

**THE EFFECTS OF CANDIDATE APPEARANCE ON INFORMATION SEARCH AND
POLITICAL BEHAVIOR DURING POLITICAL CAMPAIGNS**

By

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ABSTRACT OF THE DISSERTATION

The Effects of Candidate Appearance on Information Search and Political Behavior

During Political Campaigns

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The goal of this project is to examine the role that various aspects of a political candidate's physical appearance play in influencing voters' information search patterns, candidate evaluations, and ultimate vote choice. In particular, it considers the effects of a candidate's gender, race/ethnicity, and perceived competence on the amount of information accessed about a candidate, affect toward a candidate, personality trait ratings, and vote decisions. Using two separate computer-based experiments, both of which utilize the Dynamic Process Tracing Environment (DPTE), this dissertation seeks both to determine how an information processing perspective can enhance our knowledge of how candidate appearance influences these variables, and to provide a better understanding of how multiple appearance cues may influence voting behavior simultaneously. It looks first at the relationship between information search and race and gender-based prejudice and finds that the amount of information that subjects search for during a simulated presidential campaign is affected by both the race/gender of the candidates in the race, as well as by the levels of race and gender-based prejudice expressed by the subjects. Those

subjects who are high in prejudice search for less information about female and minority candidates, which, in turn, leads to a lower likelihood of voting for those candidates. Second, it considers the simultaneous effects of race, gender, and a candidate's perceived competence based on automatic trait inferences. I find that incompetent looking candidates are at an electoral disadvantage, but that race and gender also interact with this cue such that incompetent looking female candidates are especially disadvantaged. Finally, I find that an incompetent appearance cue can be overcome when the substantive information available about an incompetent candidate contradicts that cue by portraying him or her as politically competent. In sum, I find that appearance cues matter in a voter's decision-making process, but that the other information available during a political campaign can, at times, serve to either mediate the relationship between appearance and voting behavior or to temper it outright.

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Chapter 1: Introduction

How do impressions of candidates based on their appearance influence the way voters learn about and evaluate them? In a democratic government, citizens' ability to engage directly with the political process in order to choose representatives and create public policy is both a distinction and a dilemma. Many scholars of public opinion have decried the public's lack of political sophistication, arguing that a deficit of factual information, coherent ideology or even fixed preferences leads to irrational and meaningless political behavior (e.g. Campbell, Converse, Miller and Stokes 1960; Converse 1964, Zaller 1992; Delli Carpini and Keeter 1996). Others have accepted the public's apparent political ignorance as rational and inevitable, since people suffer from inherent cognitive limitations, attention to politics is costly in terms of time and energy, and participation in politics provides limited benefits. Often, these scholars point to the availability of cognitive heuristics or "information shortcuts" (e.g. Kahneman, Slovic and Tversky 1982; Lau and Redlawsk 2006) as evidence that, despite their limited political sophistication, voters are nonetheless often capable of making reliable political decisions.

Among the most widely used heuristics are cues related to a person's appearance—assumptions about someone's abilities, character or personality based on how someone looks and, often, the group memberships tied to that appearance (Lau and Redlawsk 2001). In the political realm, candidates are often evaluated on how they look—their race/ethnicity, gender, age, attractiveness or facial composition provide cues about politically salient attributes such as the candidate's

personality traits, ideology, policy issue specializations, and/or political viability. A candidate's perceived personality traits, in particular, have been shown to play an especially important role in voters' political decision-making—often trumping even policy or ideological considerations (Stokes 1966; Sears 1969; Kinder 1983; Kinder and Abelson 1981; Miller, Wattenburg and Malanchuk 1986). Further, voters often need no more than rapid exposure to a still image of a candidate to make assumptions about what desirable or undesirable traits he or she possesses (Todorov, Mandisotza, Goren, and Hall 2005).

Much evidence has shown that these appearance-based person judgments—or *appearance heuristics*—are ubiquitous (e.g. Huddy and Terkildsen 1993; Kahn 1996, Sigelman, Sigelman, Walkosz, and Nitz 1995; Williams 1990) but not necessarily accurate (Hassin and Trope 2000; Zebrowitz and Montepare 2008; Olivola and Todorov 2010b). Children are often warned against “judging a book by its cover,” yet, despite the fact that there is no guarantee that someone who looks like they possess certain personality traits actually does (Olivola and Todorov 2010a), that seems to be exactly what people are hard-wired to do. The question, then, is how this tendency affects the electoral process. To what extent are impressions based on appearance heuristics incorporated into political behavior and decision-making, and how are they used? Several separate literatures in both political psychology and social psychology have begun to shed light on these questions, including studies by race and gender scholars which look at the effects of person stereotypes and race and gender-based prejudice on candidate evaluation, as

well as social psychological examinations of spontaneous trait inferences derived from facial features.

First, an extensive experimental literature exists in political psychology examining the effects of various aspects of a candidate's appearance on voters' perceptions of him or her, including gender, race, religion and age (Huddy and Terkildsen 1993; Kahn 1996, Sigelman, Sigelman, Walkosz and Nitz 1995; Williams 1990; Leeper 1991; Rosenwasser et al 1987; Higgle, Miller, Shields and Johnson 1997; Matland 1994; Sapiro 1982; Mericle, Lenart and Heilig 1989; King and Matland 2001; McDermott 1998; Schneider and Bos 2009; Williams 1990). These stereotypes are multi-faceted and often lead to assumptions about a candidate's personality traits, ideology, issue competencies, and viability. A second, related concept is prejudice. Both political scientists and social psychologists have examined the nature and existence of race and gender-based prejudice in the American electorate, and some evidence suggests that these kinds of bias may still play a role in voter decision-making. Further, social psychologists have repeatedly found that individuals automatically (i.e. pre-consciously) make assumptions about others' personality traits based on nothing more than a brief exposure to their faces (Hall et al 2009; Hassin and Trope 2000). This observation has been applied to political candidate evaluation in a series of studies by Todorov and colleagues (Todorov, Mandisotza, Goren and Hall 2005; Hall et al 2009; Ballew and Todorov 2007; Olivola and Todorov 2010a), whose findings indicate that the results of actual elections can, partially, be explained by spontaneous judgments about how competent the candidates look. Taken together, these findings suggest that a

candidate's appearance might influence voters' assessments of him or her in one of two ways. Visual markers of membership in a particular social group may trigger stereotypic associations and/or prejudices stored in long-term memory, or something about a candidate's facial features (apart from indicators of social identities like race or gender) may lead to automatic inferences about his or her personality.

These literatures are vast and have made substantial contributions to our knowledge of candidate evaluation. To my knowledge, however, all studies that apply person stereotypes or spontaneous trait inferences to political candidates ask subjects to evaluate candidates after only one exposure, essentially asking them to make a judgment after a first impression, only. This series of studies, on the other hand, uses two computer-based experiments, each utilizing the Dynamic Process Tracing Environment (DPTE),¹ to examine the ways in which those first impressions based on a candidate's appearance influence voter behavior and decision-making later on. DPTE is a web-based computer program that allows researchers to mimic the constant flow of information in an actual campaign environment, thereby tracking subjects' information search as the campaign progresses. Because DPTE allows researchers to track the content, sequence and amount of information accessed by subjects, it provides a unique opportunity to examine the effects of initial impressions on subsequent political learning. Prior studies of appearance-based assessments have not had the capability to treat candidate evaluation as a process that occurs over time, but DPTE allows researchers to examine the ways in

¹ Developed by Richard Lau and David Redlawsk with assistance from the National Science Foundation.

which first impressions alter how much and what kinds of information voters choose to access later on. In this way, I seek to better approximate the experience of a voter during a campaign and begin to examine exactly how a candidate's appearance contributes to ultimate electoral judgments, even when other types of information are available.

At the same time, we also know little about how different appearance cues might function together. The majority of experimental studies that focus on the effects of a candidate's physical appearance on voter behavior have examined one aspect of appearance cue in isolation (either race OR gender OR trait inferences, e.g.). There are a number of facets of each person's physical appearance, however, that may contribute to political judgments made about him or her. It is likely that these factors interact with each other and lead to different evaluations and outcomes when they appear in different combinations. Is a competent looking African American woman perceived in the same way as a competent looking white woman, for example? These questions are particularly important as more and more women and African American candidates run for, and win, high office.

This project, then, will address two main questions. First, how do appearance cues—specifically, gender, race, and automatic inferences of competence, influence candidate evaluation and vote choice variables when other, more substantive political information is also available? Do these appearance-based heuristics still affect voter decision-making when voters have the option of conducting their own search for essentially whatever information they may wish to learn about a given candidate? Second, how do these three particular aspects of physical appearance

function in tandem? While we know something about how race, gender, and competence inferences influence evaluation and vote choice on their own, we know little about their effects on these things when considered together.

In order to answer these questions, I conducted two DPTE experiments, each of which allows me to examine a different aspect of the relationship between candidate appearance, information search, and voting behavior. All three experiments simulate presidential campaigns and elections using fictitious, yet realistic, candidates, and each manipulates various aspects of the candidates' physical appearance. Experiment 1 manipulates gender and race/ethnicity, individually, among the candidates a subject sees, and experiment 2 simultaneously manipulates race, gender, and whether or not a candidate has a "competent" appearance.

For the remainder of this introduction, I review the literature upon which my analysis is based, describe my two experiments in more detail, then briefly summarize each of the chapters that follow. I begin with a discussion of the psychological underpinnings of my project, including the ideas of behavioral decision theory and dual process theories of cognition. I then discuss, in detail, the specific types of cues I examine in these chapters—a candidate's personality traits, in general, trait stereotypes based on race and gender (as well as race and gender-based prejudice that may stem from those stereotypes), and automatic trait inferences based on facial composition. Afterwards, I discuss information processing theory and how dynamic process tracing provides a useful method for answering questions of candidate appearance and decision-making. I then provide a

description of Experiments 1 and 2 and, finally, give a synopsis of the analysis and findings in each of the chapters that follow.

Literature Review

Appearance and the Psychology of Decision-Making

Given its seeming irrelevance to political performance, why would we expect a candidate's physical appearance to play a role in a voter's decision-making process? There are several possible answers to this question, but for my purposes, I expect a candidate's physical appearance to influence political behavior because it functions as a quick, easy source of information about the candidate. In other words, it is a salient cognitive heuristic, or information shortcut (e.g. Popkin 1991, Sniderman, et al 1991, Lau and Redlawsk 2006). Humans have been called 'cognitive misers' (Fiske and Taylor 1991) because we are fundamentally limited in our ability and desire to process information (Anderson 1983). We may be especially limited when it comes to politics, given its relative unimportance in most people's lives. The more proximally important something is—the more we perceive a potential cost for not addressing it—the more likely we are to devote substantial amounts of attention to it (Chaiken and Trope 1999). Conversely, to the extent that we can get away with paying minimal attention to less pressing concerns, we will conserve our cognitive resources for other things. Limiting how much attention one devotes to politics, then, is often seen as a 'rational' allocation of cognitive resources (Fiske and Taylor 1991).

In the process of making a decision, people are guided by two conflicting motivations: to make a good decision, and to make an easy decision (e.g. Lau 2003).

Social psychologists posit that these two urges correspond to two separate decision-making 'routes'—a 'central,' deliberate process in which information is consciously and carefully considered (System 2), and a 'peripheral,' automatic process that makes use of easily available heuristics and relies on already-held attitudes (System 1) (Petty and Cacioppo, 1986; Eagly and Chaiken 1998; Chaiken and Trope 1999). The first, central process is reserved for our most important decisions, while the peripheral route is employed when cognitive energy can be conserved without expected repercussion. When the outcome of a given election is particularly important to an individual, then he or she should be motivated to devote more of his limited cognitive resources to making a vote choice. Conversely, when the stakes are not so high, he or she may revert to the less-costly peripheral route.

It is in the use of this peripheral, System 1, route that a candidate's appearance may become salient in a voter's decision-making process. Making judgments based on how someone looks is cognitively cheap—it does not take a lot of mental energy to look at someone and notice that he or she is a man or a woman, black or white. Further, psychology models long-term memory as a series of interconnected nodes in which associated concepts are activated together, so any feelings or attitudes associated with a given facet of appearance tend to automatically accompany those observations (Anderson 1983). Stereotypes about a particular ethnic group arise automatically upon seeing a member of that group, for example. Also, even people that know very little about politics are used to making appearance-based judgments like this in everyday life. For this reason, appearance heuristics are particularly salient for most people, regardless of their level of

political sophistication (Rahn, et al 1990, Lau and Redlawsk 2001). While some appearance cues may provide useful information (that African Americans and women are more likely to be Democrats, e.g.), there is an inherent danger in relying on someone's physical appearance to make judgments about them when there is no guarantee that someone who looks like he or she possesses certain characteristics actually does. The discussion of appearance based stereotypes and automatic trait inferences demonstrates why this is the case.

Appearance Based Stereotypes

Scholars of political behavior have demonstrated time and again that social identities with largely unavoidable visual markers—i.e. race and gender—lead candidates who possess these markers to be subject to different stereotypes. In particular, stereotypes ascribed to women and African American candidates are particularly prevalent. Women, for example, are perceived as more empathetic and less decisive than men, while men are seen as more assertive and rational than women (Huddy and Terkildsen 1993). Women political contenders are also perceived as more trustworthy, honest, and compassionate than their male counterparts (Kahn 1996). At the same time, though, they are perceived as less competent and experienced, less able to handle the motional demands of high office, and lacking in masculine traits like “toughness” (Carroll and Dittmar 2010). Because of these trait perceptions, voters also believe that men and women have different policy strengths: women are perceived as better able to handle “compassion” issues like education, healthcare, childcare, and poverty, while men are more adept at “masculine” issues (military, terrorism, crime; Cook, Thomas and

Wilcox 1994; Dolan 2004; Rosenwasser and Seale 1988). Women candidates are similarly stereotyped as more liberal than their male counterparts (Alexander and Andersen 1993; Koch 2000). Finally, women are often evaluated more heavily on their personal lives and family situation than men (Carroll and Dittmar 2010).

In terms of racial stereotypes, some studies have found that being black may create doubts about a candidate's competence and qualifications (Sigelman et al. 1995; Williams 1990). Further, white candidates are more likely to be perceived as intelligent, knowledgeable, hardworking, and trustworthy compared to black candidates (Williams 1990). As with gender, racial stereotypes can also affect a candidate's perceived policy strengths. Blacks have an advantage on compassion and specifically racial issues (helping the poor, ending discrimination), but a disadvantage on major policy issues such as the military and economy (McDermott 1998; Sigelman et al. 1995; Williams 1990). Like women, blacks are also perceived as more liberal and more likely to be strongly Democratic (McDermott 1998; Schneider and Bos 2009).

While much has been learned from these studies of race and gender stereotypes, they have all been methodologically limited in an important way. Whether using survey data (Koch 2000,2002; Sanbonmatsu 2002; Alexander and Anderson 1993; McDermott 1993; Sanbonmatsu and Dolan 2009; Cook, et al 1994; Lawless 2004; Williams 1990) or experimental methods (Huddy and Terkildsen 1993; Kahn 1994; Leeper 1991; Rosenwasser et al 1987; Higgle, Miller, Shields and Johnson 1997; Matland 1994; Sapiro 1982; Mericle, Lenart and Heilig 1989; King and Matland 2001), studies examining the effects of race and gender stereotypes on

political candidates have been limited to evaluations made at one point in time. Experimental studies, in particular, tend to manipulate a mock candidate's race or gender—either by changing the picture or a written description associated with the candidate—then measure the dependent variables of interest. Again, though this technique has produced important findings in terms of how race and gender influence candidate evaluation, it means that most results to date rely exclusively on first impressions. This study seeks to understand what happens *after* these initial evaluations.

Race and Gender-Based Prejudice

Interestingly, though race and gender based stereotypes clearly exist, the nature and existence of outright prejudice based on these cues is more complicated. Many studies have found that overt bias toward women in the electorate is no longer a major obstacle to women's election to office (Burrell 1994, Seltzer, Newman and Leighton 1997, Darcy, et al 1994, Woods 2000, Dolan 2004), while others have found that women are advantaged in some contexts—when “feminine” issues are at the electoral forefront, in particular (Cook, Wilcox and Thomas 1994, Dolan 2004, Lawless 2004)—and disadvantaged in others—when vying for high, executive office, for example (Huddy and Terkildsen 1993, Carroll and Dittmar 2010). The adage “when women run, women win” seems to be true, at least in some contexts. Because of this assumption, however, little work exists that directly examines the effects of gender-based prejudice on voting behavior at the individual level (but see Huddy and Carey, 2009, for an exception).

The jury is also still out on the nature and effects of racism in the contemporary political context. Traditional forms of racism, including support for a formally segregated society, have faded, but several new incarnations of racial prejudice seem to have surfaced. “New Racism” measures (e.g. symbolic racism: Sears and Kinder 1971, modern racism: McConahay 1986, racial resentment: Kinder and Sanders 1996), which combine negative affect toward blacks with support for “American values,” such as individualism and self-reliance, have been shown to be significant predictors of both racialized policy issues (e.g. Kluegel and Smith 1983, Sears and Allen 1983) and evaluations of black political candidates (e.g. Kinder and Sears 1981). Further, tests of implicit attitudes (e.g. the Implicit Attitudes Test: Greenswald, McGhee and Schwartz 1998, the Affect Misattribution Procedure: Payne, Cheng, Govorun and Stewart 2005) have found evidence of a different kind of racial bias in the electorate that exists unconsciously and is largely employed automatically.

While the study of racism in American politics is alive and well, many uncertainties still exist, including which measures are the best and most influential in a political setting (Sears 1988, Ditonto, Lau and Sears 2013), and whether racism even still has a role to play in voter decision-making. Some scholars suggest that African American candidates are no less likely to win their races than white candidates (Reeves 1997, Voss and Lublin 2001, Highton 2004), which may be evidence that racial prejudice is no longer as influential in a political context as it once was.

Ethnicity, Stereotypes and Prejudice

While the literature on Hispanic candidates is not as extensive as for black candidates, there is some evidence to suggest that Hispanic candidates are subject to stereotypes based on their ethnicity, as well as bias by voters. Like black candidates, Hispanic candidates are perceived as more liberal and more compassionate, though less competent than white candidates (Sigelman et al 1995). Some evidence has shown that Hispanic candidates are disadvantaged in low-information elections compared to white candidates (Matson and Fine 2006), though scholars have also found evidence that Hispanic voters are sometimes more likely to vote for Hispanic candidates due to in-group affinity (Barretto, Villareal and Woods 2005, Huddy 2001, Sigelman and Sigelman 1982). Finally, Kam (2007) finds that, in the absence of a party cue, voters with negative attitudes (either implicit or explicit) toward Hispanics as a group are less likely to vote for Hispanic candidates.

Spontaneous Trait Inferences

A separate literature, emerging from social psychology, has found that, in all forms of human interaction, individuals constantly make spontaneous, preconscious trait inferences based on others' appearance, and their faces, in particular (e.g. Hall et al 2009; Hassin and Trope 2000; Olivola and Todorov 2010). Evaluating a person's characteristics based on their face—or, *physiognomy*—is a well-documented phenomenon, as the face has been shown to play a special role in human cognition, since it is always available in in-person human interaction and vision is evolutionarily the most basic and most utilized sense (Noller 1985, Posner, Nissen and Klein 1976, Gazzaniga 1998). In fact, neuroscience has found certain

areas in the brain that specialize in the processing of human faces (Kandel, Schwartz and Jessell 1991; Young and Bruce 1991). Interestingly, judgments made based on faces tend to be reliable, in that people infer the same sorts of traits from the same sorts of faces (Hassin and Trope 2000), but most evidence suggests that these inferred traits do not necessarily correlate with the actual traits possessed by individuals (Cohen 1973, Alley and Cunningham 1988; but see Berry and Zebrowitz 1990). Regardless of their level of reliability, characteristics derived from faces have been shown to alter people's evaluations of targets, even when other information is available, and subjects seem unable to ignore this information, even when they are told to do so (Hassin and Trope 2000).

