables	<u>Congressional In-Party Vote Choice</u>	<u>Presidential In-Party Vote Choice</u>
Constant	1.211 (.787)	1.231* (.608)
Strength of Party ID	0.413 (0.309)	0.425† (0.258)
Senate Race	-0.337 (0.554)	0.057 (0.496)
Governor Race	-0.416 (0.532)	-0.248 (0.518)
Number of In-Party Female Candidates	0.755† (0.404)	0.174 (0.323)
Female In-Party House Candidate	0.496 (0.635)	--
Female House Candidate X Number Female Candidates	-0.661 (0.504)	--
Female In-Party Presidential Candidate	--	1.152 (0.749)
Female Presidential Candidate X Number Female Candidates	--	-0.639 (0.391)
R-Squared	0.038	0.032
N	276	352

Table 5.
OLS Regressions for Feeling Thermometers, Study 2

	<u>Facing Out-Party Woman</u>		<u>Facing Out-Party Man</u>	
	<u>Congressional In-Party Feeling Thermometer Rating</u>	<u>Presidential In-Party Feeling Thermometer Rating</u>	<u>Congressional In-Party Feeling Thermometer Rating</u>	<u>Presidential In-Party Feeling Thermometer Rating</u>
Variables				
Constant	54.371*** (5.974)	57.919*** (4.496)	49.320*** (6.099)	53.886*** (4.555)
Strength of Party ID	8.245*** (2.089)	7.062*** (1.815)	6.287** (2.287)	7.198*** (1.762)
Senate Race	4.724 (3.843)	-1.867 (3.271)	-2.331 (3.970)	0.716 (3.387)
Governor Race	-3.716 (4.094)	0.459 (3.649)	3.192 (4.007)	6.885 [†] (3.848)
Number of In-Party Female Candidates	-2.132 (3.003)	1.689 (2.461)	6.192* (2.638)	-1.370 (2.224)
Female In-Party House Candidate	2.326 (6.364)	-	17.993** (6.929)	--
Female House Candidate X Number Female Candidates	0.196 (3.509)	-	-10.333** (3.548)	--
Female In-Party Presidential Candidate	-	0.169 (4.974)	--	10.357* (5.114)
Female Presidential Candidate X Number Female Candidates	-	-2.378 (3.034)	--	-3.393 (2.754)
R-Squared	0.093	0.057	0.090	0.085
N	139	172	137	180

[†]p<.1, *p<.05, **p<.01, ***p<.001

Table 6.
Logistic Regressions for In-Party Vote Choice, Study 2


	<u>Facing Out-Party Woman</u>		<u>Facing Out-Party Man</u>	
	<u>Congressional In-Party Vote Choice</u>	<u>Presidential In-Party Vote Choice</u>	<u>Congressional In-Party Vote Choice</u>	<u>Presidential In-Party Vote Choice</u>
Variables				
Constant	2.215 [†] (1.288)	2.224* (0.899)	0.497 (1.103)	0.274 (0.865)
Strength of Party ID	0.386 (0.432)	0.056 (0.368)	0.538 (0.469)	0.795* (0.389)
Senate Race	0.086 (0.818)	0.041 (0.707)	-0.519 (0.810)	0.177 (0.720)
Governor Race	-0.655 (0.824)	-0.789 (0.690)	-0.284 (0.720)	0.352 (0.825)
Number of In-Party Female Candidates	0.283 (0.749)	-0.181 (0.439)	0.931 [†] (0.501)	0.508 (0.524)
Female In-Party House Candidate	-1.336 (1.308)	--	2.179 (1.550)	--
Female House Candidate X Number Female Candidates	-0.025 (0.828)	--	-1.228 [†] (0.743)	--
Female In-Party Presidential Candidate	--	0.380 (1.037)	--	1.284 (0.803)
Female Presidential Candidate X Number Female Candidates	--	0.045 (0.553)	--	-1.380* (0.616)
R-Squared	0.052	0.030	0.087	0.075
N	139	172	137	276


† $p < .1$, * $p < .05$, ** $p < .01$, *** $p < .001$


Figure 1. DPTE Screenshot


Stage: 2012 Presidential Election
Sub-stage: Primary Election


Time Remaining: 28:07
8:22


**Susan Turner's Religion**

**Debra Johnson's Party Affiliation**

**Lou Baker's Campaign Slogan**

**Susan Turner's stance on Military Intervention**

**Jim Davis's Stand on the Defense Budget**

**Lou Baker's Military Experience**

DPTE: Dynamic Process Tracing Environment 2.5.1, Copyright (c) 2007 - 2012 The University of Iowa, all rights reserved.