These inferences are involuntary and made very rapidly—often in as little as 100 milliseconds (Todorov and Uleman 2003; Olson and Marshuetz 2005; Todorov 2008)—and happen regardless of a person's race, gender, age, or any other social group membership. It is still unclear exactly what features a face must possess in order to appear competent, trustworthy, charismatic, etc., but some evidence suggests that such inferences seem to depend on aspects of an individual's face that signal maturity and attractiveness, such as distance between the eyes, roundness of the face and angularity of the jaw (Oliviola and Todorov 2010). Other findings suggest that trait inferences depend on the extent to which someone's facial structure resembles people in various emotional states—faces that look happy, structurally, tend to be seen as more trustworthy, for example (Montepare and Dobish 2003). Whatever the triggers, because these sorts of trait inferences are occurring frequently and automatically, it is perhaps not surprising that they affect

individuals' decision-making in a number of domains, including selection of romantic partners (Oliviola et al 2009), judicial decisions (Zebrowitz and McDonald 1991) and choices about which applicant to hire (Naylor 2007).

Politics seems to be no exception. In a series of studies, Todorov and colleagues (Todorov, Mandisotza, Goren and Hall 2005; Hall et al 2009; Ballew and Todorov 2007; Oliviola and Todorov 2010a) found that subjects' spontaneous inferences about a candidate's traits—competence, in particular—correctly predicted the outcomes of actual Congressional and Gubernatorial elections between 60% and 73% of the time. Inferences were made after seeing still images of the candidates' faces, only, and those rated as more competent by the subjects were more likely to win (or have won) in actual elections. While multiple trait ratings were collected, perceived competence was the only trait found to have this effect. Traits like trustworthiness and charisma did not predict vote choice in the same way, and other attributes like attractiveness and age seem to be bound up with perceptions of competence, as well. Oliviola and Todorov (2010a), for example, found that a candidate's attractiveness and perceived maturity contributed to inferences of competence, meaning that more attractive and more mature looking candidates may do better in elections because they are seen as more competent. Similarly, Mattes, Spezio, Kim, Todorov, Adolphs, and Alvarez (2007) find that attractive candidates who also look competent tend to do better in elections, while attractive but incompetent looking candidates do worse. Banducci, et al (2008) also find that more attractive candidates are significantly more likely to do better in

electoral contests unless trait perceptions (like competence) are also added to the equation, in which case the effects of attractiveness drop out.

The sum total of many of these spontaneous inference studies suggests that perceptions of competence are particularly important in predicting candidate evaluation and vote choice. Again, though competence may be a reasonable heuristic on which to base candidate evaluation, inferred competence from rapid exposure to a candidate's face may not be the most reliable indicator (Lenz and Lawson 2008). Further, as with political psychology studies or person stereotypes, to my knowledge, all studies of spontaneous trait inferences and political candidates are limited to evaluations made after first impressions. It is clear that automatic inferences lead to trait judgments, but to what extent do those judgments influence later political behavior? Automatic competence judgments have been found to predict election outcomes as much as 60-73% of the time, but that is far from perfect correlation. When and how are they incorporated into later information search and vote decisions?

Information Search and Dynamic Process Tracing

In order to answer this question (as well as the others posed above) I turn to information processing theory and dynamic process tracing (Lau and Redlawsk 2006). An Information processing perspective posits that the task of voting or evaluating a candidate is fundamentally an information-processing task. Voters must search for and encounter information about candidates, which they then process in order to build an evaluation and, ultimately, make a vote choice. This takes multiple steps, with each step influencing the next. This model suggests that

while candidate characteristics like a candidate's appearance, and voter characteristics (like the stereotypes or prejudice they have related to particular social groups) affect vote choice, they generally do so through their influence on information search and processing, rather than directly. 'Information search' refers to the amount, type, and sequence of information that voters seek out and learn during a political campaign. An information processing perspective views this process of acquiring information and learning about candidates as important steps that come between traditional, individual and candidate level predictors of candidate appraisal and vote choice and actual evaluations and vote decisions. In this way, information search becomes a crucial intervening variable in any model that seeks to explain candidate evaluations or vote choice.

In order to study information search and processing, Lau and Redlawsk have relied on dynamic process tracing (DPTE). Process tracing experiments are designed to follow a subject's decisions as he or she examines information available in a simulated political campaign. Detailed scripts of the subject's information search are recorded, which provide measures of the sequence in which information is examined, the amount of information acquired, and the patterns evident in the search. DPTE present subjects with a rich and constantly-changing information environment which mimics the flow of information in a real-world campaign. Thus, DPTE provides a complex experimental environment where subjects have the opportunity to learn about the candidates running for office, while their information search activity is recorded. Further, the amount of information available in a DPTE experiment is usually far more than any one person could access in the amount of

time given. This means that there is an opportunity cost inherent in learning any one piece of information—by accessing one thing, you miss out on the opportunity to learn something else. This forces subjects to prioritize their search and learn what is really important to them. This also simulates a real-world high-level campaign in which there is far more information available than any voter could realistically encounter.

The process of searching out and acquiring information is inherently a ‘System 2’ type task, in that it requires conscious, deliberate thought and activity. Appearance cues, on the other hand, fall under ‘System 1’ processing, as they are used automatically and without much cognitive effort. By examining the effects of appearance cues on candidate evaluation and vote choice by themselves, without other, competing information, previous experimental studies have essentially been mimicking low-information, low-cost elections in which voters may rely only on these heuristics. In real-world, higher-information elections that voters view as more important, though, automatic, System 1 processing may not be sufficient for most voters. By manipulating a candidate’s appearance in a DPTE study, I can examine how a candidate’s appearance might shape voter decision-making over time in a complex information environment, thereby more closely mimicking the experience of a voter in a real-world election.

DPTE Experiments 1 and 2

Experiment 1

Experiment 1 took place in the spring of 2011 and was a The Multi-Investigator Multi-Site (MIMS) study, which combined ideas from a number of

collaborators that could be tested simultaneously in the same experimental setting. A single experiment was developed with random manipulations designed to test each of those ideas, with each collaborator running subjects at different sites. Data from all sites were then combined into a single dataset. The manipulations not relevant to this study were randomly distributed so should not have an effect on this analysis.² A non-student sample of 303 adult subjects was recruited in central New Jersey, southern California, and the area around Nashville, Tennessee. The average age of subjects was 39 and 68.5% of the sample was female. In terms of race and ethnicity, 69.5% was white, 11.5% black, 4.4% was Asian, and 11.9% identified as Latino. 46.8% identified as a Democrat, 19.3% as Republican, and 33.8% as independent.

Experiment 1 mimicked a presidential campaign and election. It consisted of both a Democratic and Republican primary campaign and election, as well as a general campaign and election in which a candidate ran from each of the major parties. Subjects first completed a questionnaire that asked them questions related to partisanship, ideology, political attitudes, political sophistication, participation, prejudice measures, and demographics. Subjects were then asked to register for one of the party's primaries,³ though they saw information about candidates from both parties. After the primary race, which lasted approximately 16 minutes, subjects moved on to a 9 minute general election.

² See Lau 2012 for an in-depth discussion of the details, as well as benefits and drawbacks of the MIMS-1 study.

³ 204 subjects chose to vote in the Democratic primary, and 99 chose to vote in the Republican primary.

During the campaigns, subjects saw scrolling boxes that contained different pieces of information related to one of the candidates in the race. Each scrolling box had a label describing the information available in the box, should the subject decide to click on it (saying, for example, “Lou Baker’s Stance on Crime”). Each scrolling box also had a colored border indicating the party affiliation of the candidate to whom the information applied (red for Republicans, blue for Democrats). When an information box was selected by clicking on it, the information in the box filled up the screen and subjects could spend as much time as they wished reading it. While they did this, however, the other pieces of information continued to scroll by behind it, creating an opportunity cost. In the primary election, there were 25 distinct pieces of information available about each candidate, including 12 policy positions, party affiliation, a picture, and 11 other personal/background-related bits of information. There were also endorsements from 9 different interest groups. Each piece of information was available twice during the campaign, with the items presented in random order. It was virtually impossible for a subject to learn all of the information available in the campaign. The number of boxes opened by each subject during the primary campaign ranged from 9 to 139, with an average of 60 items per person.

In the primary election, the main manipulation was to vary the candidates’ gender, race and ethnicity. Three different candidate “personas” were created for each party’s primary, each containing unique issue positions, ideologies, background information, and endorsements from various groups. In the Democratic primary, one of the personas was extremely liberal and took issue positions

consistent with that ideology. Another was a “mainstream” liberal Democrat in ideology and issue stances, and the third was a moderate Democrat with issue stands that reflected this ideology. Among Republicans, there was likewise an extremely conservative persona, a “mainstream” Republican persona, and a moderate Republican persona.

At the same time, each persona was tied to a particular appearance that varied by race, ethnicity and gender. Each persona could either be paired with a white man, a white woman or a member of a man who was also a racial/ethnic minority. Among Democrats, the minority candidate was a Hispanic man, while the minority candidate in the Republican primary was an African American man. Race, ethnicity, and gender were portrayed through pictures of the candidates⁴ (as well as via name in the case of female vs. male candidates and the Hispanic candidate). Each persona was paired with each picture/name combination 1/3 of the time.⁵

Each subject saw a “synopsis page” at the beginning of the primaries that displayed the names and pictures of each of the candidates running in each party’s contest. The scrolling information boxes also had a small “thumbnail” picture of the candidate to whom the information applied. Finally, the pictures of each candidate were included in the scrolling information available during the campaign, so subjects could click on them as they wanted. The same picture of each candidate was always used.

⁴ Pictures were taken from state legislators’ websites in states other than those from which subjects were recruited. All were pre-tested and rated similarly in terms of attractiveness, age, and likability.

⁵ Candidate pictures are available in the appendix.

While our intention was always to have the candidate for whom a subject voted lose in the primary, thereby creating a gender manipulation for the subject's in-party general election candidate, a programming error caused the white male candidate to advance to the general election for almost all subjects. Because of this, the general election is a far less interesting place to study the effects of gender, so my analysis will be limited to the primary campaigns, only.

Experiment 2

Experiment 2 was conducted in the spring of 2012⁶ and was completed by 449 total subjects. 106 of those subjects were recruited from the Central New Jersey area and took the experiment in the lab at the Center for the Experimental Study of Politics and Psychology at Rutgers University. The remaining subjects were recruited through Amazon Mechanical Turk and took the study online using their own computers.⁷ The sample is 58% female, 76% white, 9% African American, 9% Asian and 5% Latino. The median age is 32 and 55% had at least a college degree. 16% of the sample identified as Republican, 48% as Democrat, and 31% as independent.

The experiment lasted approximately one hour. Subjects first saw a series of instruction screens, then were asked to complete a pre-election questionnaire, which collected information on subjects' issue positions, ideology, party identification, demographics, political participation, political knowledge, ratings of interest groups, and racism and sexism scales. They then participated in a 2-minute

⁶ With support from the National Science Foundation

⁷ Very few differences were found between the two sub-samples or in their performance in the study. See Kleinberg, Ditonto, Andersen, and Lau (2013) for more information on the comparison of these sub-samples.

practice campaign in order to gain some experience using the software, after which they were asked to choose whether they wanted to participate in the Republican primary or the Democratic primary,⁸ and assigned to the appropriate 11-minute primary campaign. Two candidates ran in each of the party's primaries and, though subjects could only vote in one primary election, they saw information about the candidates in both races. Subjects were then asked to vote in the primary election for their own party and answer a series of questions about the candidates they saw in the campaign. They then moved on to the general campaign and election, which lasted approximately 10 minutes and featured one candidate from each political party. After the general campaign, voters were asked to cast a vote for one of the two candidates and then to answer a series of questions about each of them.

During the primary and general campaigns, subjects could access information about the candidates' stances on a number of policy issues, their ideology, family, education, and prior experience in work and politics. Each piece of information appeared twice during the campaign. In the primary, subjects had the opportunity to access 25 unique pieces of information about each of the two candidates in their primary, as well as 25 pieces of information about the two candidates in the other party's primary. There were also 12 group endorsements, each of which supported one of the four candidates. In the general election, there were 35 unique items available about each candidate (25 of which repeated from the primary, but 10 of which were new). Again, each piece of information was available twice. With 364 pieces of information available, in total, during the

⁸ 133 subjects chose the Republican primary, 316 chose the Democratic Primary

experiment, there is far more information available to learn than any one subject could.

In the primary campaign, subjects experienced a 2x2x2x2 manipulation, in which the picture of one of the candidates in their party's primary (Candidate A) varied by race, gender, and whether the candidate had a competent or incompetent appearance. The fourth manipulation was the ideology of the candidates in the race (and will be explained below). Whether a picture appeared to be competent or incompetent was based on pre-tests of pictures conducted by 148 undergraduates. Pictures were taken from state legislatures' websites in multiple states, and pre-test subjects were asked to rate a series of 64 pictures on a series of traits including competence. There were 8 pictures in each race/gender combination, so there were 8 white men, 8 white women, 8 black men, and 8 black women. Subjects rated each of the 8 pictures in each category on a 1 through 4 scale (Banducci et al 2008) on each trait, and the pictures with the highest and lowest competence scores were selected for use in the experiment. Each picture and competence score is available in the appendix, but the average competence score for the competent-looking candidates was 3.21, while the average competence score for the incompetent-looking candidate was 2.44.

Candidate A, then, could be black or white, male or female, and either competent-looking or incompetent-looking. Candidate B was always a white man and either looked competent or incompetent depending on whether Candidate A received a competent or incompetent picture. In other words, If Candidate A was competent-looking (regardless of the race or gender manipulation), Candidate B

was always an incompetent-looking white man. If Candidate A was incompetent-looking (again, regardless of race or gender), Candidate B was always a competent-looking white man.

Each party's primary also had both a moderate candidate and either a liberal or conservative candidate, depending on the party (i.e. subjects in the Republican primary saw a moderate and a conservative candidate, while those in the Democratic primary saw both a moderate and a liberal candidate). Which candidate received each ideological position was randomly assigned so that Candidate A was moderate half of the time and Candidate B was moderate the other half of the time. This allowed me to control for subjects' ideological preferences. All of the information about the candidates was factual and non-evaluative in tone

Regardless of whom a subject voted for in the primary, the incompetent-looking candidate from his or her party always advanced to the general election. This means that the subject's in-party candidate was always incompetent-looking, but could have been either a black man, a black woman, a white man, or a white woman. The out-party candidate was always the same competent-looking white man from the out-party's primary. The in-party candidate was always incompetent-looking in order to pit this appearance cue against the overwhelmingly influential party heuristic. I wanted to ensure that subjects would be forced to grapple with the incompetence cue in the context of a candidate for whom they would otherwise most likely vote. Race and gender are manipulated in order to ascertain whether an incompetent appearance functions differently in the context of a general election for men vs. women, and blacks vs. whites.

Along with the race and gender manipulations, the general election had one further manipulation in which the content of the information available about a subject's in-party candidate either confirmed the incompetence cue available in the picture by portraying the candidate as politically incompetent, or contradicted it by portraying him or her as politically capable. Specifically, there were 6 information items about the in-party candidate that reinforced or contradicted this manipulation—a summary of the in-party candidate's debate performance, comments about the candidate from a newspaper editorial, a summary of the candidate's job performance in previous office, a description of the candidate by a political opponent, a summary of the candidate's past political experience, and a description of the candidate by a former staff member. In the "competent information" condition, these items all portrayed the candidate as very experienced in politics and someone others viewed as a competent politician. In the "incompetent information" condition, the candidate is portrayed more negatively, as inexperienced and having made questionable decisions while in previous office. The debate performance summary was a "forced" information item, which means that it appeared and opened on the screen at the same point during the campaign for all subjects, and they were forced to close it before moving on. This ensured that subjects were exposed to the manipulation. All of the other five items were available twice as scrolling items. All of the other information in the campaign remained neutral in tone.

Analyses and Findings

Using the data from these experiments, I conduct a series of analyses on a number of information search, candidate appraisal, and vote choice variables. Chapters 2 and 3 use data from Study 1 to examine how a candidate's race and gender influence voters' political behavior during a political campaign, particularly for those subjects who are high in expressed race and gender-based prejudice. Chapter 2 focuses on a candidate's race and finds that African American candidates are disadvantaged in terms of the amount of information accessed about them by subjects, feeling thermometer scores, vote choice, and correct voting (Lau and Redlawsk 1996, 2006), but only for subjects high in racial prejudice. Further, candidate evaluation and vote choice measures for black candidates are directly affected by racism only until the amount of information searched for by subjects is taken into account. In other words, subjects high in racial prejudice end up rating black candidates more negatively and are less likely to vote for them, but only because their prejudice first causes them to seek out less information about them. Essentially, subjects high in racial prejudice ignore black candidates during a campaign, which is what ultimately leads to these candidates' disadvantages. However, even for subjects high in racial prejudice, increased information search leads to more positive evaluations of, and a higher likelihood of voting for, the minority candidate.

Chapter 3 conducts the same analysis for female candidates and finds similar, but slightly different results. Female candidates are disadvantaged by gender-based prejudice among voters, but only *indirectly*. That is, sexism does not have a direct

effect on candidate evaluation measures or vote choice, but it does affect the amount of information voters search for related to the female candidate, and the amount of search, in turn, influences candidate appraisal and vote choice. As with black candidates, women candidates are essentially discounted by subjects who hold sexist attitudes, which ultimately hurts their evaluations and chances of winning. The only dependent variable for which gender-based prejudice has a direct effect is correct voting, which is a much subtler measure of preference and one that is not subject to social desirability bias in the same way that explicit self-report measures are (like feeling thermometer scores and vote choice).

Chapters 4 and 5 use data from Experiment 2, which focuses on candidate race, gender, and whether a candidate had a competent or incompetent appearance, consistent with findings by Todorov, et al. Experiment 2 is comprised of both a primary and general presidential election, each with slightly different manipulations, so Chapter 4 focuses on findings from the primary, while Chapter 5 reports results from the general election. The primary election in Experiment 2 includes the three appearance manipulations described above (as well as the ideology manipulation) and looks for effects of these factors on ratings of candidate competence, feeling thermometer scores, and vote choice, while controlling for the amount of information accessed about the candidates. I find that a candidate's appearance does indeed influence competence ratings and feeling thermometer scores, even when a host of other information is available about the candidates in the race. Further, while competence inferences seem to work as expected for white, male candidates (i.e. as found in studies by Todorov, et al), they do not when

candidate race and gender are also varied. The presence of these other appearance cues seems to change the nature of how automatic trait inferences function. Finally, I find that the presence of a female, black, and/or incompetent looking candidate has significant effects on ratings of the candidates that they run *against* in a race. Running against a black opponent causes a white candidate to be perceived as more competent, for example.

Lastly, Chapter 5 presents the results of Experiment 2's general election, in which subjects are faced with an incompetent looking candidate in their own political party and a competent looking candidate in the other party. I also vary candidate race and gender for the in-party candidate, as well as the nature of information available about the in-party candidate. Half of the time, subjects see a series of information items that confirm the incompetence cue provided by their candidate's picture (i.e. information available about the candidate makes him or her seem actually incompetent based on prior performance in office and comments made by other people). The other half of the time, the information available about the candidate is inconsistent with his or her picture, in that it paints a picture of a competent, qualified in-party candidate. I find that all candidates receive more positive evaluations and a greater likelihood of winning votes in the competent information condition, despite the fact that they always look incompetent. Further, female candidates seem to be particularly vulnerable to the information manipulation. For women candidates in the incompetent information condition, their chances of receiving a vote from a subject in their own party are less than 50%, and the out-party candidate receives feeling thermometer scores that are essentially

identical to theirs. This is not true of male candidates. Even when they are in the incompetent information condition, men are far more likely receive an in-party subject's vote than the out-party opponent.

In sum, I find that the effects of appearance cues on voter decision-making are subtle and complex, but important, nonetheless. Chapters 2 and 3 provide new insight into how racial and gender-based prejudice may still be functioning in the political world, despite the widespread hope that these sorts of biases are a thing of the past. Chapter 4 provides evidence that studies which consider one aspect of appearance at a time are likely missing an important part of the story, and that a particular candidate may look quite different to voters depending on whom he or she happens to be running against. Chapter 5, finally, provides a possible solution for overcoming appearance-related judgments in that actual, politically relevant information seems able to overcome a candidate's otherwise disadvantageous appearance cues. Thus, the relationship between a candidate's appearance and the information environment in which they run is a complicated one that is deserving of further attention, as is the relationship between different appearance cues. It is not enough to study individual appearance-related heuristics in a vacuum, or in isolation.

The following four empirical chapters are each written as stand-alone papers, all of which I very quickly hope to submit for publication. This makes the reading somewhat repetitious if it is accomplished all in one sitting, but makes the experiments easier to follow if they are read one-at-a-time. Chapter 6 provides an

overall summary of my findings, their limitations, and a brief discussion of what needs to come next.

Chapter 2: Information Search as a Mediating Variable in the Relationship between Racism and Voting Behavior

The 2012 elections were a milestone for diversity in the United States' federal government. The nation reelected its first African American president, as well as the most diverse Congress in history, and there are now more minority candidates serving in high office than ever before. While this is clearly a step in the right direction toward representational equality, the composition of our national institutions of government still look quite different from our population at-large. For example, only 20% of the House and 5% of the Senate is non-white. While African Americans make up about 10% of the House (not too far off from their 12% of the population), black representatives are almost exclusively elected from majority minority districts, and they currently have only one representative in the Senate. The story is similar for Latinos, who constitute approximately 16% of the population but make up only 3% of the Senate and 6% of the House. While the 2012 elections clearly moved our institutions of government closer to representational equality, there is still a long way to go.

In this paper, I examine some possible reasons for these continuing discrepancies. In particular, I am interested in the role that individual level stereotypes and prejudice might have in contributing to the difficulties that minority candidates experience when running for office. Scholars have found much evidence suggesting that race and ethnicity matter in politics, but what is still unclear is exactly *how* these cues influence candidate evaluation and vote choice. Much experimental research has shown that voters evaluate candidates differently based

on race/ethnicity-based stereotypes (e.g. Sigelman, Sigelman, Walkosz and Nitz 1995, Terkildsen 1993), but the extent to which these stereotypes lead to differences in real world elections is unclear (e.g. Highton 2004). Additionally, the nature and influence of racial prejudice in the political context is often contested. Race scholars continue to debate the changing nature of racism in the American electorate (e.g. Kinder and Sears 1981, McConahay 1986, Pettigrew and Meertens 1995, Kinder and Sanders 1996, Gaertner and Dovidio 1986) as well as its effects on the political world (e.g. Reeves 1997, Bullock 2000, Voss and Lublin 2001).

I argue that prejudice matters for minority candidates and that the confusion related to how race and ethnicity cues influence political behavior is at least partly a result of the imperfect methods we have used to study them. Most of our knowledge of how race and ethnicity affect voter decision-making is based on experimental studies that invent candidates and ask subjects to evaluate them after a very limited exposure to the candidate, and little or no information other than the candidate's picture (e.g. Terkildsen 1993, Moskowitz and Stroh, 1994, Sigleman et al 1995). While we have learned much from these types of "minimalist" studies, their generalizability to real world campaign environments is limited, since the decision task subjects face is much simpler in a lab setting than in (most) actual elections. This is especially true if we are interested in understanding their influence in high-level, national elections like those for Congress and the presidency. At the same time, survey-based studies that examine the role that race and ethnicity play for candidates in actual elections may be able to tell us *whether* a candidate's minority status mattered in vote choice or candidate evaluations, but they are largely unable

to determine the mechanism by which they mattered. We may be able to tell that voters were less likely to vote for an African American candidate in a particular election, but is it because of voters' negative attitudes or assumptions about the candidates or actual differences in their issue stances and/or personality traits? Essentially, our knowledge of how race and ethnicity affect candidate evaluation and vote choice is either limited to first impressions in a drastically simplified experimental information environment, or based on correlation, rather than observation of causal relationships in real world elections. We know little about how, exactly, these cues function over time, during the course of an entire campaign.

It is my contention that an information processing perspective (Lau and Redlawsk 2006) can greatly further our understanding of how race and ethnicity cues factor into a voter's decision-making during a campaign. Voter decision-making is a process, with candidate evaluations and vote choice as only the last in a series of steps that voters must progress through as they experience a campaign and learn about the candidates in the race. According to an information processing paradigm, cues like race and ethnicity likely influence voter decision-making at multiple stages of the decision-making process and, while they may or may not influence vote choice and candidate appraisal directly, it is likely that they do have an effect on what and how voters choose to learn about candidates. This information search process, then, likely has a more proximal relationship to final appraisals and vote decisions, and it may be through this process that race and ethnicity cues, and the prejudices they may invoke, are working. At the same time, while variables like vote choice and candidate evaluation measures may be subject to self-monitoring for

subjects who do not want to appear to be prejudiced (but may nonetheless hold prejudicial attitudes), the information those subjects search for may be less consciously affected by this desire. In this way, information search may also be a less biased measure of how prejudice affects voting behavior, particularly if search influences evaluations and vote choice.

In order to explore these propositions, this study will use a computer-based experiment utilizing the Dynamic Process Tracing Environment (DPTE). DPTE is a web-based computer program that allows researchers to mimic the constant flow of information in an actual campaign environment, thereby tracking subjects' information search as the campaign progresses. Because DPTE allows researchers to track the content, sequence and amount of information accessed by subjects, it provides a unique opportunity to examine the effects of initial impressions on subsequent political learning. Prior studies of appearance-based assessments have not had the capability to treat candidate appraisal as a process that occurs over time, but DPTE allows researchers to examine the relationships between appearance cues and the prejudices they might trigger information search, candidate evaluations, and vote choice. In this way, we can better approximate the experience of a voter during a campaign and begin to examine exactly how the combination between a candidate's race or ethnicity, and a voter's attitudes toward minority groups contributes to ultimate electoral judgments and decisions.

Specifically, I seek to determine how the use of race and ethnicity cues influences multiple steps in the voter decision-making process. I look for direct effects of prejudice on vote choice in a presidential race, attitudes toward

candidates in the race, as well as the “quality” of a person’s vote decision (i.e. correct voting; Lau and Redlawsk 1997). I also look for *indirect* effects of prejudice on these variables via the amount of information that voters choose to access about minority candidates. It is my expectation that the strongest effects of prejudice will be seen on information search itself, and that the amount of information subjects access about the candidates will then predict the evaluation and vote choice measures.

Appearance Cues and Candidate Evaluation

While it may be democratically troubling that ascriptive identities like race and ethnicity are often incorporated into voters’ political judgments and decisions, it is a well-documented phenomenon in political science; political psychologists, in particular, have shown that these types of group memberships are a powerful heuristic, or “information shortcut.” Many scholars have pointed to heuristic use as a partial antidote to the public’s apparent lack of political interest, knowledge and sophistication (e.g. Kahneman, Slovic and Tversky 1982; Lau and Redlawsk 2006). They posit that despite their cognitive limitations, voters are nonetheless often capable of making reliable political decisions thanks to their ability to use such cues.

Among the most widely used heuristics are cues related to a person’s physical appearance—assumptions about someone’s abilities, character or personality based on how they look, and often the social identities or group memberships that are tied to their appearance (Lau and Redlawsk 2001). Characteristics like race and ethnicity provide cues about politically salient attributes such as the candidate’s personality traits, ideology, policy issue specializations, and/or political viability. Psychology models long-term memory as a

series of interconnected nodes in which associated concepts are activated together, which means that beliefs about a particular group of people (including attitudes, stereotypes and/or affect) automatically arise upon observation of a member of that group (or wherever the “entry conditions” of a schema occur: Anderson 1983, Riggle, Ottati, Wyer, Kuklinski and Schwartz 1992).

Scholars of political behavior have demonstrated time and again that social identities with largely unavoidable visual markers—e.g. race and ethnicity—lead candidates who possess these markers to be subject to stereotypes and discrimination in a number of areas. In terms of race, some studies have found that being black may also create doubts about a candidate’s competence and qualifications (Sigelman et al. 1995; Williams 1990). Further, white candidates are more likely to be perceived as intelligent, knowledgeable, hardworking, and trustworthy compared to black candidates (Williams 1990). Racial stereotypes can also affect a candidate’s perceived policy strengths. Blacks have an advantage on compassion and specifically racial issues (helping the poor, ending discrimination), but a disadvantage on major policy issues such as the military and economy (McDermott 1998; Sigelman et al. 1995; Williams 1990). Blacks are also perceived as more liberal and more likely to be strongly Democratic (McDermott 1998; Schneider and Bos 2009).

While a not-inconsequential amount of evidence suggests that black candidates are subject to race-based stereotypes, the jury is also still out on the nature and effects of racism in the contemporary political context. Traditional forms of racism, including support for a formally segregated society, have faded, but

several new incarnations of racial prejudice seem to have surfaced. “New Racism” measures (e.g. symbolic racism: Sears and Kinder 1970, modern racism: McConahay 1986, racial resentment: Kinder and Sanders 1996), which combine negative affect toward blacks with “American values,” such as individualism and self-reliance, have been shown to be significant predictors of both racialized policy issues (e.g. Kluegel and Smith 1983, Sears and Allen 1983) and evaluations of black political candidates (e.g. Kinder and Sears 1981). Further, tests of implicit attitudes (e.g. the Implicit Attitudes Test: Greenwald, McGhee and Schwartz 1998, the Affect Misattribution Procedure: Payne, Cheng, Govorun and Stewart 2005) have found evidence of a different kind of racial bias in the electorate that exists unconsciously and is largely employed automatically.

While the study of racism in American politics is alive and well, many uncertainties still exist, including which measures are the best and most influential in a political setting (Sears 1988, Ditonto, Lau and Sears 2013), and whether racism even still has a role to play in voter decision-making. Some scholars suggest that African American candidates are no less likely to win their races than white candidates (Reeves 1997, Bullock 2000, Voss and Lublin 2001, Highton 2004), which may be evidence that racial prejudice is no longer as influential in a political context as it once was.

While the literature on Hispanic candidates is not as extensive as for black candidates, there is some evidence to suggest that Hispanic candidates are subject to stereotypes based on their ethnicity, as well as bias by voters. Like black candidates, Hispanic candidates are perceived as more liberal and more compassionate, though

less competent than white candidates (Sigelman et al 1995). Some evidence has shown that Hispanic candidates are disadvantaged in low-information elections compared to white candidates (Matson and Fine 2006), though scholars have also found evidence that Hispanic voters are sometimes more likely to vote for Hispanic candidates due to in-group affinity (Barretto, Villareal and Woods 2005, Huddy 2001, Sigelman and Sigelman 1982). Finally, Kam (2007) finds that, in the absence of a party cue, voters with negative attitudes (either implicit or explicit) toward Hispanics as a group are less likely to vote for Hispanic candidates.

Information Search and MIMS-1

In order to get a better idea of how the use of race and ethnicity cues affects voter decision-making, I will rely on an analysis of voters' information search behavior during a simulated campaign. Data for this study come from the Multi-Investigator, Multi-Site study (MIMS-1) conducted in the Spring of 2011⁹. The sample consists of 303 adult subjects recruited in three different locations: central New Jersey, southern California, and the area around Nashville, Tennessee. The average age of subjects was 39 and 68.5% of the sample was female. In terms of race and ethnicity, 69.5% was white, 11.5% black, 4.4% was Asian, and 11.9% identified as Latino. 46.8% identified as a Democrat, 19.3% as Republican, and 33.8% as independent.

⁹ The Multi-Investigator Multi-Site (MIMS) study combined ideas from a number of collaborators that could be tested simultaneously in the same experimental setting. A single experiment was developed with random manipulations designed to test each of those ideas, with each collaborator running subjects at different sites. Data from all sites were then combined into a single dataset. The manipulations not relevant to this study were randomly distributed so should not have an effect on this analysis. See Lau 2012 for an in-depth discussion of the details, as well as benefits and drawbacks of the MIMS-1 study.

DPTE experiments are designed to allow researchers to follow subjects' behavior as they search for and learn information during a simulated political campaign. MIMS-1 consisted of both a Democratic and Republican primary, as well as a general election with a candidate from each of the major parties. Subjects began by completing a questionnaire collecting information from them related to partisanship, ideology, political attitudes, political sophistication, participation, prejudice measures, and demographics. Each subject was then asked to select one primary to vote in,¹⁰ though they saw information about candidates from both parties. After the primary race, which lasted approximately 16 minutes, subjects moved on to a 9-minute general election in which one candidate from their party ran against one candidate from the other party.

During the campaigns, subjects saw scrolling boxes that contained different pieces of information that they could learn about each candidate in a particular race. Individual pieces of information scroll down the subject's computer screen from top to bottom, each remaining available for a period of time (in this experiment, 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 box had only a label (saying, for example, "Debra Johnson's Stance on Abortion"), as well as a colored border indicating the party affiliation of the candidate to whom the information applied. Subjects had to click on a box in order to read the information contained inside. When an information box was clicked, the information in the box filled up the screen while the other pieces of

¹⁰ 204 subjects chose to vote in the Democratic primary, and 99 chose to vote in the Republican primary.

information continued to scroll by behind it, creating an opportunity cost for subjects. As they learned one thing, they missed out on the chance to learn others, so they had to choose which information was most important for them to learn.

In the primary election, there were 25 distinct pieces of information available about each candidate, including 12 policy positions, party affiliation, a picture, and 11 other personal/background-related bits of information. There were also endorsements from 9 different interest groups. Each piece of information was available twice during the campaign, with the items presented in random order. The number of boxes opened by each subject during the primary campaign ranged from 9 to 139, with an average of 60 items per person. With 300 pieces of information available, in total, during the campaign, there was far more information available to learn than any one subject could. By overwhelming subjects with so much information, DPTE mimics the abundance of information available during a real-world campaign and forces subjects to choose what is most important to them.

In the primary election, the main manipulation was to vary the candidates' physical appearance, both in terms of race/ethnicity and gender, though the minority candidate was always male.¹¹ Three different candidate "personas" were created for each party's primary, each containing unique issue positions, ideologies, background information, and endorsements from various groups. In the Democratic primary, one of the personas was extremely liberal and took issue positions consistent with that ideology. Another was a "mainstream" liberal Democrat in ideology and issue stances, and the third was a moderate Democrat with issue

¹¹ A separate analysis was conducted to examine the effects of gender on information search and can be found in Chapter 3.

stands that reflected this ideology. Among Republicans, there was likewise an extremely conservative persona, a “mainstream” Republican persona, and a moderate Republican persona.

At the same time, each persona was tied to a particular appearance that varied by race/ethnicity or gender. Each persona could either be paired with a white man, a white woman or a member of a racial/ethnic minority. Among Democrats, the minority candidate was a Hispanic man, while the minority candidate in the Republican primary was an African American man. Race, ethnicity, and gender were portrayed through pictures of the candidates¹² (as well as via name in the case of female vs. male candidates and the Hispanic candidate). Each persona was paired with each picture/name combination 1/3 of the time, which allowed me to examine the effects of candidate race and ethnicity on candidate evaluation and voting behavior while controlling for candidate ideology. Table 2.1 shows the persona-picture combinations seen by each group.

¹² Pictures were taken from state legislators’ websites in states other than those from which subjects were recruited. All were pre-tested and rated similarly in terms of attractiveness, age, and likability.

Table 2.1. Primary Election Group Assignments

	Very Liberal	Liberal	Moderate Democrat	Moderate Republican	Conservative	Very Conservative
Group 1 (n = 47)	Hispanic Male	White Female	White Male	Black Male	White Female	White Male
Group 2 (n = 50)	Hispanic Male	White Male	White Female	Black Male	White Male	White Female
Group 3 (n = 49)	White Male	White Female	Hispanic Male	White Female	White Male	Black Male
Group 4 (n = 52)	White Female	White Male	Hispanic Male	White Male	White Female	Black Male
Group 5 (n = 55)	White Male	Hispanic Male	White Female	White Male	Black Male	White Female
Group 6 (n = 49)	White Female	Hispanic Male	White Male	White Female	Black Male	White Male

Each subject was shown a “synopsis page” (Figure 2.1) at the beginning of the primaries that showed the names and pictures of each of the candidates running in each party’s contest. The scrolling information boxes also had a small “thumbnail” picture of the candidate to whom the information applied. Finally, the pictures of each candidate were included in the scrolling information available during the campaign, so subjects could click on them as they wanted. The same picture of each candidate was always used.

Figure 2.1. Candidate Synopsis Page

Due to other manipulations in the general election, minority candidates in this study never advanced past their party's primary. For this reason, my analysis is limited to the primary campaigns, only.

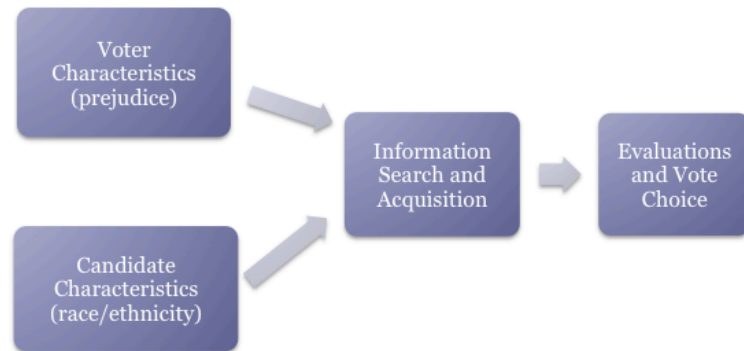
Hypotheses and Analysis

My analysis will examine both the direct and indirect effects of race and ethnicity based prejudice on candidate evaluation, vote choice, and correct voting for the minority candidates in the study. In order to test for direct effects, the three dependent variables will be regressed on a number of traditional individual-level

predictors of vote choice. I will also test for direct effects of prejudice on the amount of information that subjects accessed for the minority candidates. This measure of information search will then be added to the models for vote choice, evaluation, and correct voting. Analyses for both parties' primaries were originally conducted separately but yielded very similar findings, so the results reported here combine analysis from the two primaries. In all models, I measure subjects' search for, evaluations of, and voting behavior for, their in-party minority candidate.

While there is some conflicting evidence in the previous literature about whether racism affects political behavior, there is a substantial amount of work that shows that it does. For this reason, I hypothesize that racial prejudice will have a direct effect on vote choice, candidate evaluation and correct voting when information search is ignored. The unique contribution of this study, however, is its ability to incorporate a subject's information search patterns into these traditional analyses. I anticipate that information search will have a mediating effect between prejudice and the dependent variables of interest. This relationship is illustrated in Figure 2.2. I expect that the information search measure will have a more proximal effect on the vote choice and evaluation measures, so will "do the work" of the prejudice measures when added to the models. This means that decreased information search for the minority candidate should lead to a lower likelihood of voting for him, more negative evaluations of him, and a lower likelihood of voting correctly if the minority candidate is the subject's correct vote choice, and that the direct effects of racial prejudice on these variables should drop out when the search variable is added to the model.

Figure 2.2. The Mediating Effect of Information Search on Prejudice and Voting Behavior



Dependent Variables

Vote choice for the minority candidate will be measured using a dichotomous variable with a score of 1 indicating a vote for the minority candidate. The candidate evaluation measure used for the minority candidate is a traditional 100-point feeling thermometer. A logistic regression is used to analyze the results of vote choice, while an OLS regression is used for the feeling thermometer analysis.

Correct voting will be analyzed using logistic regression and will predict whether subjects voted for the candidate who is considered to be their “correct” choice. Lau and Redlawsk’s (1997) dichotomous measure of correct voting is defined as “the likelihood that citizens, under conditions of incomplete information, nonetheless vote for the candidate or party they would have voted for had they full information about those same candidates or parties” (Lau, et al 2008). It compares an individual’s self-proclaimed preferences to the positions of the candidates in a given race. Those who voted for the candidate who most closely matches their

expressed preferences are said to have voted correctly (1), while those who did not are said to have cast an 'incorrect' vote (0).¹³

The amount of information accessed for the minority candidate will function as both a dependent and independent variable in this study. It will serve as a dependent variable first in order to ascertain the effects of prejudice on information search. It will then be added as an independent variable to the models for vote choice, feeling thermometer ratings, and correct voting. Information search is measured using a count variable of the total number of unique information boxes opened for the minority candidate. Possible values range from 0 to 25 and, because the distribution mimics a normal curve, will be analyzed using an OLS regression.¹⁴

Independent Variables

The independent variables of interest include "group member," or whether a subject's race/ethnicity matches that of the minority candidate in their party's primary race (i.e. whether the subject is an African American Republican or Hispanic Democrat), as well as the subject's score on the Symbolic Racism Scale¹⁵ ($\alpha = .849$)¹⁶. Control variables include gender, age, partisanship, ideology,

¹³ More information on the calculation of correct voting is available in the appendix.

¹⁴ Negative binomial regressions were also estimated but were essentially identical to the OLS models.