Stage: 2012 Presidential Election
Sub-stage: Primary Election

Time Remaining: 27:50
8:05

Susan Turner's Stance on the Defense Budget

Susan Turner believes that defense spending in the US is out of proportion to the needs of the nation, and must be limited. Susan Turner would like to see reductions in the size of the military budget, mainly by reducing the number of bases operated domestically and abroad, and by limiting the research and development budget given to the department of defense.

Close

DPTE: Dynamic Process Tracing Environment 2.5.1, Copyright (c) 2007 - 2012 The University of Iowa, all rights reserved.

Figure 2. Predicted Probabilities of In-Party House Vote Choice in Pilot Study

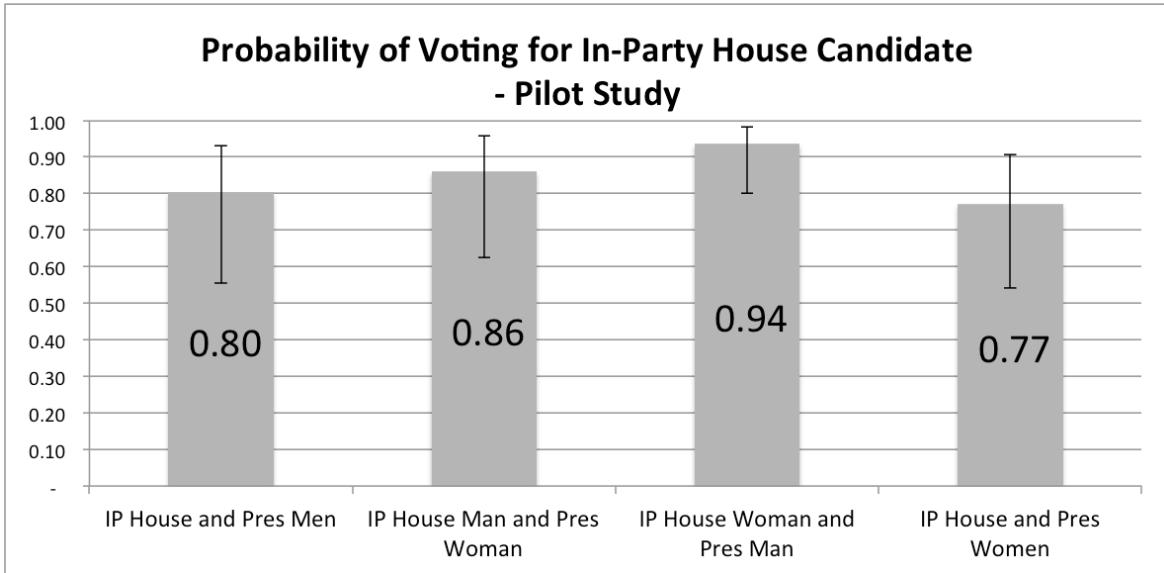


Figure 3. Predicted Probabilities of In-Party House Vote Choice in Study 2

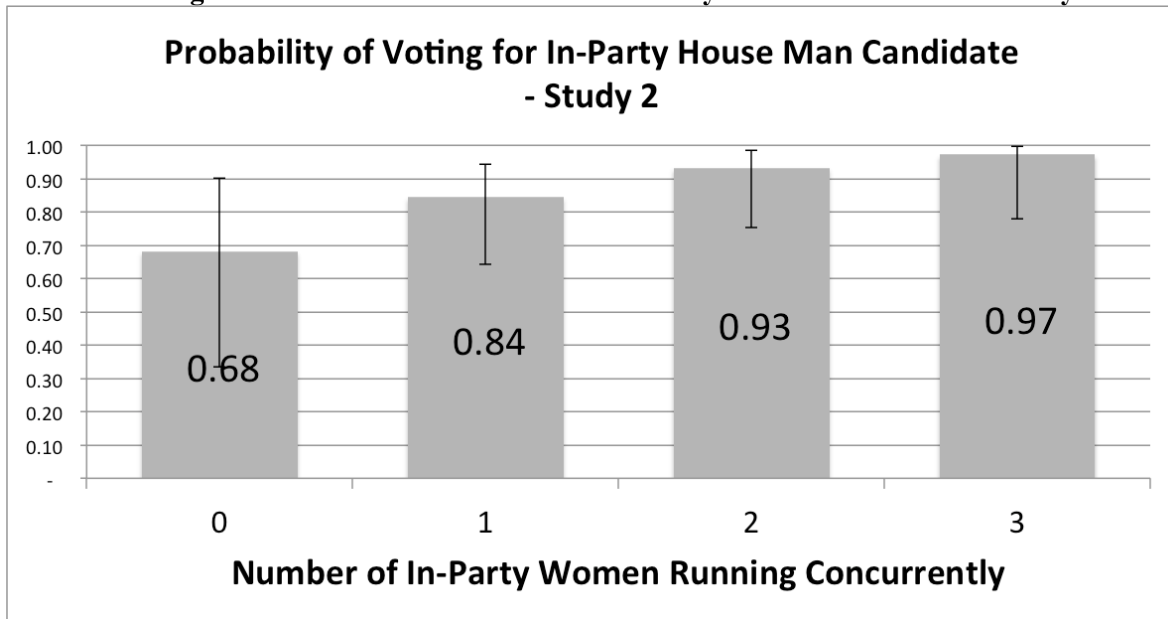


Figure 4. Predicted probabilities of In-Party House Vote Choice, by Candidate Sex

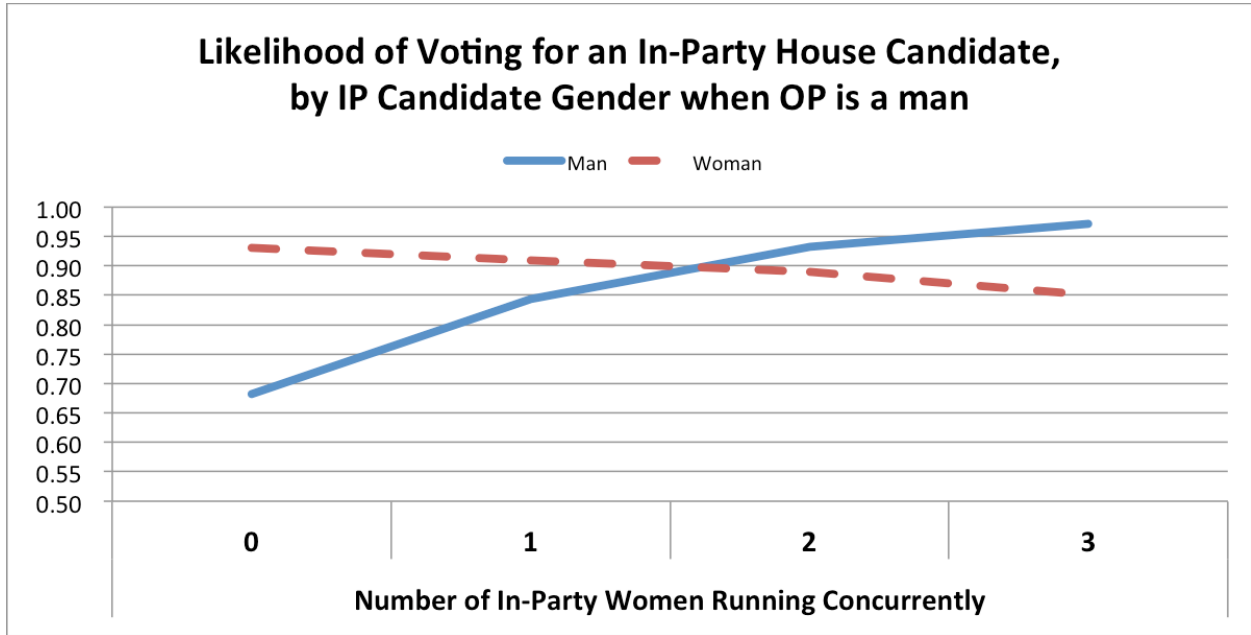
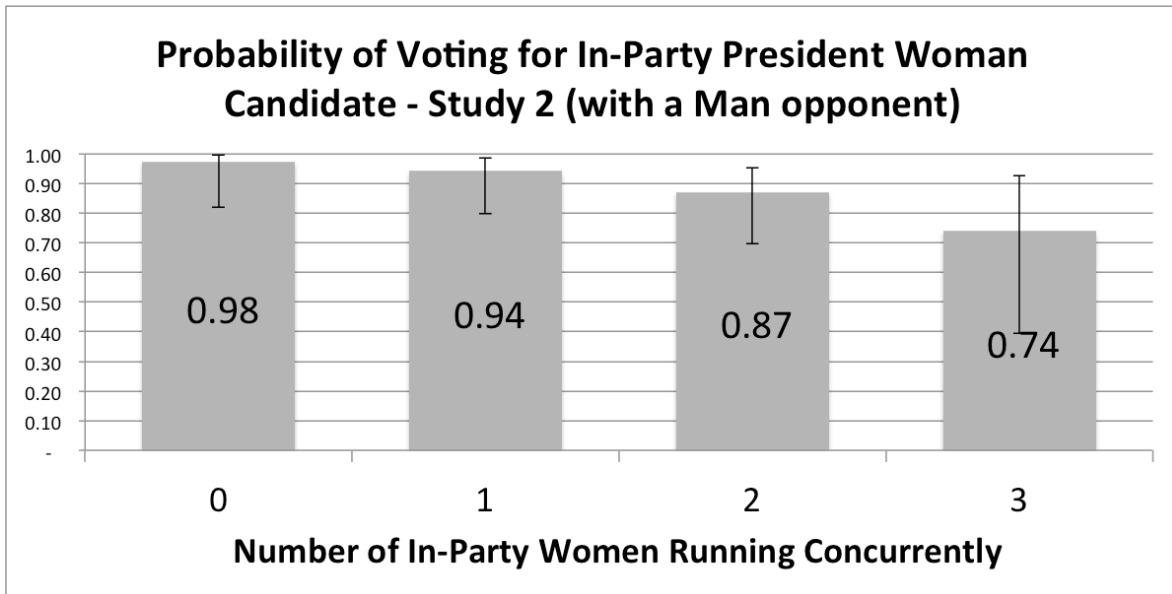