¹⁵ Items Include: "Irish, Italians, Jews, and many other minorities overcame prejudice and worked their way up. Blacks should do the same without any special favors," "Generations of slavery and discrimination have created conditions that make it difficult for blacks to work their way out of the lower class," "Over the past few years, blacks have gotten less than they deserve," "It's really a matter of some people not trying hard enough; if blacks would only try harder they could be just as well off as whites."

¹⁶ It is important to note that I do not have a measure of prejudice toward Hispanics, per se. While I was prepared to restrict my analysis to Republicans and the black candidate, only, symbolic racism proved to be a potent predictor of behavior toward

income, education, political sophistication, strength of party ID, perceived difficulty of the vote choice and, when information search is added, the control variable for out-party search. The models also control for an unrelated manipulation in the primary election in which the minority candidate could have been portrayed as being behind the other candidates in a series of polls that subjects were exposed to. This manipulation was random so should not affect my results, but I control for it, nonetheless.

Results

Information Search

I begin by looking for effects of racial prejudice on the amount of information search for the minority candidate in each party. Table 2.2 shows the results of this analysis. All three variables of primary interest in this equation are statistically significant. Both white subjects and subjects who share the same racial/ethnic group as the candidate in their party search for more information about the minority candidate than other subjects (subject white $b=3.417$, $p<.001$, subject group member $b=3.201$, $p<.01$). Most importantly to this analysis, the coefficient for symbolic racism is negative and significant ($b=-3.031$, $p<.05$), suggesting that the higher a subject is in symbolic racism, the fewer information boxes he or she accessed for the minority candidate. As expected, prejudice seems to be influencing voter decision-making at this earlier stage.

the Hispanic candidate, as well. Reasons for this will be explored in the discussion section.

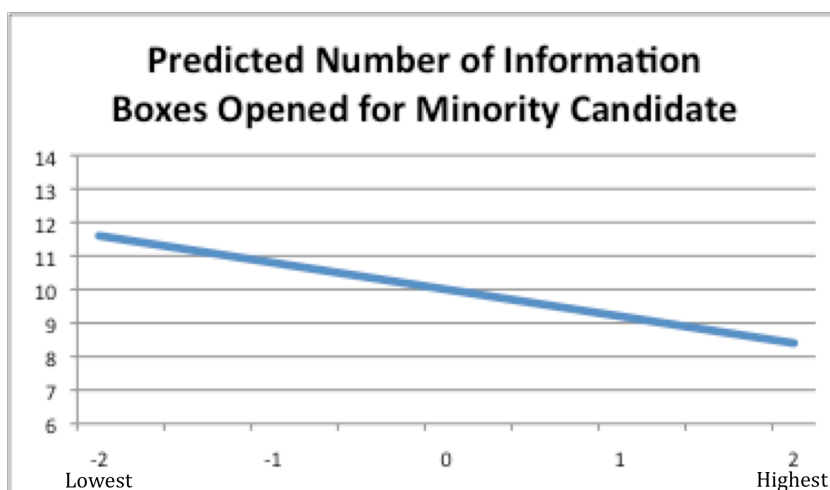
Table 2. 2. Information Search for Minority Candidates

	Model 1
Subject Male	-.142 (.768)
Subject White	3.417*** (.791)
Group Member	3.201** (1.173)
Age	-3.382* (1.505)
Income	.585 (1.331)
Registered Republican	-.464 (.959)
Strength of Party ID	1.966* (1.005)
Liberal-Conservative Self Placement	1.451 (1.961)
Minority Candidate Behind	-1.831** (.658)
Out-Party Search	3.246* (1.647)
Political Sophistication	.995 (1.876)
Symbolic Racism	-3.031* (1.585)
Constant	7.826*** (1.232)
Adjusted R²	.369

***p<.001, **p<.01, *p<.05, †p<.1

Note: Values are OLS regression coefficients, n=303.

Figure 2.3. Predicted Number of Information Boxes Opened for Minority Candidate by Symbolic Racism Scores



Note: Horizontal Axis shows the subject's score on the Symbolic Racism Scale. The vertical axis shows the number of information boxes opened for the subject's in-party minority candidate. Predicted probabilities holding all other independent variables at their means.

Figure 2.3 shows the predicted number of information boxes opened for a subject's in-party minority candidate by the subject's score on the Symbolic Racism Scale. Those who score lowest in symbolic racism are predicted to search for almost 12 information boxes related to the minority candidate, while those who score highest are predicted to access approximately 9 items. This means that those who score highest in racial prejudice are searching for almost 1/4 less information about the minority candidate than those who are least prejudiced.

Candidate Evaluation

I turn now to my analysis of feeling thermometer scores for a subject's in-party candidate. Table 2.3 shows the results of this analysis. Model 1 includes individual-level subject variables without taking information search into account. Being a member of the candidate's racial/ethnic group has a positive and significant

effect on ratings of the minority candidate, as might be expected ($b=12.172$, $p<.01$) and, using a one-tailed test, symbolic racism has a direct, negative effect on evaluations of the minority candidate ($b=-11.849$, $p<.1$, two-tailed). Racial prejudice seems to have a direct effect on evaluations of minority candidates, as well.

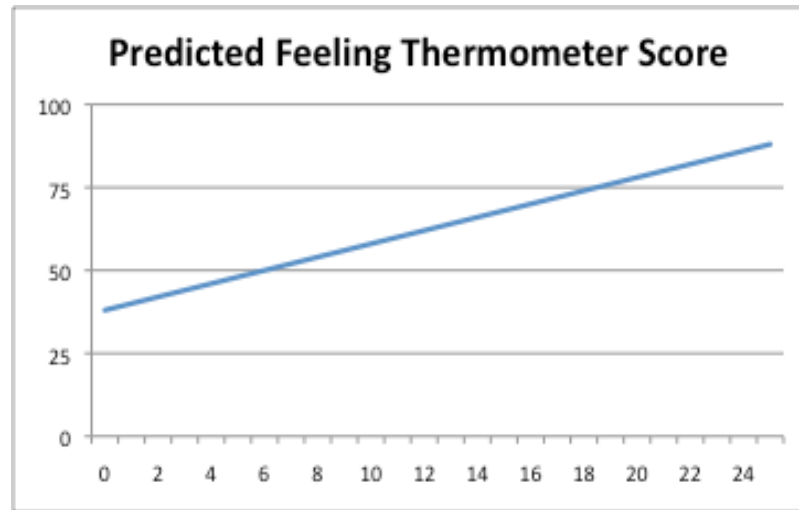
Table 2.3. Feeling Thermometer Scores for Minority Candidates

	Model 1	Model 2
Subject Male	-.849 (3.177)	-.599 (3.095)
Subject White	1.296 (3.267)	-1.580 (3.288)
Group Member	12.172** (4.922)	9.632* (4.837)
Age	-2.803 (5.970)	3.326 (6.135)
Income	3.932 (5.519)	3.943 (5.375)
Registered Republican	-18.682* (8.084)	-16.098* (7.899)
Strength of Party ID	.936 (4.200)	.513 (4.141)
Subject Liberal-Conservative	-15.065 (14.411)	-9.376 (14.117)
Candidate Lib-Con	-.441 (1.677)	-.902 (1.646)
Candidate X Subject Lib-Con	1.910 (3.778)	.450 (3.730)
Minority Candidate Behind	1.311 (2.731)	3.236 (2.700)
Political Sophistication	-2.746 (7.792)	-3.926 (7.602)
Symbolic Racism	-11.849† (6.557)	-8.515 (6.439)
Out-Party Search		8.865 (6.719)
Search for Minority Candidate		.918*** (.249)
Constant	62.293*** (5.777)	51.549*** (6.326)
Adjusted R²	.265	.303

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

Note: Values are OLS regression coefficients, $n=303$.

Figure 2.4. Predicted Feeling Thermometer Scores for minority candidate based on subjects' information search



Note: Horizontal Axis shows the subject's information search for the minority candidate. The vertical axis shows the predicted feeling thermometer score. Predicted probabilities holding all other independent variables at their means.

Model 2 includes the amount of information search for the minority candidate, as well as the control for total search. When search variables are added to the equation, the effect of symbolic racism disappears completely ($b = -8.515$, n.s.) and the positive effect of group membership becomes smaller ($b = -9.632$, $p < .05$). While the direct effects of prejudice drop out in this model, search for the minority candidate is positive and statistically significant ($b = .918$, $p < .001$), which suggests that, as hypothesized, the effects of prejudice are actually being mediated by the amount of information subjects are accessing about the minority candidate.

Figure 2.4 shows the predicted feeling thermometer values for the minority candidate based on subjects' information search. The more information subjects access about the minority candidate, the higher they are predicted to rate him on a feeling thermometer scale. Those who look for no information are predicted to rate

the minority candidate at approximately 38, while those who look for 25 items are predicted to give him a score of 89. This is a difference of 51 points on a 100 point scale, which is a huge effect.

Vote Choice

Table 2.4. Vote Choice for the Minority Candidate

	Model 1	Model 2
Subject Male	.528 [†] (.320)	.668* (.341)
Subject White	.951** (.348)	.518 (.369)
Group Member	.978* (.495)	.631 (.521)
Age	-.003 (.25)	-.097 (.673)
Income	-.335 (.602)	-.019 (.588)
Registered Republican	-.378 (.401)	-.345 (.432)
Strength of Party ID	-.286 (.413)	-.621 (.447)
Liberal-Conservative	1.372 [†] (.818)	1.365 (.872)
Political Sophistication	-.855 (.788)	-1.058 (.849)
Perceived Difficulty of Vote Choice	-.743 (.658)	-1.035 (.718)
Minority Candidate Behind	-.749** (.276)	-.596* (.294)
Symbolic Racism	-1.041 [†] (.662)	-.823 (.714)
Out Party Search		-.826 (.735)
Search for Minority Candidate		.143*** (.029)
Constant	-.949* (.455)	-2.074*** (.620)
Pseudo R²	.128	.210

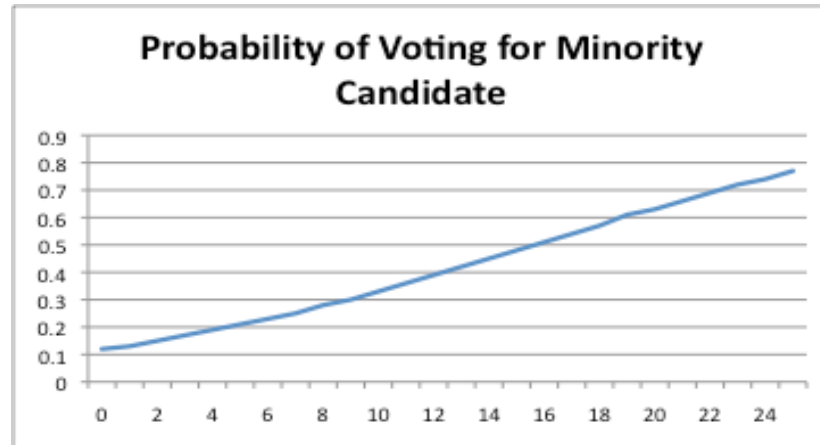
***p<.001, **p<.01, *p<.05, †p<.1

Note: Values are logistic regression coefficients, n=303.

Table 2.4 shows the results of the vote choice analysis for the minority candidate. Again, Model 1 includes traditional predictors, only, while Model 2 includes information search variables as well. In Model 1, both white subjects and those who belong to the minority candidate's racial/ethnic group are more likely to vote for him (white subject $b=.951$, $p<.01$, group member $b=.978$, $p<.05$). Those higher in symbolic racism are also less likely to vote for the minority candidate ($b=-1.041$, $p<.1$, two-tailed), showing a direct effect of racial prejudice on a subject's willingness to vote for either an African American or Latino candidate, depending on their party.

Model 2 adds the information search variables, which, again, change the nature of how prejudice influences the vote choice. Neither white subjects nor those who share the candidate's group membership are more likely to vote for the minority candidate in this model (for white subjects, $b=.518$, n.s.; for group members, $b=.631$, n.s.) and symbolic racism also loses statistical significance ($b=-.717$, n.s.). As with candidate evaluation, however, information search for the minority candidate has a significant and positive effect ($b=.127$, $p<.001$). Here again, information search seems to be mediating the relationship between prejudice and vote choice.

Figure 2.5. Predicted Probabilities of Vote Choice for Minority Candidate



Note: Horizontal Axis shows the subject's information search for the minority candidate. The vertical axis shows the probability of a vote for the minority candidate. Predicted probabilities holding all other independent variables at their means.

Figure 2.5 shows the predicted probability of a vote for the minority candidate based on how many unique information items a subject accessed about him. Subjects who look at no information have about a 10% chance of voting for the minority candidate, while those who look for the maximum number of items have about a 78% chance of doing so. Clearly, information search is a powerful predictor of vote choice with prejudice, indirectly, playing a role.

Correct Voting

The analysis of feeling thermometers and vote choice for the minority candidates in this study have provided quite a bit of support for my hypotheses. Racial prejudice does indeed seem to have a direct effect on information search and on voting behavior until information search variables are added to the equation. My final dependent variable of interest is correct voting. While prejudice seems to work in particular ways for candidate evaluation and vote choice overall, how will it

influence this more subtle measure of whether or not a subject voted for the candidate who they should have preferred? To find out, I use logistic regression to estimate two correct voting models – one that takes subject level variables and the race/gender manipulations, only, into account, and one that adds in information search variables. Subject level variables in both equations include gender, race, ethnicity, age, income, strength of party ID, liberal-conservative self placement, political sophistication, and how difficult the subject felt it was to make a vote choice.¹⁷ I also include subjects' scores on the symbolic racism scale. If subjects are discriminating against minority candidates based on race directly, then symbolic racism should have a negative and significant effect on subjects' likelihood of voting correctly for these candidates, even without taking information search into account.

To this basic equation, I then add the information search variables in an attempt to determine if information search mediates the relationship between appearance cues and vote choice for correct voting, as it does for candidate evaluation and vote choice. The variables include total search for the minority candidate, as well as the average total search for the two white candidates in the race.¹⁸

¹⁷ Modeled after Lau and Redlawsk 2006.

¹⁸ I also attempted to add the three-way interaction term between racism, the indicator that the minority candidate is correct, and search for the minority candidate, but this did not significantly change the results of the model so it has been omitted.

Table 2.5 Correct Vote Choice

	Model 1	Model 2
Subject Male	-.406 (.317)	-.664[†] (.346)
Subject White	-.018 (.678)	-.321 (.352)
Group Member	.634 (.481)	.387 (.529)
Age	-.756 (.604)	-.762 (.653)
Income	.230 (.550)	.236 (.588)
Strength of Party ID	.818* (.419)	.880 (.450)
Liberal-Conservative	1.852** (.690)	1.959** (.730)
Political Sophistication	.974 (.785)	.680 (.861)
Perceived Difficulty of Vote Choice	-1.740** (.661)	-1.669* (.713)
Minority Candidate Behind	-.450[†] (.270)	-.535 (.297)
Symbolic Racism	-.925 (.707)	-.805* (.732)
Minority Candidate Correct Choice	.221 (.285)	-3.593*** (.881)
Minority Candidate Correct X Sym Racism	-.493 (1.132)	-.519 (1.326)
Search for Minority Candidate		-.086* (.040)
Avg. Search for White Candidates		.056 (.040)
Min Cand Correct X Search for Min Cand		.295*** (.063)
Constant	-.965* (.442)	-.337 (.596)
Pseudo R²	.119	.259

***p<.001, **p<.01, *p<.05, †p<.1

Note: Values are logistic regression coefficients, n=303.

Table 2.5 shows the results of the correct voting models. Again, Model 1 includes all but the information search variables and their interaction terms. The results show that subjects with a stronger party identification, those who are more

conservative, and those who perceived the vote decision as less difficult are more likely to vote correctly. Unexpectedly, neither subjects who should have voted for the minority candidate nor those who are higher in symbolic racism were less likely to vote correctly, suggesting that racial prejudice is not functioning in the same way for correct voting as it is for candidate evaluation and vote choice.

Adding the information search variables to the model (Model 2) complicates the story, however. The interaction term between the indicator that the minority candidate is the correct candidate and search for the minority candidate is positive and significant (.295, $p < .001$), suggesting that subjects who should have voted for the minority candidate are more likely to do so as they search for more information about him. At the same time, the marginal effect of the indicator variable that a subject's correct choice was the minority candidate becomes negative and significant (-3.593, $p < .001$), suggesting that subjects who access no information about the minority candidate are extremely unlikely to vote for him (when compared to the white candidates). The interaction between the indicator that the minority candidate is correct and symbolic racism remains negative but non-significant, suggesting that it is not prejudice, per se, that is driving these effects for the minority candidate, but that all subjects are less likely to vote correctly for the minority candidate than the white candidates, regardless of their prejudice levels.

Discussion and Conclusion

Taken together, the evidence from my analyses suggest that prejudice does indeed play a role in determining voting behavior for minority candidates. Further, information search seems to play a critical role in understanding exactly how prejudice functions in the political arena. Racial prejudice affects how much information subjects choose to access about minority candidates and, while racial prejudice has a direct effect on feeling thermometer scores and vote choice, its effects seem to be mediated by information search, losing its predictive power when search variables are added to these models. Correct voting tells an even more complicated story, in which information search plays a vital role in helping subjects to vote correctly when their “correct” candidate is a minority.

It is interesting and unexpected that the race of the candidate mattered for all subjects in the correct voting analysis, and that racial prejudice did not seem to play a role. I can only speculate as to the reason for this, but it likely has something to do with the nature of correct voting as a variable, which, much like information search, is less susceptible to self-monitoring than either candidate evaluation or general vote choice. The effects of prejudice on feeling thermometer ratings and vote choice disappeared once information search was accounted for, which is probably at least partially due to subjects’ hesitancy to appear prejudiced against minority candidates in their answers to those questions. Subjects cannot easily manipulate their “correct” candidate choice, however, so direct effects of a candidate’s race may be easier to see without the self-monitoring bias seen in analyses of more traditional measures.

While it is disheartening to see that racial and ethnic prejudice still plays a role in candidate evaluation and voting behavior, it is perhaps cause for some hope that information search is mediating this relationship. Subjects who score high in racism are not necessarily refusing to vote for minority candidates outright. Rather, they are choosing to access less information about them. It is possible that if these voters are exposed to more information about candidates against whom they have prejudices, that this learning process could overcome initial biases. Indeed, the results of the correct voting analysis support this possibility. Increased information search led to an increase in the likelihood of voting correctly for the minority candidate. This suggests that increased exposure to information about minority candidates may be a partial antidote to the effects of prejudice in the electorate.

Clearly, there is much more work to be done in this area. In particular, this paper examines the *amount* of information subjects access about minority candidates, only, but it is likely that the *content* of information has a role to play, as well. If prejudiced voters encounter information about minority candidates that they like (as was probably the case for subjects in the correct voting analysis, given that the minority candidate held policy stances and characteristics the subject had indicated that they preferred) that may be enough to overcome prejudice. What happens, though, if the information they encounter is negative or consistent with stereotypes? Also, this paper looks at racial prejudice, but more work should also be done on other forms of prejudice, such as bias based on gender or age. While this paper is only a first step, it suggests that information search is at least one

mechanism by which race -based prejudice, as well as the race and ethnicity of candidates influence candidate evaluation and voting behavior.

Chapter 3: The Unseen Effects of Prejudice: Gender, Sexism, and Information in Political Campaigns

While the 2012 elections were touted as another “year of women” by many, they also drew attention to the complicated reality of women’s representation in the federal government. On one hand, more women were, in fact, elected to Congress than ever before. There are now 78 women serving in the House of Representatives and 20 women in the Senate (up from 73 women previously in the House and 17 in the Senate). This means that women now make up 20% of the Senate and 18% of the House. On the other hand, women comprise approximately 51% of the US population. It is also worth remembering that a woman has never served as president or vice president. While the 2012 elections clearly moved our institutions of government closer to representational equality, then, there is still a long way to go.

The question I want to address in this paper is “why?” Why do we still see such obvious underrepresentation of women in our national institutions of government? There are likely many answers to this question, but I am specifically interested in the role that gender based prejudice might play in voters’ decision-making when women are on the ballot. There is much evidence suggesting that gender matters in politics, but it is still unclear exactly *how* gender influences candidate evaluation and vote choice. Experimental research has shown that voters apply particular stereotypes to female candidates (e.g. Huddy and Terkildsen 1993, Kahn 1996, Koch 2000), but the extent to which these stereotypes lead to differences in real world elections is unclear (e.g. Darcy and Schramm 1977, Darcy,

Welch and Clark 1994, Burrell 1994, Seltzer, Newman and Leighton 1997).

Additionally, gender scholars have largely discounted overt bias as an obstacle to women's election to office for a number of reasons, which will be discussed below (e.g. Burrell 1994, Seltzer, Newman and Leighton 1997, Darcy, et al 1997, Woods 2000, Dolan 2004, Huddy and Carey 2009).

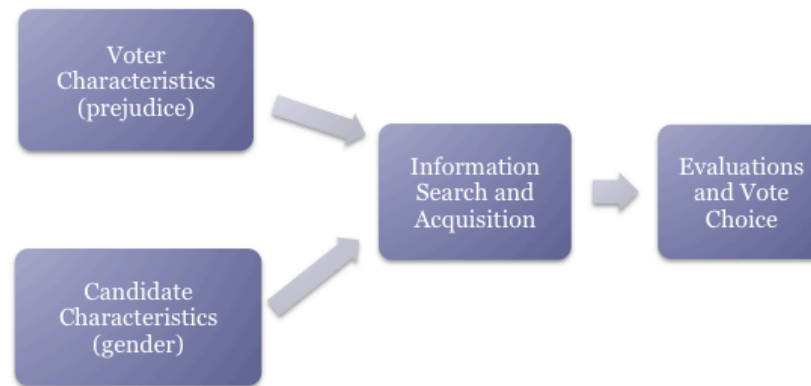
It is my contention, however, that prejudice matters for women candidates and that scholars may have been too quick to dismiss sexism as a factor in voters' political behavior. I argue that the general dismissal of prejudice as a problem for female candidates stems at least partly from the imperfect methods we have used to study it. Most of our knowledge of how gender affects voter decision making is based on either experimental studies that invent candidates and ask subjects to evaluate them after a very limited exposure to the candidate (e.g. Huddy and Terkildsen 1993,; Lodge, McGraw, and Stroh, 1989; Riggle and Johnson, 1996; Huang, 2000; Huang and Price, 2001), or survey-based studies that examine actual elections and can tell us *whether* a candidate's gender mattered but not *how* it mattered (e.g. Burrell 1994, Dolan 2004).

While we have learned much from both of these kinds of studies, findings from each type are also limited in important ways. In terms of experimental research, the external validity is often questionable, since the decision task subjects face is much simpler in a lab setting than in most real-world elections. This is especially true if we are interested in understanding the role of gender in high-level, national elections like those for Congress and the presidency. At the same time, from survey-based studies, we may be able to tell whether or not women candidates fare

differently than men, but is it because of voters' negative assumptions about the candidates or actual differences in their issue stances and/or personality traits? Essentially, our knowledge of how gender affects candidate evaluation and vote choice is either limited to first impressions in a drastically simplified experimental information environment, or based on correlation, rather than observation of causal relationships in real world elections. We know little about how, exactly, these cues function over time, during the course of an entire campaign.

I argue that an information processing perspective (Lau and Redlawsk 2006) can greatly further our understanding of how gender cues factor into a voter's decision-making during a campaign. Voter decision-making is a process, with candidate evaluations and vote choice as only the last in a series of steps that voters must progress through as they experience a campaign and learn about the candidates in the race. According to an information processing paradigm, cues like gender probably influence voter decision-making at multiple stages of the decision-making process and, while they may or may not influence vote choice and candidate appraisal directly, it is likely that they do have an effect on what and how voters choose to learn about candidates. This information search process, then, likely has a more proximal relationship to final appraisals and vote decisions, and it may be through this process that gender cues, and the stereotypes or prejudices they may invoke, are working. If this is true, then that would mean that gender based prejudice may actually have an *indirect* effect on voting behavior. Figure 3.1 displays this relationship.

Figure 3.1. The Mediating Effect of Information Search on Prejudice and Voting Behavior



In order to explore these possibilities, this study will use a computer-based experiment utilizing the Dynamic Process Tracing Environment (DPTE), which is a web-based computer program that allows researchers to mimic the constant flow of information in an actual campaign environment. We can then follow subjects' information search as the campaign progresses, tracking the content, sequence and amount of information accessed by subjects. In this way, DPTE provides a unique opportunity to examine the effects of cues like gender on political learning and decision-making. Prior studies of appearance-based assessments have not been able to treat voter decision-making as a process that occurs over time, but DPTE allows researchers to examine the relationships between appearance cues like gender, the prejudices they might trigger, candidate evaluation, and vote choice *through* information search.

In this analysis, then, I will be looking for *indirect* effects of sexism on voting behavior through the information search that subjects conduct. I will first look for direct effects of gender-based prejudice on vote choice in a presidential race, attitudes toward candidates in the race, and the “quality” of a person’s vote decision (i.e. correct voting; Lau and Redlawsk 1997). Based on the previous literature, however, I do not expect to find any direct effects of prejudice on these dependent variables. I then test for indirect effects of prejudice on these variables via the amount of information that voters choose to access about women candidates. It is my expectation that prejudice will influence information search by causing subjects who are high in prejudice to search for less information about female candidates, and that the amount of information that subjects access about the candidates will then predict the evaluation and vote choice measures.

Gender Cues and Voting Behavior

It is well known that ascriptive identities like gender are often incorporated into voters’ political judgments and decisions. Political psychologists have shown that these types of group memberships are powerful heuristics, or “information shortcuts” that allow voters to infer a host of information from easily-observed cues. These “appearance heuristics” are among the most widely used in all aspects of life, and politics is no exception (Lau and Redlawsk 2001). Characteristics like gender provide cues about politically salient attributes such as the candidate’s personality traits, ideology, policy issue specializations, and/or political viability. Of course, this kind of stereotypic information based on someone’s appearance may or may not

actually apply to a particular candidate, but much evidence suggests that women often cannot avoid it.

Female candidates are perceived, for example, as more empathetic and less decisive than men, while men are seen as more assertive and rational than women (Huddy and Terkildsen 1993). Women political contenders are also perceived as more trustworthy, honest, and compassionate than their male counterparts (Kahn 1996). At the same time, though, they are perceived as less competent and experienced, less able to handle the emotional demands of high office, and lacking in masculine traits like “toughness” (Carroll and Dittmar 2010). Because of these trait perceptions, voters also believe that men and women have different policy strengths: women are perceived as better able to handle “compassion” issues like education, healthcare, childcare, and poverty, while men are more adept at “masculine” issues, such as the military, terrorism, and crime (Cook, Thomas and Wilcox 1994; Dolan 2004; Rosenwasser and Seale 1988). Women candidates are similarly stereotyped as more liberal than their male counterparts (Alexander and Andersen 1993; Koch 2000). Finally, women are often evaluated more heavily on their personal lives and family situation than men (Carroll and Dittmar 2010).

Despite the prevalence of stereotypes applied to women candidates, the consensus among many gender and politics scholars is that voters are no longer overtly prejudiced against women candidates (e.g. Burrell 1994, Seltzer, Newman and Leighton 1997, Darcy, et al 1997, Woods 2000, Dolan 2004). This argument has been made for several reasons: (1) there is evidence that, in the aggregate, women candidates are no less likely to win their races than men, suggesting that the reason

for women's underrepresentation is a lack female candidates (e.g. Darcy, Welch and Clark 1994, Burrell 1994), (2) there are certain political contexts in which gender has been shown to benefit female candidates (e.g. Dolan 2008), and (3) any disadvantage that female candidates have faced has been largely attributed to structural factors, rather than individual-level prejudice (e.g Burrell 1994). Because of this assumption, however, little work exists that directly examines the effects of gender-based prejudice on voting behavior at the individual level (but see Huddy and Carey 2007 for an exception). I contend that this dismissal may have been too hasty, however, and that the effects of sexism may be subtler than we realized.

Method

In order to determine whether this is the case, I conducted an analysis of voters' information search behavior during a simulated presidential campaign and election that took place in the spring of 2011.¹⁹ A non-student sample of 303 adult subjects was recruited in central New Jersey, southern California, and the area around Nashville, Tennessee. The average age of subjects was 39 and 68.5% of the sample was female. In terms of race and ethnicity, 69.5% was white, 11.5% black, 4.4% was Asian, and 11.9% identified as Latino. 46.8% identified as a Democrat, 19.3% as Republican, and 33.8% as independent.

¹⁹ The Multi-Investigator Multi-Site (MIMS) study combined ideas from a number of collaborators that could be tested simultaneously in the same experimental setting. A single experiment was developed with random manipulations designed to test each of those ideas, with each collaborator running subjects at different sites. Data from all sites were then combined into a single dataset. The manipulations not relevant to this study were randomly distributed so should not have an effect on this analysis. See Lau 2012 for an in-depth discussion of the details, as well as benefits and drawbacks of the MIMS-1 study.

DPTE experiments are designed to allow researchers to follow subjects' behavior as they search for and learn information during a simulated political campaign. This study consisted of both a Democratic and Republican primary campaign and election, as well as a general campaign and election in which a candidate ran from each of the major parties. Subjects first completed a questionnaire that asked them questions related to partisanship, ideology, political attitudes, political sophistication, participation, prejudice measures, and demographics. Subjects were then asked to register for one of the party's primaries,²⁰ though they saw information about candidates from both parties. After the primary race, which lasted approximately 16 minutes, subjects moved on to a 9 minute general election.

During the campaigns, subjects saw scrolling boxes that contained different pieces of information related to one of the candidates in the race. Individual pieces of information scroll down the subject's computer screen from top to bottom, each remaining available for a period of time (in this experiment, 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 box had a label describing the information available in the box, should the subject decide to click on it (saying, for example, "Lou Baker's Stance on Crime"). Each information box also had a colored border indicating the party affiliation of the candidate to whom the information applied (red for Republicans, blue for Democrats). When an information box was selected by clicking on it, the information in the box filled up

²⁰ 204 subjects chose to vote in the Democratic primary, and 99 chose to vote in the Republican primary.

the screen and subjects could spend as much time as they wished reading it. While they did this, however, the other pieces of information continued to scroll by behind it, so there was an opportunity cost each time a subject chose to learn a piece of information. In the primary election, there were 25 distinct pieces of information available about each candidate, including 12 policy positions, party affiliation, a picture, and 11 other personal/background-related bits of information. There were also endorsements from 9 different interest groups. Each piece of information was available twice during the campaign, with the items presented in random order. With 300 pieces of information available, in total, during the campaign, there was far more information available to learn than any one subject could. By overwhelming subjects with so much information, DPTE mimics the abundance of information available during a real-world campaign and forces subjects to choose what is most important to them. The number of boxes opened by each subject during the primary campaign ranged from 9 to 139, with an average of 60 items per person.

In the primary election, the main manipulation was to vary the candidates' gender. Race and ethnicity of the candidates was also varied, though the nonwhite candidates in this experiment were always male.²¹ Three different candidate "personas" were created for each party's primary, each containing unique issue positions, ideologies, background information, and endorsements from various groups. In the Democratic primary, one of the personas was extremely liberal and took issue positions consistent with that ideology. Another was a "mainstream"

²¹ A separate analysis was conducted that examined the effects of a candidate's race/ethnicity and can be found in Chapter 2.

Table 3.1. Primary Election Group Assignments

	Very Liberal	Liberal	Moderate Democrat	Moderate Republican	Conservative	Very Conservative
Group 1 (n = 47)	Hispanic Male	White Female	White Male	Black Male	White Female	White Male
Group 2 (n = 50)	Hispanic Male	White Male	White Female	Black Male	White Male	White Female
Group 3 (n = 49)	White Male	White Female	Hispanic Male	White Female	White Male	Black Male
Group 4 (n = 52)	White Female	White Male	Hispanic Male	White Male	White Female	Black Male
Group 5 (n = 55)	White Male	Hispanic Male	White Female	White Male	Black Male	White Female
Group 6 (n = 49)	White Female	Hispanic Male	White Male	White Female	Black Male	White Male

liberal Democrat in ideology and issue stances, and the third was a moderate Democrat with issue stands that reflected this ideology. Among Republicans, there was likewise an extremely conservative persona, a “mainstream” Republican persona, and a moderate Republican persona.

At the same time, each persona was tied to a particular appearance that varied by race, ethnicity and gender. Each persona could either be paired with a white man, a white woman or a member of a man who was also a racial/ethnic minority. Among Democrats, the minority candidate was a Hispanic man, while the minority candidate in the Republican primary was an African American man. Race, ethnicity, and gender were portrayed through pictures of the candidates²² (as well as via name in the case of female vs. male candidates and the Hispanic candidate). Each persona was paired with each picture/name combination 1/3 of the time,

²² Pictures were taken from state legislators’ websites in states other than those from which subjects were recruited. All were pre-tested and rated similarly in terms of attractiveness, age, and likability.

which allowed me to examine the effects of candidate gender while controlling for ideology. Table 3.1 shows the persona-picture combinations seen by each group.

Each subject saw a “synopsis page” (Figure 3.2) at the beginning of the primaries that displayed the names and pictures of each of the candidates running in each party’s contest. The scrolling information boxes also had a small “thumbnail” picture of the candidate to whom the information applied. Finally, the pictures of each candidate were included in the scrolling information available during the campaign, so subjects could click on them as they wanted. The same picture of each candidate was always used.

Figure 3.2. Candidate Synopsis Page



While our intention was always to have the candidate for whom a subject voted lose in the primary, thereby creating a gender manipulation for the subject's in-party general election candidate, a programming error caused the white male candidate to advance to the general election for almost all subjects. Because of this, the general election is a far less interesting place to study the effects of gender, so my analysis will be limited to the primary campaigns, only.

Hypotheses and Analysis

My analysis will examine both the direct and indirect effects of gender-based prejudice on candidate evaluation, vote choice, and correct voting for the female candidates in the study. In order to test for direct effects, the three dependent variables will be regressed on a number of traditional individual-level predictors of vote choice. I will also test for direct effects of prejudice on the amount of information that subjects accessed for the women candidates. This measure of information search will then be added as a predictor to the models for vote choice, evaluation, and correct voting.

Based on the previous literature, I hypothesize that sexism will not have a direct effect on vote choice or candidate evaluation. I do expect, however, that the effects of prejudice on these traditional measures will show up indirectly through information search. While gender based prejudice will not influence vote choice or evaluation on its own, it will lead to a decrease in information search for the female candidate, which, in turn, will lead to a lower likelihood of voting for her, as well as more negative evaluations of her.

I expect to find this indirect effect of prejudice for two reasons. First, gender based stereotypes and prejudice are stored in long-term memory throughout a person's life, but information search and learning for a specific candidate must take place during a campaign, immediately before a vote choice is made. Because of this, information search is likely more temporally proximal to candidate evaluations and vote choice than prejudicial attitudes toward women in general. Also, information search does not require a direct statement from subjects regarding their attitudes toward a female candidate, like evaluation and vote choice measures. These types of traditional measures are subject to social desirability effects since subjects may answer dishonestly to avoid appearing prejudiced to researchers. Information search is less susceptible to self-monitoring, given the nature of the task that subjects must complete.

For similar reasons, I expect to find *both* direct *and* indirect effects of prejudice on correct voting. Much like information search, correct voting is a measure of preference that is much less likely to be influenced by social desirability effects than are traditional measures of evaluation and vote choice. More details are given below, but correct voting compares a subject's expressed preferences in terms of policy, group endorsements, and personality traits to all of the candidates in the race and determines whether a subject voted for the candidate who most closely fits with those preferences. Researchers calculate subjects' correct candidate choices after the fact and do not need to rely on subjects' expressed attitudes toward candidates, so it is almost impossible for subjects to consciously influence this measure. For this reason, direct effects of sexism should be easier to identify. At the

same time, information search should still play a role in determining whether a subject voted correctly, which will mean that, if prejudice does indeed affect information search, it will also have an indirect effect on correct voting.

Dependent Variables

Vote choice for the female candidate will be measured using a dichotomous variable with a score of 1 indicating a vote for the woman candidate, while the candidate evaluation measure is a traditional 100-point feeling thermometer, though in order to control for inter-subject variability, the score for the female candidate is subtracted from the average feeling thermometer score for subjects' two male in-party candidates. Vote choice is analyzed using a logistic regression and the feeling thermometer measure is analyzed using an OLS regression.

Correct voting will be analyzed using logistic regression and will predict whether subjects voted for the candidate who is considered to be their "correct" choice. Lau and Redlawsk's (1997) dichotomous measure of correct voting is defined as "the likelihood that citizens, under conditions of incomplete information, nonetheless vote for the candidate or party they would have voted for had they full information about those same candidates or parties" (Lau, et al 2008). It compares an individual's self-proclaimed preferences to the positions of the candidates in a given race. Respondents who vote for the candidate most closely aligned with their expressed preferences are said to have voted correctly, while those who did not are said to have cast an 'incorrect' vote.²³

²³ More information on the calculation of correct voting is available in the appendix.

The amount of information accessed for the female candidate will function as both a dependent and independent variable in this study. It will serve as a dependent variable first in order to ascertain the effects of prejudice on information search. It will then be added as an independent variable to the models for vote choice, feeling thermometer ratings, and correct voting. Information search is measured using a count variable of the total number of unique information boxes opened for woman candidate. Possible values range from 0 to 25 and, because the distribution mimics a normal curve, will be analyzed using an OLS regression.²⁴

Independent Variables

Predictors of interest include a subject's gender and his or her score on a scale of gender-based prejudice items taken from the 2008 ANES measuring modern sexism (Swim, Akin, Hall, and Hunter 1995: $\alpha = .660$).²⁵ Control variables include a subject's race, ethnicity, partisanship, income, strength of party ID, perceived difficulty of the vote choice, political sophistication, age, and education. When the variable measuring search for the female candidate is added to the model, a variable measuring search for all candidates in the subject's out-party is also added to control for inter-subject differences in the amount of information they accessed, overall.

²⁴ Negative binomial regressions were also estimated but were essentially identical to the OLS models.

²⁵ Items include: "Women who demand equality these days are actually seeking special favors," "Women often miss out on jobs because of discrimination," "Women who complain about harassment cause more problems than they solve," "A working mother can establish just as warm and secure a relationship with her children as a mother who does not work," "It is much better for everyone involved if the man is the achiever outside the home and the woman takes care of the home and family."

Results

Information Search

I begin with an analysis of how gender-based prejudice influences information search. Table 3.2 shows the results of the OLS regression with the number of unique information boxes opened for the female candidate as the dependent variable. Coefficients for control variables are displayed in Table 3.2. Some have a significant effect on information search while others do not, but in the interest of space, I will not discuss them here. In terms of my predictors of primary interest, subject gender is negative but not statistically significant ($b = -.352$, n.s.), indicating that, on the whole, men did not seek out less information for women candidates. As hypothesized, however, the measure of gender-based prejudice is negative and significant ($b = -3.475$, $p < .05$). This suggests that, as expected, the higher a subject scores in modern sexism, the less information they access about the female candidate in their party.

Table 3.2. Information Search, Female Candidate

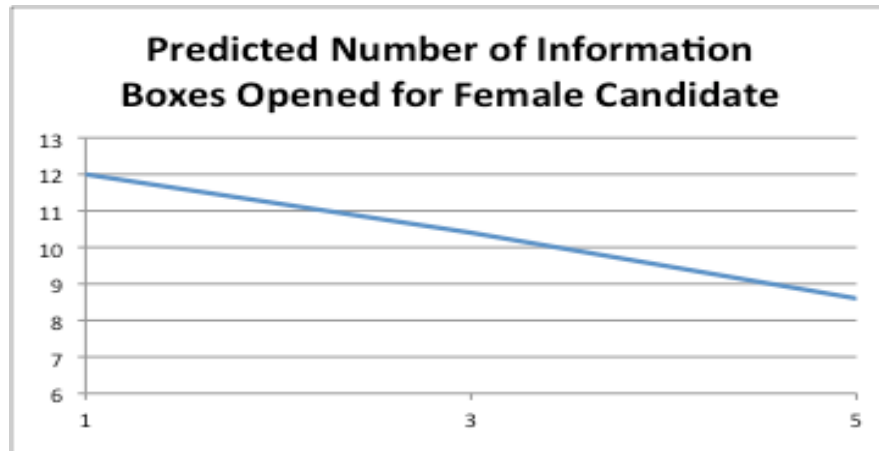
Subject Male	-.352 (.699)
Subject Non-white	-1.810** (.686)
Subject Age	-.204 (1.271)
Registered Republican	-6.522*** (.678)
Strength of Party ID	.182 (.881)
Income	.327 (1.171)
Political Sophistication	.808 (1.613)
Out-party Search	9.592*** (1.444)
Sexism	-3.475* (1.413)
Constant	10.024*** (.904)
Adjusted R²	.383

***p<.001, **p<.01, *p<.05, †p<.1

Note: Values are OLS regression coefficients, n=303.