Figure 5. Predicted Probabilities of In-Party President Vote Choice in Study 2



Appendix

Appendix Table 1. Information Items Available about the Candidates, by Study

Pilot (25)	Study 2 (20)
Abortion	Abortion
Affirmative Action	
	Afghanistan
Campaign Slogan	
Current Job Performance	
	Crime
Debate Performance	Debate Performance
Defense Budget	Defense Budget
Economic Philosophy	
Editorial Comments	Editorial Comments
Education	Education
Education Stance	Education Policy
Energy Stance	Energy Stance
Family	Family
	Global Warming
	Gun Control
Healthcare	Healthcare
	Immigration
Jobs/Unemployment	Jobs/Unemployment
Military Experience	
Military Intervention	
Mother's Anecdote	
Picture	
Political Experience	Political Experience
Religion	Religion
Social/Political Philosophy	
Taxes	Taxes
Terrorism	Terrorism
Welfare	Welfare
Work Experience	

Appendix Table 2: Demographics of the Two Studies

	Pilot (N=267)	Study 2 (N=420)
% Female	57.7%	58.6%
% Hispanic	15.4%	5.7%
% Black	6.4%	4.5%
Mean Age	21.8	34.6
% Democrat	67.4%	59.2%
% Republican	22.5%	24.8%
Mean IP House Term	64.79	70.2
Mean IP Pres Term	70.72 (N=130)	70.9

Appendix Table 3: Explanation of Variables in Pilot Study

Variable	Interpretation	Values
Senate Race	The marginal effect of having the Senate Race appear, rather than not appear	0, 1
Presidential Race	The marginal effect of having the Presidential Race appear, rather than a Governor's race	0, 1
Realistic Information	The marginal effect of having a realistic availability of information, rather than an equal distribution between the offices	0, 1
Female In-Party House Candidate	The conditional marginal effect of having an in-party woman candidate for the House, rather than a man, when the in-party candidate for the executive is a man	0, 1
Female In-Party Presidential Candidate	The conditional marginal effect of having an in-party woman candidate for the President, rather than a man, when the in-party candidate for the House is a man	0, 1
Multiple In-Party Women	The conditional marginal effect of having in-party women candidates run for both House and President, rather than not having two women candidates	0, 1

Appendix Table 4: Explanation of Variables in Study 2

Variable	Interpretation	Values
Strength of Party ID	The marginal effect of Strength of Partisanship	0, 1, 2, 3
Senate Race	The marginal effect of having a Senate race appear, rather than not appear	0, 1
Governor Race	The marginal effect of having a Governor race appear, rather than not appear	0, 1
Number of In-Party Female Candidates	The conditional marginal effect of having an additional in-party women candidate appear when the in-party House/Presidential candidate is a man	0, 1, 2, 3
Female In-Party House Candidate	The conditional marginal effect of having an in-party woman House candidate, rather than a man, when no other in-party women appear	0, 1
Female House Candidate X Number Female Candidates	The conditional marginal effect of having an additional in-party women candidate appear when the in-party House candidate is a woman	0, 1, 2, 3
Female In-Party Presidential Candidate	The conditional marginal effect of having an in-party woman Presidential candidate, rather than a man, when no other in-party women appear	0, 1
Female Presidential Candidate X Number Female Candidates	The conditional marginal effect of having an additional in-party women candidate appear when the in-party Presidential candidate is a woman	0, 1, 2, 3