Because all predictors are on a one-point scale, the regression coefficient shows that there is a difference of approximately 3.5 information boxes accessed from the top to the bottom of the scale. Figure 3.3 shows the predicted values for information search by a subject's sexism score based on this model. Those who scored lowest in sexism are predicted to look at approximately 12 unique information boxes for the female candidate, while those who scored highest are predicted to access about 8.5 items, or almost 1/3 less. This is a huge effect and, if information search proves to be an important direct predictor of candidate evaluation and vote choice, as I predict, then this is an important indirect route by which prejudice influences political attitudes and behavior.

Figure 3.3. Predicted information search values by subject's sexism score



Note: Horizontal axis shows subject's sexism score. Vertical axis shows the number of unique information boxes opened by subject. Predicted probabilities holding all other independent variables at their means

*Candidate Evaluation***Table 3.3. Feeling Thermometer Ratings, Female Candidate**

	Model 1	Model 2
Subject Male	.913 (2.962)	1.676 (2.787)
Subject Non-white	4.641 (2.909)	7.271** (2.200)
Subject Age	-2.167 (5.326)	-2.366 (5.231)
Subject Income	10.785* (4.999)	8.996† (4.710)
Subject Lib-Con	-56.457*** (12.292)	44.973*** (11.705)
Candidate Lib-Con	-.413 (1.427)	-.241 (1.365)
Subject X Candidate Lib-Con	11.643*** (3.221)	8.023** (3.086)
Registered Republican	-1.672 (6.834)	1.877 (6.543)
Strength of Party ID	4.773 (3.855)	2.294 (3.661)
Political Sophistication	1.407 (6.909)	-2.882 (6.559)
Sexism	-7.925 (6.420)	-6.183 (6.061)
Out-party Search		-14.520* (5.949)
Search for Female Candidate		1.347*** (.223)
Constant	56.843*** (4.049)	44.896*** (5.294)
Adjusted R²	.147	.247

***p<.001, **p<.01, *p<.05, †p<.1

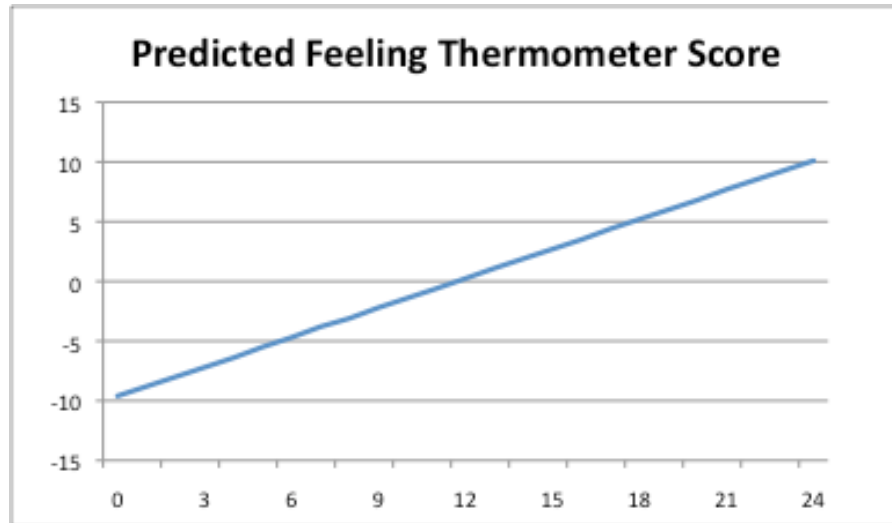
Note: Values are OLS regression coefficients, n=303.

Table 3.3 shows the results of the analysis of feeling thermometer ratings for the female candidate running in the subject's in-party. Model 1 includes subject characteristic variables, only, and Model 2 adds variables for total information search for the female candidate and, as a control, total information accessed in the primary for all out-party candidates. In Model 1, neither a subject's gender nor their

score on the sexism scale is significant. Consistent with previous literature, sexism does not seem to have a direct effect on this candidate evaluation measure. Looking at Model 2, though, search for the female in-party candidate is positive and significant ($b=.1.347$, $p<.001$). This suggests that, as anticipated, searching for more information about the female candidate leads to more positive evaluations of her. Sexism does not have a direct effect on feeling thermometer scores, but since those who are higher in sexism search for less information about the female candidate, it does have an indirect effect through search behavior.

Figure 3.4 shows the predicted feeling thermometer values for the female candidate given a subject's information search for the female candidate. When a subject looks for no information for the female candidate, he or she is expected to rate her approximately 10 points lower than the male candidates. When a subject looks for the highest possible number of information items, though, he or she is expected to rate her 10 points *higher* than the male candidates in his or her party.

Figure 3.4. Predicted feeling thermometer values by subject's search for female candidate



Note: Horizontal axis shows the number of unique information boxes opened by subject. Vertical Axis shows the subject's feeling thermometer score for the female candidate (average male score – female score). Predicted probabilities holding all other independent variables at their means.

Table 3.4. Vote Choice for Female Candidate

	Model 1	Model 2
Subject Male	-.250 (.358)	-.199 (.365)
Subject Non-white	.444 (.325)	.597 [†] (.336)
Income	.516 (.588)	.412 (.591)
Age	.343 (.621)	.214 (.649)
Registered Republican	.135 (.432)	.533 (.478)
Lib-Con	-1.026 (.861)	-.740 (.873)
Strength of Party ID	-.608 (.441)	-.647 (.452)
Political Sophistication	.137 (.812)	.110 (.817)
Perceived Vote Difficulty	.304 (.685)	.231 (.698)
Sexism	-.864 (.796)	-.830 (.809)
Out-Party search		-1.010 (.798)
Search for Female Candidate		.066* (.031)
Constant	-.750* (.386)	-1.302* (.575)
Pseudo R²	.056	.082

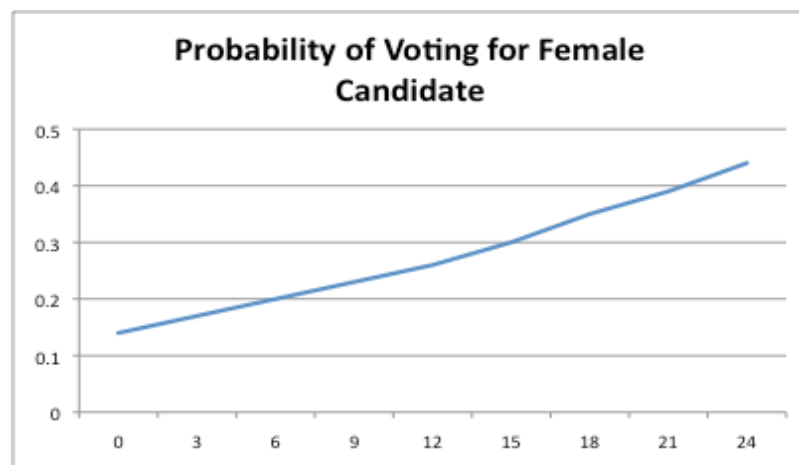
***p<.001, **p<.01, *p<.05, †p<.1

Note: Values are logistic regression coefficients, n=303.

Table 3.4 shows the results of the two models predicting vote choice for the female candidate. In Model 1, none of the predictors of interest or control variables are significant. The coefficients for both a male subject and sexism are negative, but neither reaches statistical significance (subject male $b = -.250$, n.s.; sexism $b = -.864$, n.s.). Again, as with the candidate evaluation measure, sexism does not have a direct

effect on voting for the female candidate in one's party. In Model 2, when search is added, sexism remains negative and non-significant ($b = -.830$, n.s.), but the amount of information sought by the subject is positive and significant ($b = .066$, $p < .05$), again suggesting an indirect effect of prejudice through the amount that subjects choose to learn about the female candidate. More search for the female candidate improves the likelihood of voting for her, but higher sexism scores lead to less search for the female candidate.

Figure 3.5. Predicted Probabilities of Voting for the Female Candidate by Information Search for the Female Candidate



Note: Horizontal axis shows the number of unique information boxes opened by subject. Vertical Axis shows the subject's probability of voting for the female candidate. Predicted probabilities holding all other independent variables at their means.

Figure 3.5 graphs the predicted probabilities of voting for the female candidate given the number of unique information boxes opened for the female candidate. Subjects who search for no information about her have about a 15% chance of voting for her, while those who search for the most possible information about her have about a 45% chance of doing so. Again, since gender-based prejudice

negatively influences information search for the female candidate, this is more evidence of a direct effect of sexism on voting for female candidates.

Correct Voting

The analysis of information search, feeling thermometers, and vote choice for the female candidates in this study have provided quite a bit of support for my hypotheses. Gender-based prejudice does not seem to directly affect candidate evaluation or voting behavior, but it does predict information search, which, in turn, influences these other measures. My final dependent variable of interest is correct voting. While prejudice seems to work in particular ways for candidate evaluation and vote choice, I expect a different result for correct voting. Because of its subtle nature and lower likelihood of susceptibility to social desirability effects, I expect to find both direct and indirect effects of prejudice on correct voting. To test this hypothesis, I use logistic regression to estimate two correct voting models – one that takes subject level variables and the gender manipulation, only, into account, and one that adds in information search variables.

Table 3.5. Correct Vote Choice for Female Candidate

	Model 1	Model 2
Subject Male	-.163 (.324)	-.133 (.329)
Subject White	-.133 (.295)	-.282 (.308)
Age	-.485 (.582)	-.295 (.595)
Income	-.033 (.547)	-.081 (.553)
Strength of Party ID	.587 (.408)	.517 (.414)
Liberal-Conservative	1.519* (.647)	1.621* (.656)
Political Sophistication	.651 (.753)	.471 (.772)
Perceived Difficulty of Vote Choice	-1.701** (.652)	-1.731** (.662)
Sexism	-.024 (.777)	-.047 (.787)
Female Candidate Correct Choice	-.284 (.297)	-.821 (.754)
Female Candidate Correct X Sexism	-3.513* (1.437)	-2.990* (1.492)
Search for Female Candidate		.020 (.039)
Avg. Search for Male Candidates		.030 (.040)
Female Candidate Correct X Search for Female Candidate		.042 (.054)
Constant	-.911* (.417)	-4.560** (1.626)
Pseudo R²	.112	.135

***p<.001, **p<.01, *p<.05, †p<.1

Note: Values are logistic regression coefficients, n=99.

Table 3.5 shows the results of the correct voting models. Again, Model 1 includes all but the information search variables. Subjects who were more conservative and perceived the vote choice as less difficult were more likely to vote correctly. Also, the interaction term between a subject's score on the modern sexism

scale and the indicator variable that the subject's correct choice was the female candidate is negative and significant here ($b=-3.513$, $p<.05$), suggesting that, among those whose interests and preferences most closely aligned with the female candidate, subjects who were higher in gender-based prejudice were less likely to vote for her, regardless of their proximity on these things. As expected, this is a marked contrast from the results for the more traditional evaluation and vote choice measures. While sexism did not have a direct effect on feeling thermometer scores or vote choice, it clearly matters for correct voting.

Model 2 adds the information search variables to this model. Again, the interaction between sexism and the indicator that the female candidate was the correct choice is negative and significant ($b=-2.990$, $p<.05$). Unexpectedly, search for the female candidate is positive, but not significant, suggesting that, among those who should have voted for the female candidate, those who searched for more information about her were no more likely to vote correctly for her. Unlike in the other analyses, then, it seems as if prejudice has *only* a direct effect correct voting, and that information search does not seem to play the same mediating role.

Discussion and Conclusion

The findings from my analyses suggest that prejudice does indeed affect voting behavior for female candidates, though its role is quite subtle and difficult to find using traditional measures. Consistent with previous literature, I found no direct effects of sexism on either feeling thermometer scores or vote choice. I did, however, find direct effects of gender based prejudice on information search patterns. Specifically, the higher a subject scored on the scale of modern sexism

items, the fewer information boxes he or she opened related to the female candidate. At the same time, increased information search was positively correlated with both voting for the female candidate and rating her more positively on the feeling thermometer. This suggests that sexism is still serving to disadvantage female candidates, but is doing so through the process of learning about candidates during a campaign, rather than through any direct impact on outright evaluations and vote choice.

Sexism also seems to play a significant role in influencing voting behavior using the subtler correct voting measure. Those higher in gender-based prejudice were less likely to vote correctly if their correct choice was the female candidate. Even when a subject admittedly preferred many policy stands and characteristics held by the female candidate, sexism stopped some of them from casting a vote for her. The direct effects of prejudice on both correct voting and information search patterns serve as powerful evidence that sexism is still acting as an obstacle to female candidates, albeit in ways that are less obvious than traditional analyses might be able to locate.

While the continuing influence of gender based prejudice may be disheartening, it is important to recognize the ways in which sexism may still be working in order to effectively combat it. Indeed, the important role of political learning may be cause for some hope. Subjects who score high in sexism are not necessarily refusing to vote for female candidates outright, but are choosing to seek out less information about them. It is possible that if these voters are exposed to

more information about women who are running for office, that this learning process could overcome initial biases.

There is clearly still much more work to be done, this paper makes two important contributions, both by identifying one mechanism by which gender based prejudice is influencing voting behavior (information search) and by showing that gender scholars may be able to get around self-monitoring by subjects by looking for effects of prejudice on subtler measures of preference (like correct voting).

Chapter 4:
A Face Fit for Office?
The Effects of Candidate Race, Gender, and Perceived Competence on
Candidate Evaluation and Voting Behavior

How do impressions of candidates based on physical appearance influence the way voters learn about and evaluate them? In a democratic government, citizens are expected to participate in the political process in a meaningful way—specifically, to determine where candidates stand on a number of dimensions and then to vote for the candidate who most closely aligns with their own values and preferences. It is increasingly clear, though, that other, seemingly unrelated or unimportant information gets incorporated into voters' decision-making processes as well. For example, candidates are often evaluated on how they look—their race/ethnicity, gender, age, attractiveness or facial composition provide cues about politically salient attributes such as the candidate's personality traits, ideology, policy issue specializations, and/or political viability. Children are often warned against “judging a book by its cover,” yet, despite the fact that there is no guarantee that these appearance cues provide any accurate information (Hassin and Trope 2000; Zebrowitz and Montepare 2008; Olivola and Todorov 2010b), that seems to be exactly what people are hard-wired to do.

In particular, social psychologists have repeatedly found that individuals automatically (i.e. pre-consciously) make judgments about others' personality traits based on nothing more than a brief exposure to their faces (e.g. Hall et al 2009; Hassin and Trope 2000). This observation has been applied to political candidate evaluation in a series of studies by Todorov and colleagues (Todorov, Mandisotza, Goren and Hall 2005; Hall et al 2009; Ballew and Todorov 2007; Olivola and

Todorov 2010a, Mattes, Spezio, Kim, Todorov, Adolphs, Alvarez 2010, Sussman, Petkova, and Todorov, 2013), whose findings indicate that the results of actual elections can, partially, be explained by spontaneous judgments about how competent the candidates look.

At the same time, a vast literature exists in political science that examines the role of appearance-based stereotypes in candidate evaluation and voting behavior. Specifically, much evidence suggests that stereotypes based on race and gender lead to differences in how women and African American candidates are perceived and evaluated (e.g. Huddy and Terkildsen 1993; Kahn 1996, Sigelman, Sigelman, Walkosz and Nitz 1995; Williams 1990). Like automatic trait inferences, these stereotypes are fundamentally dependent on the appearance of a candidate—both race and gender are largely unavoidable visual markers that people generally cannot help but notice (Lau and Redlawsk 2001). Further, many race and gender-based stereotypes relate to a candidate's personality traits, including competence. In particular, evidence suggests that both women and African American candidates are considered less competent than their male and white counterparts (Kahn 1996, Sigelman, et al 1995).

It is clear from these literatures that perceptions of candidate personality traits, and especially competence, are an important aspect of candidate appraisal. It also seems that certain individuals running for political office will be evaluated on their traits in systematically different ways based solely on their appearance. Many important questions remain, however, and this paper seeks to address two of them. First, how do these different appearance cues function together? Previous studies by

Todorov and colleagues control for race and gender when asking subjects to evaluate candidate pictures (i.e. subjects are only shown faces that share the same race and gender). This is precisely because these two characteristics provide such strong competence cues on their own. Because of this, it is unclear how competence inferences function when candidates also differ in terms of race and/or gender. It is becoming much more common, however, for female and black candidates to appear in high-level races, where they often oppose candidates who do not share the same race and/or gender. Both women and African Americans are generally stereotyped as being less competent than men and whites, but what happens when a woman who looks particularly competent competes against a man perceived as less competent, for example? In other words, what happens to subjects' initial inferences when competence cues are inconsistent?

Second, dual system theories of cognition (e.g. Chaiken and Trope 1999, Kahneman 2011) posit that people have two separate methods of processing information—one of which relies on the use of heuristics and other automatic associations and inferences (System 1), and another that employs deliberate thought and learning (System 2). Studies that apply person stereotypes or spontaneous trait inferences to political candidates ask subjects to evaluate candidates after only one brief exposure, essentially asking them to make a judgment after a first impression, only. This study, on the other hand, uses an experimental design to examine the ways in which those first impressions based on a candidate's appearance influence voter behavior and decision-making later on. In other words, while trait inferences and appearance-based stereotypes fall into the

category of automatic, System 1 processing (Chaiken and Trope 1999, Kahneman 2011), this study examines the effects of these cues when subjects are asked to participate in more deliberate, System 2 processing by learning about candidates in a simulated political campaign and election. Will these cues function in the same way when subjects are placed in a high-information environment and can learn (almost) anything they want to know about a particular candidate?

In order to answer these questions, this study utilizes a computer-based experiment using the Dynamic Process Tracing Environment (DPTE).²⁶ DPTE is a web-based computer program that allows researchers to mimic the constant flow of information in an actual campaign environment, thereby tracking subjects' information search as the campaign progresses. In particular, this study asks subjects to participate in a simulated presidential campaign and election in which they can learn as much or little information about the candidates in the race as they like. I manipulate the race and gender of the candidates in the race, as well as how competent a candidate looks, and examine how these appearance cues influence subjects' evaluations of the candidates and their ultimate vote choice after experiencing the campaign and gathering relevant information about them. If appearance cues influence political behavior even in this context, then that would give good indication that a candidate's appearance matters a great deal in politics, regardless of what other information voters have about them. If information search tempers this relationship, however, that may provide an avenue to mitigate these automatic, pre-conscious effects.

²⁶ Developed by Richard Lau and David Redlawsk with assistance from the National Science Foundation.

Literature Review

Candidate Personality and Voting Behavior

As an indication of what has been termed the “personalization of politics” (Sears 1969), or the growing focus on individual candidates as opposed to political parties or other structural factors, scholarship devoted to candidate evaluation has shown that voters often care more about candidates’ personal characteristics than other politically relevant information like policy issues or ideology (Miller et al 1986). Further, it has been found that voters use these personal judgments as a cognitively “cheap” means of determining how a candidate will perform while in office (Kinder and Abelson 1981; Shabad and Anderson 1979). Indeed, perceptions of traits such as competence, compassion and leadership have been shown to predict vote outcomes for presidential, House, and Senate candidates (Kinder 1986; Markus 1982; Miller 1990; Miller and Miller 1976), and perceptions of a candidate’s competence, in particular, are often considered to be particularly important in predicting how a candidate will fare (Kinder 1986; Markus 1982; Miller and Miller 1976; Miller, Wattenberg, and Malanchuk 1986; Shanks and Miller 1990, Mondak 1995).

The use of personality traits as information shortcuts to quickly and easily figure out how a candidate might perform while in office is not necessarily irrational. Knowing that a potential political leader is intelligent or compassionate in general may make it easier to predict with some certainty how he or she will behave politically, and competence inferences are considered particularly “task-relevant” in terms of choosing a political leader (Fiorina 1988; Page 1978; Popkin 1991).

Further, people are better at inferring personality-relevant information than political or issue based information, since they have to make these sorts of judgments in everyday life. Thus, making political decisions based on personal information is less costly in terms of time and energy than basing one's decision on policy preferences (Rahn, et al 1990, Popkin 1991). However, the basis on which a trait like competence is judged is important. In other words, how are citizens coming to the conclusion that a given candidate is competent or not? In particular, what happens when judgments are made solely a candidate's physical characteristics to deduce personality traits or behavioral tendencies?

Spontaneous Trait Inferences

Two separate literatures have emerged that directly address the connection between a candidate's appearance, perceived traits, and voting behavior. One examines the role of pre-conscious inferences and the other discusses stereotypic information stored in long-term memory. First, a strain of research emerging from social psychology has found that, in all forms of human interaction, individuals constantly make spontaneous, pre-conscious trait inferences based on others' appearance, and their faces, in particular (e.g. Hall et al 2009; Hassin and Trope 2000; Olivola and Todorov 2010). Evaluating a person's characteristics based on their face is a well-documented phenomenon, as the face has been shown to play a special role in human cognition since it is always available in in-person human interaction and vision is evolutionarily the most basic and most utilized sense (Noller 1985, Posner, Nissen and Klein 1976, Gazzaniga 1998). Interestingly, judgments made based on faces tend to be reliable, in that people infer the same

sorts of traits from the same sorts of faces (Hassin and Trope 2000), but most evidence suggests that these inferred traits do not necessarily correlate with the actual traits possessed by individuals (Cohen 1973, Alley 1988; but see Berry and Zebrowitz 1990). Regardless of their level of accuracy, characteristics derived from faces have been shown to alter people's evaluations of targets, even when other information is available, and subjects seem unable to ignore this information even when they are told to do so (Hassin and Trope 2000).

These inferences are involuntary and made very rapidly—often in as little as 100 milliseconds (Todorov and Uleman 2003; Olson and Marshuetz 2005; Todorov 2008)—and happen regardless of a person's race, gender, age, or any other social group membership. It is still unclear exactly what features a face must possess in order to appear competent, trustworthy, charismatic, etc., but some evidence suggests that such inferences seem to depend on aspects of an individual's face that signal maturity and attractiveness, such as distance between the eyes, roundness of the face and angularity of the jaw (Oliviola and Todorov 2010). Other findings suggest that trait inferences depend on the extent to which someone's facial structure resembles people in various emotional states—faces that look happy, structurally, tend to be seen as more trustworthy, for example (Montepare and Dobish 2003). Whatever the triggers, because these sorts of trait inferences are occurring frequently and automatically, it is perhaps not surprising that they affect individuals' decision-making in a number of domains, including selection of romantic partners (Oliviola et al 2009), judicial decisions (Ziebowitz and McDonald 1991) and in hiring decisions (Naylor 2007).

Politics seems to be no exception. In a series of studies, Todorov and colleagues (Todorov, Mandisotza, Goren and Hall 2005; Hall et al 2009; Ballew and Todorov 2007; Olivola and Todorov 2010a) found that subjects' spontaneous inferences about a candidate's traits—competence, in particular—correctly predicted the outcomes of actual Congressional and Gubernatorial elections between 60% and 73% of the time. Inferences were made after seeing still images of the candidates' faces, only, and those rated as more competent by the subjects were more likely to win (or have won) in actual elections. While multiple trait ratings were collected, perceived competence was the only trait found to have this effect. Traits like trustworthiness and charisma did not predict vote choice in the same way,²⁷ and other attributes like attractiveness and age seem to be bound up with perceptions of competence as well. Olivola and Todorov (2010a), for example, found that a candidate's attractiveness and perceived maturity contributed to inferences of competence, meaning that more attractive and more mature looking candidates may do better in elections because they are seen as more competent. Similarly, Mattes, et al (2010) find that attractive candidates who also look competent tend to do better in elections, while attractive but incompetent looking candidates do worse. Banducci and Karp (2008) also find that more attractive candidates are significantly more likely to do better in electoral contests unless trait perceptions (like competence) are also added to the equation, in which case the effects of attractiveness drop out.

²⁷ Though Mattes, Spezio, Kim, Todorov, Adolphs and Alvarez (2010) also find that more threatening faces are less likely to win election.

The sum total of many of these spontaneous inference studies suggests that perceptions of competence are particularly important in predicting candidate evaluation and vote choice. Though competence may be a reasonable heuristic on which to base candidate evaluation, inferred competence from rapid exposure to a candidate's face may not be the most reliable indicator. Further, previous studies of spontaneous trait inferences and political candidates are limited to evaluations made after first impressions. It is clear that there is a relationship between automatic trait inferences and ultimate vote choice, but what is the role of political learning in this process? Do these judgments still matter when a person takes the time to learn about the candidates in the race? Further, what happens when other visual cues become salient, such as a candidate's race or gender?

Appearance Based Person Stereotypes

Scholars of political behavior have demonstrated time and again that social identities with largely unavoidable visual markers—i.e. race and gender—lead candidates who possess these markers to be subject to different personality-related stereotypes. Women, for example, are perceived as more empathetic and less decisive than men, while men are seen as more assertive and rational than women (Huddy and Terkildsen 1993). Women political contenders are also perceived as more trustworthy, honest, and compassionate than their male counterparts. At the same time, though, they are perceived as less competent and experienced, less able to handle the emotional demands of high office, and lacking in masculine traits like “toughness” (Kahn 1996, Carroll and Dittmar 2010). Because of these trait perceptions, voters also believe that men and women have different policy

strengths: women are perceived as better able to handle “compassion” issues like education, healthcare, childcare, and poverty, while men are more adept at “masculine” issues (military, terrorism, crime) (Cook, Thomas and Wilcox 1994; Dolan 2004; Rosenwasser and Seale 1988). Women candidates are similarly stereotyped as more liberal than their male counterparts (Alexander and Andersen 1993; Koch 2000), and are often evaluated more heavily on their personal lives and family situation than men (Carroll and Dittmar 2010).

In terms of racial stereotypes, some studies have found that being black may create doubts about a candidate’s competence and qualifications (Sigelman et al. 1995; Williams 1990). Further, white candidates are more likely to be perceived as intelligent, knowledgeable, hardworking, and trustworthy compared to black candidates (Williams 1990). As with gender, racial stereotypes can also affect a candidate’s perceived policy strengths. Blacks have an advantage on compassion and specifically racial issues (helping the poor, ending discrimination), but a disadvantage on major policy issues such as the military and economy (McDermott 1998; Sigelman et al. 1995; Williams 1990). Like women, blacks are also perceived as more liberal and more likely to be strongly Democratic (McDermott 1998; Schneider and Bos 2009).

These stereotypes based on race and gender are cognitively cheap—it does not take a lot of mental energy to look at someone and notice that he or she is a man or a woman, black or white. Further, because long-term memory is usually conceptualized as a series of interconnected nodes in which associated concepts are activated together, preconceptions about what traits women or African Americans

possess tend to automatically accompany those observations (Anderson 1983).

Even people that know very little about politics are used to making person judgments in everyday life. For this reason, these sorts of appearance heuristics are particularly salient for most people, regardless of their level of political sophistication (Rahn, et al 1990, Lau and Redlawsk 2001).

Method and Hypotheses

While much has been learned from these studies of candidate appearance, they have all been limited to judgments based on one appearance cue in isolation, and to evaluations made at one point in time, based on first impressions only. It is clear that automatic, System I processing has a role to play in political decision-making, but it is not clear how and whether these appearance-based cues matter when viewed simultaneously, or when voters take the time to learn the politically relevant information about candidates that is available during political campaigns. In order to explore these questions, I rely on dynamic process tracing (Lau and Redlawsk 2006), which simulates the constant flow of information in a political campaign and allows researchers to track the amount and content of information that subjects choose to access about each candidate.

The experiment was conducted in the spring of 2012²⁸ and was completed by 449 total subjects. 106 of those subjects were recruited from the Central New Jersey area and took the experiment in the lab at the Center for the Experimental Study of Politics and Psychology at Rutgers University. The remaining subjects were recruited through Amazon Mechanical Turk and took the study online using their

²⁸ With support from the National Science Foundation

own computers.²⁹ The sample is 58% female, 76% white, 9% African American, 9% Asian and 5% Latino. The median age is 32 and 55% had at least a college degree. 16% of the sample identified as Republican, 48% as Democrat, and 31% as independent.

The experiment lasted approximately one hour and consisted of a pre-election questionnaire, a “practice” campaign, a primary campaign and election, a post-primary questionnaire, a general campaign and election, and a post-general election questionnaire. After subjects saw a series of instruction screens, they were asked first to complete the pre-election questionnaire, which collected information on subjects’ issue positions, ideology, party identification, demographics, political participation, political knowledge, ratings of interest groups, and racism and sexism scales. They then participated in a 2-minute practice campaign in order to gain some experience using the software. They were then asked to choose whether they wanted to participate in the Republican primary or the Democratic primary,³⁰ and assigned to the appropriate campaign. Two candidates ran in each of the party’s primaries and, though subjects could only vote in one primary election, they saw information about the candidates in both races. Subjects were then asked to vote in the primary election for their own party and answer a series of questions about the candidates they saw in the campaign. They then moved on to the general campaign and election. The analysis in this paper uses data from the primary campaign, only,

²⁹ Very few differences were found between the two sub-samples or in their performance in the study. See Kleinberg, Ditonto, Andersen, and Lau (2013) for more information on the comparison of these sub-samples.

³⁰ 133 subjects chose the Republican primary, 316 chose the Democratic Primary

so in the interest of space, I will not provide detailed information about the general election here.

During a DPTE campaign, individual pieces of information scroll down the subject's computer screen from top to bottom, each remaining available for a period of time (in this experiment, 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).³¹ 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, creating an opportunity cost for subjects. As they learn one thing, they miss out on the chance to learn others, so they must choose which information is most important for them to learn.

The primary campaign lasted approximately 11 minutes, and subjects had the opportunity to access 25 unique pieces of information about each of the two candidates in their primary, as well as 25 pieces of information about the two candidates in the other party's primary. There were also 12 group endorsements,

³¹ See the appendix for images of a DPTE campaign and an information box.

each of which supported one of the four candidates. Subjects could access information about the candidates' stances on a number of policy issues, their ideology, family, education, and prior experience in work and politics. Each piece of information appeared twice during the campaign and the software randomly decided the order in which the boxes were seen by each subject. With 224 pieces of information available, in total, during the campaign, there is far more information available to learn than any one subject could (the average number of items accessed by subjects was 64). By overwhelming subjects with so much information, DPTE mimics the abundance of information available during a real-world campaign and forces subjects to choose what is most important to them.

In the primary campaign, subjects experienced a 2x2x2x2 manipulation, 3 of which related to a candidate's physical appearance, and one of which varied candidate ideology. For each subject, one of the candidates in their party's primary (Candidate A) varied by race, gender, whether the candidate had a competent or incompetent appearance, and whether the information available about the candidate portrayed him or her as a moderate party member or a more extreme party member (i.e. very liberal for Democrats and very conservative for Republicans).

Pre-test of Candidate Pictures

Race, gender, and competence were conveyed via a single candidate picture tied to each candidate. Whether a picture appeared to be competent or incompetent was based on pre-tests of pictures conducted by 148 undergraduates. Pictures were taken from state legislatures' websites in multiple states, and pre-test subjects were

asked to rate 64 pictures on a series of traits including competence, attractiveness, compassion, likability, and trustworthiness. There were 8 pictures in each race/gender combination, so there were 8 white men, 8 white women, 8 black men, and 8 black women. Subjects rated each of the 8 pictures in each category on a 1 through 4 scale for each trait, consistent with Banducci et al, 2008. This procedure differs from that used by Todorov, et al, as their studies presented subjects with pairs of candidate pictures and asked them to rate the candidates on relative competence (i.e. “which of these candidates looks more competent?”) I chose to acquire individual ratings for each picture in order to try to isolate the effects of the multiple appearance cues in this study.

The pictures with the highest and lowest competence scores in each race/gender combination were selected for use in the experiment. Each picture and competence score is available in the appendix, but the average competence score for the competent-looking candidates was 3.21, while the average competence score for the incompetent-looking candidate was 2.44, which is a statistically significant difference ($p < .05$). This shows that, within each race/gender combination, there was variance in terms of how competent/incompetent the candidates looked. There is clearly room for automatic trait inferences to play a role in candidate evaluation even when race and gender vary, as well.

Manipulations

Candidate A, then, could be black or white, male or female, and either competent-looking or incompetent-looking. Candidate B was always a white man and either looked competent or incompetent depending on whether Candidate A

received a competent or incompetent picture. In other words, If Candidate A was competent-looking (regardless of the race or gender manipulation), Candidate B was always an incompetent-looking white man. If Candidate A was incompetent-looking (again, regardless of race or gender), Candidate B was always a competent-looking white man. While Candidate A allows me to analyze the interactions of race, gender, and competence inferences, then, Candidate B manipulates competence, only, in a white, male candidate (still the most common type of candidate). Both out-party candidates were always white, male, and competent-looking.

Each party's primary had both a moderate candidate and either a liberal or conservative candidate, depending on the party (i.e. subjects in the Republican primary saw a moderate and a conservative candidate, while those in the Democratic primary saw both a moderate and a liberal candidate). Which candidate received each ideological position was randomly assigned so that Candidate A was moderate half of the time and Candidate B was moderate the other half of the time. Ideology was conveyed via the information available about him or her in the campaign that related to ideological and policy positions.³² A measure of ideological agreement is included in the following analyses, indicating whether a subject was most closely ideologically aligned to the candidate in question, or to the other candidate. This manipulation serves as a measure of System 2 processing, since a

³² All of the information about the candidates was factual and non-evaluative in tone.

candidate's ideology can only be learned by deliberately seeking out issue-based information about him or her.

Dependent Variables and Analysis

My dependent variables of interest include subjects' evaluations of the candidates' competence after the primary election, their feeling thermometer evaluations of the candidates, and their ultimate vote choice. Competence is measured on a 1-4 scale, with a score of 1 indicating that the subject found the candidate to be very incompetent and a score of 4 indicating a very competent judgment. Feeling thermometer ratings for each candidate are measured on the traditional 100-point scale, and vote choice is measured using a dichotomous variable for which a score of 1 signifies a vote for Candidate A and a score of 0 signifies a vote for Candidate B (subjects were required to vote for one of the two candidates).

I begin by using a series of 4-way analyses of covariance (ANCOVAs), controlling for the amount of information a subject accessed about the candidate in question, in order to determine the effects of my four manipulations (race, gender, competence of appearance, and ideological agreement) on the competence trait measure and feeling thermometer score for each of the candidates in a subject's in-party. I then consider the effects of my manipulations, as well as subjects' information search and their ultimate competence rating, on vote choice.

Hypotheses

Because prior research has found such a strong effect of competence inferences on voting behavior, I hypothesize that, for Candidate B (the white, male

candidate), the competence/incompetence manipulation will lead candidates to have higher competence and feeling thermometer evaluations and a greater likelihood of receiving a subject's vote when he has a competent appearance than when he has an incompetent appearance. I expect this to be the case even after subjects have spent an entire campaign gathering information about the candidates, since studies of trait inferences based on first impressions were able to predict the outcomes of actual elections in which, presumably, voters had the ability to learn more about the candidates in the race than just how they looked. Additionally, these types of appearance cues are often difficult to change and are valued more highly than other kinds of cues in individuals' judgments of others (Oliviola and Todorov 2010b). In comparison to other common political heuristics such as partisanship, then, there may be something more accessible and basic about appearance related inferences. Indeed, because they are used so frequently in all types of interactions, they may be particularly influential and resistant to change in the political realm, as well.

The same patterns should not necessarily hold true with race and gender are also systematically varied, however. Because both female candidates and black candidates are subject to stereotypes that cause them to be seen as less competent, I expect there to be significant interactions between the appearance manipulations for Candidate A such that both women and African American candidates who are also considered incompetent-looking will be rated especially negatively and do even worse against their competent-looking opponent than male and white candidates,

respectively. Again, I expect this to hold true even after subjects have learned a great deal of information about the candidates in the race.

At the same time, I expect that subjects will rate the candidate who is closest to them, ideologically, as more competent, will give him or her a more positive feeling thermometer score, and will be more likely to vote for him or her. This analysis essentially pits automatic, System 1 processing against deliberate, System 2 learning in terms of their effects on candidate evaluation and vote choice. Based on previous literature (e.g. Redlawsk and Lau 2006), it is unclear whether appearance cues or substantive information will be more influential in these analyses. If aspects of a candidate's appearance significantly predict things like trait ratings, feeling thermometer scores, and vote choice even when factors like ideological agreement and information search are taken into account, that would provide strong evidence that a candidate's appearance is very important, even in high-information election environments.

Results

I begin with an analysis of subjects' competence ratings for each candidate, which were completed after subjects experienced the primary campaign. This will determine whether the competence/incompetence of a candidate's appearance affected subjects' evaluations of their competence even after spending 11 minutes gathering relevant information about them. Because Candidate B received the competence and ideology manipulations, only, I begin with the results for him. I find significant main effects for both the competence and ideology manipulations here. As expected Candidate B is rated as more competent when he is associated with the

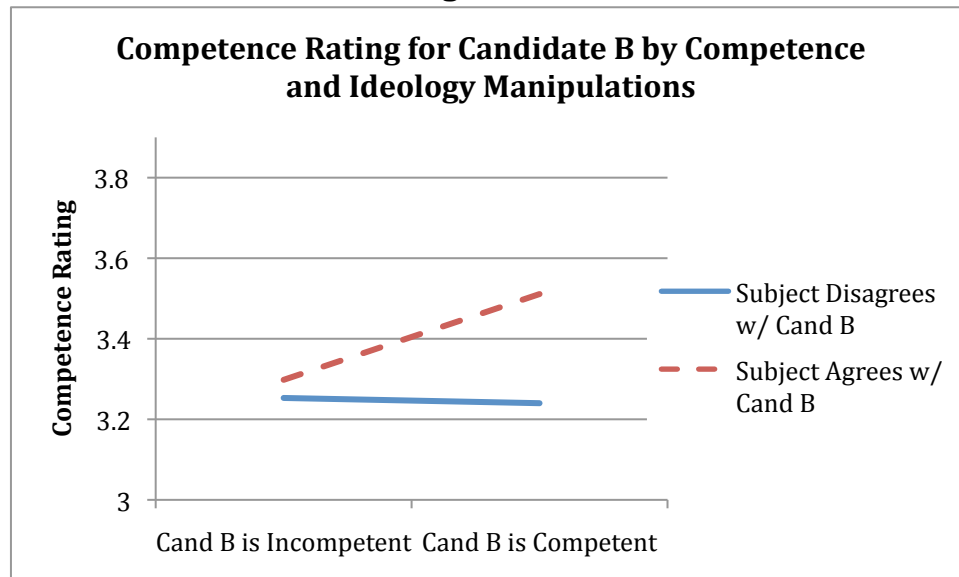
more competent looking picture (3.376 when he is competent vs. 3.275 when he is incompetent, $p < .1$)³³ and when he is ideologically closer to the subject's own position than Candidate A (3.404 when he agrees with the subject ideologically, 3.274 when he disagrees, $p < .01$). The effects of a competent appearance on competence ratings, then, seem to hold even after an entire campaign's worth of information about the candidate, and even when ideological agreement is also taken into account. Clearly, the effects of the appearance manipulation are smaller after the campaign than they were in the pretest, when the only information available about the candidates was the picture. This makes sense since the appearance cue in my experiment is competing against all of the other available information throughout the campaign.

There is also a significant interaction between these two manipulations ($p < .1$), which is shown in Figure 4.1. As one might expect, Candidate B is seen as most competent when he is associated with the competent looking picture, and the subject is ideologically closest to him (3.511). Interestingly, in all other conditions, the competence score for Candidate B is essentially the same. When Candidate B is the competent looking one, but the subject is ideologically closer to Candidate A, the rating of Candidate B drops to 3.24. Similarly, when Candidate B is incompetent looking, ideological agreement does not seem to matter for his competence ratings (3.253 when the subject agrees, 3.298 when the subject disagrees). Again, it seems as though the competence of appearance cue matters for Candidate B, but the other,

³³ All significance levels are reported using two-tailed tests, though my hypotheses are unidirectional and support the use of one-tailed tests. For this reason, I report anything with a significance level under .1 as statistically significant.

more politically relevant information available during the campaign matters as well, since the competent appearance cue only seemed to work when subjects generally agreed with the candidate on the issues.

Figure 4.1.



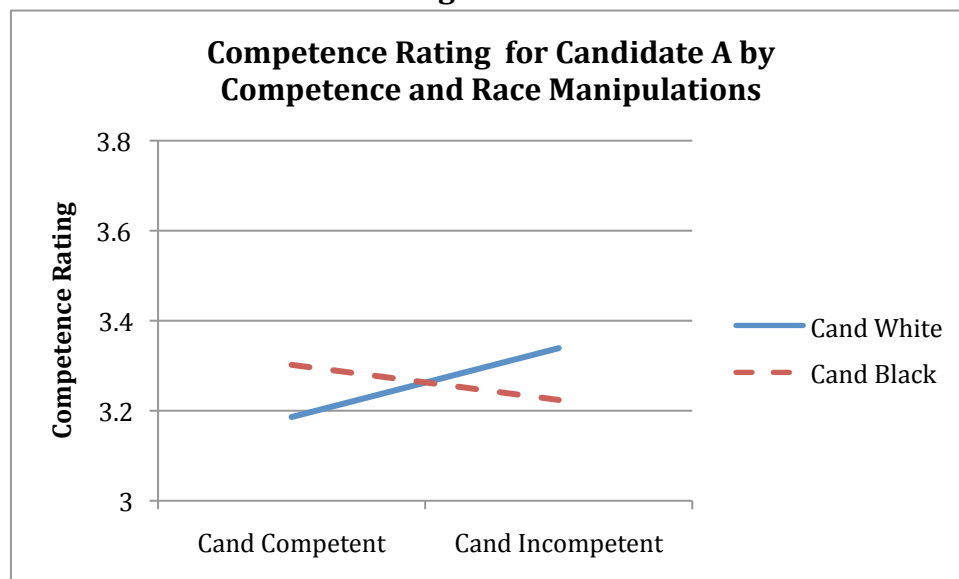
Results are from an analysis of covariance (ANCOVA) which includes candidate competence cue, ideology, and controls for the number of items accessed for the candidate. N=449. Results are significant at $p < .09$.

Interestingly, neither the competence manipulation nor the ideology manipulation seem to affect the competence rating of Candidate A, or the candidate whose race and gender also varied. In fact, the average competence rating for this candidate when he or she appeared competent is 3.244, while it is 3.282 when he or she is incompetent. Similarly, the average competence score when a subject is ideologically closest to Candidate A is 3.230, while the average rating is 3.296 when he or she is ideologically further away. Though these differences do not come close to reaching statistical significance, it is clear that the competence and ideology manipulations are not working in the same way for this candidate. It seems that

varying the race and gender of this candidate somehow changed or negated both the competence of appearance and ideology cues.

In fact, in the 4-way ANCOVA testing for main effects of my manipulations and interactions between them for Candidate A, the only effect that reaches statistical significance is the interaction between the competence manipulation and race ($p < .1$). Figure 4.2 displays this interaction. Surprisingly, the competence manipulation seems to work as expected for black candidates, but not for white candidates. When Candidate A is black and competent, s/he is rated as more competent than when s/he is black and incompetent (mean=3.302 vs. 3.224, respectively). When the candidate is white, however, competence seems to have the opposite effect. Competent-looking white candidates receive a mean rating of 3.186 while incompetent-looking white candidates have a mean rating of 3.339.

Figure 4.2.



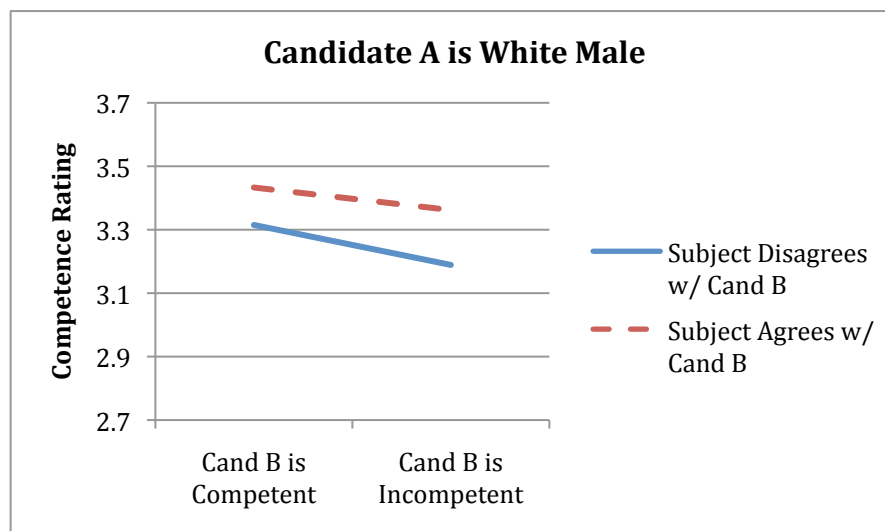
Results are from an analysis of covariance (ANCOVA), which includes candidate race, gender, competence cues, and ideology, and controls for the number of items accessed for the candidate. N=449. Results are significant at $p < .1$.

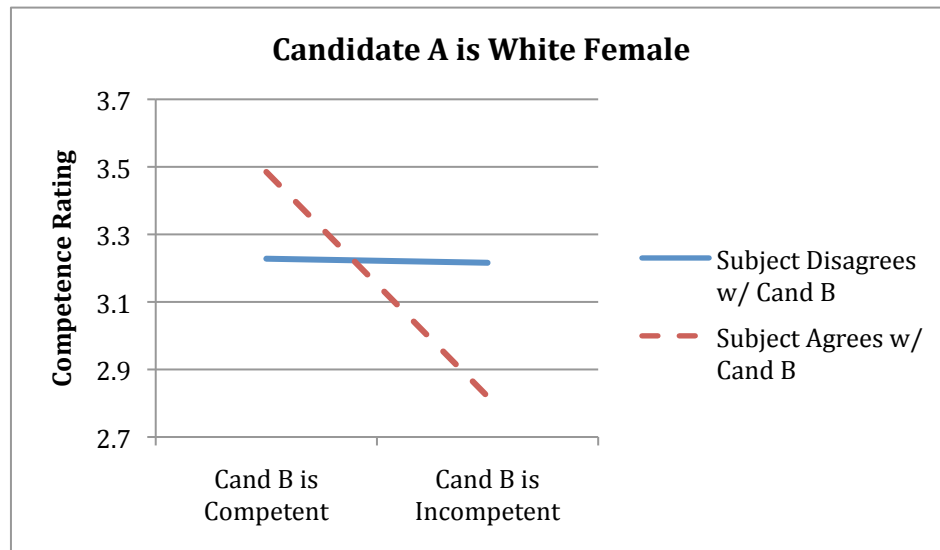
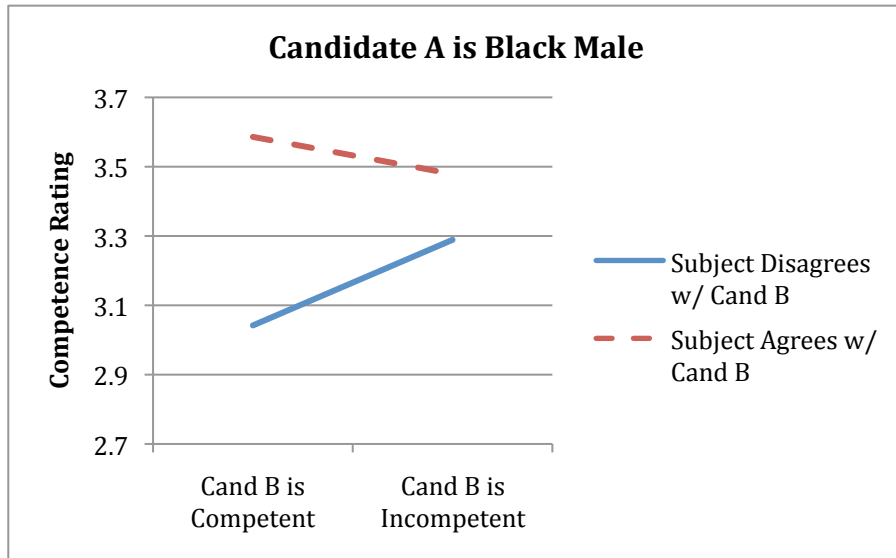
The effects of the four manipulations on Candidate A's competence rating are different and less pronounced than expected, while the effects of the two manipulations that directly affect Candidate B do have the hypothesized effects. The previous analysis of Candidate B ignores the race and gender manipulations of Candidate A, however, essentially pretending as if Candidate B were being evaluated in isolation when, in fact, he is being assessed simultaneously with Candidate A. Because of this, it is reasonable to expect that varying the race and gender of Candidate A may have an effect on ratings of Candidate B. When I consider the effects of all four manipulations on Candidate B, it appears that this is, in fact, the case. Candidate B is seen as more competent when *Candidate A* is black than when s/he is white (3.395 vs. 3.256, respectively, $p < .05$). Because this difference did not show up in evaluations of Candidate A, it is possible that self-monitoring played a role for subjects when they were asked to rate a black candidate, but not when they were asked to rate the candidate against whom he or she ran. In other words, while competence ratings of Candidate A did not differ significantly whether he or she was white or black, the white, male candidate that ran against him or her looked more competent when his *opponent* was black.

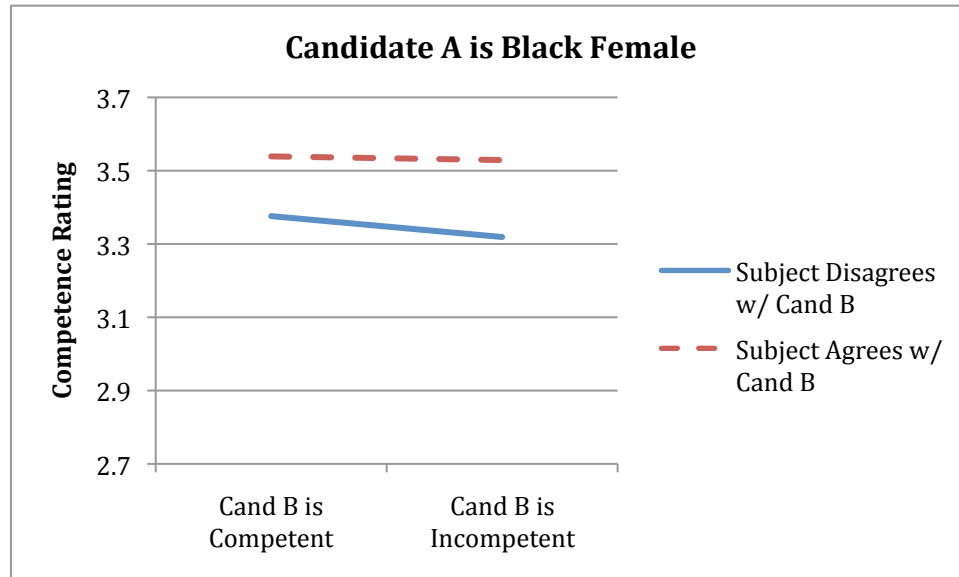
There are a number of significant interactions in this analysis as well, but because the 4-way interaction is significant ($p < .05$), I will not discuss the significant lower-order interactions. Figure 4.3 shows the results of the 4-way interaction on Candidate B's competence rating. Panel 1 shows the results when Candidate A is a white male. In this case, Candidate B is always rated higher when he is competent looking than when he is incompetent looking, and when the subject agrees with him

than when he or she disagrees with him (Candidate B is competent and ideologically close = 3.433, Candidate B is competent and ideologically far = 3.315, Candidate B is incompetent and ideologically close = 3.362, Candidate B is incompetent and ideologically far = 3.189). This is the pattern I would expect to see for all candidates if the race and gender of Candidate A did not matter, since both more competent looking candidates and ideologically closer candidates receive higher ratings here. Panel 2, however, shows Candidate B's competence rating when Candidate A is a black male. Here, Candidate B again does best when he is competent looking and the subject is ideologically closest to him (3.586), but does worst when he is competent looking and the subject is ideologically far from him (and, therefore, closest to the black, male candidate; 3.042). When Candidate B is incompetent looking, he does better when the subject's ideology is closest to his, but the difference between agreement and disagreement is smaller (3.479 vs. 3.289, respectively).

Figure 4.3. Competence Ratings for Candidate B







Results are from an analysis of covariance (ANCOVA), which includes candidate race, gender, competence cues, and ideology, and controls for the number of items accessed for the candidate. N=449. Results are significant at $p < .05$.

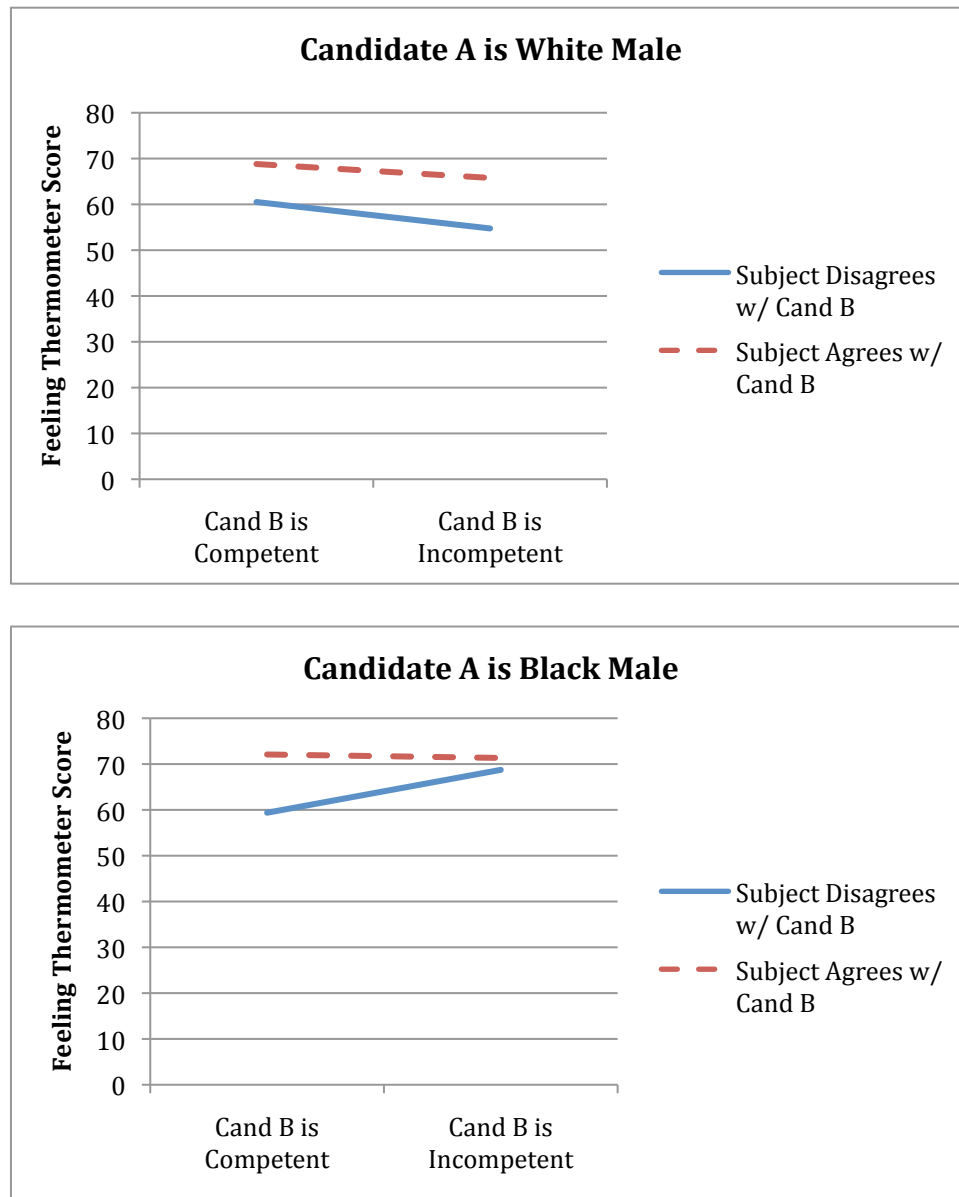
Panels 3 and 4 show the effects on Candidate B's competence rating when Candidate A is female. Panel 3 shows the results when Candidate A is a white woman. Here, Candidate B's rating is essentially the same when the subject disagrees with him, regardless of the competence manipulation (3.228 when Candidate B is competent, 3.216 when he is incompetent), but there is a huge difference in the rating for Candidate B when the subject is ideologically close to him. When Candidate B is competent looking and a subject agrees with him, ideologically, his rating is 3.485. When he is incompetent looking, though (and the white, female candidate is competent looking), his rating drops to 2.82. This suggests that the competence cue is especially important for white, female candidates—when she looks incompetent, Candidate B looks much more competent by comparison. When she looks competent, though, Candidate B's competence rating drops precipitously.

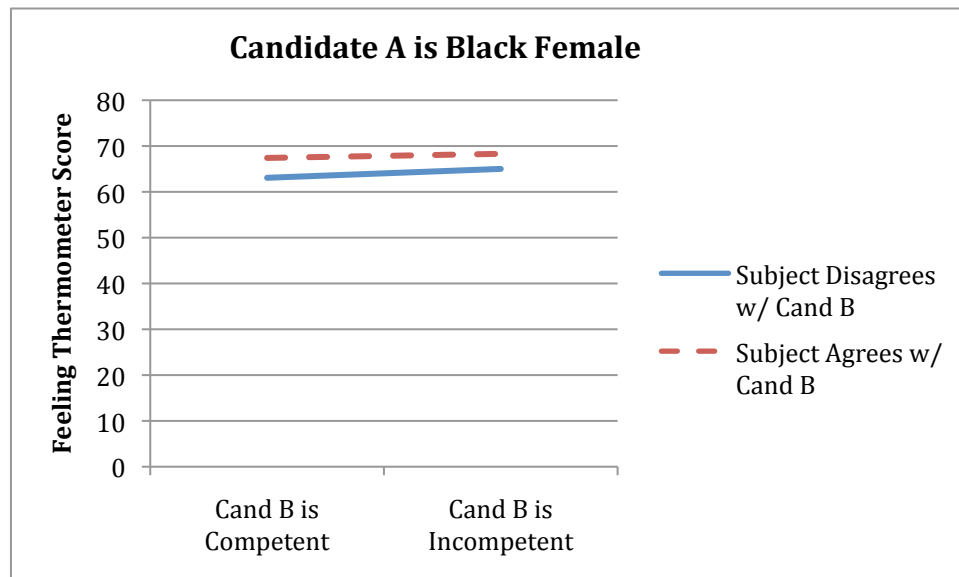
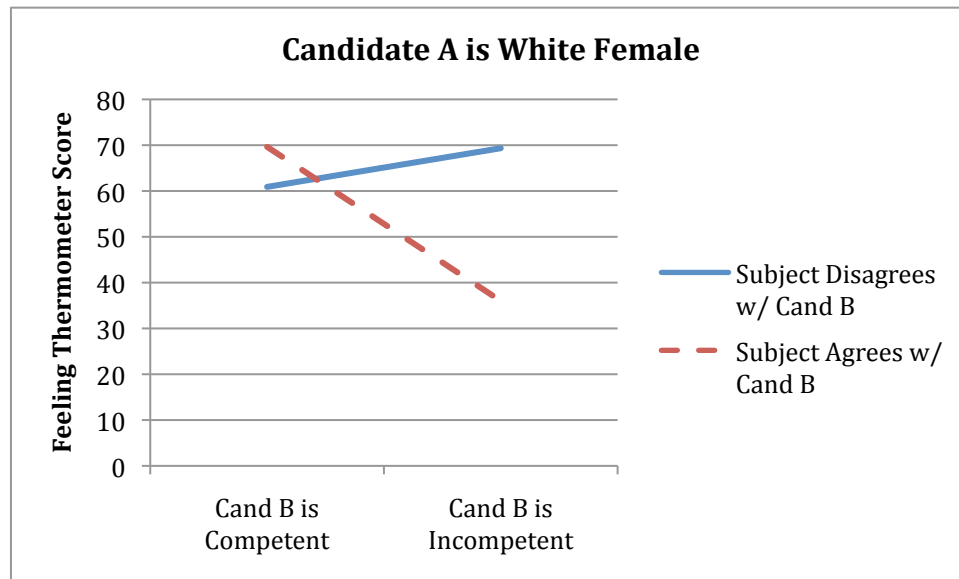
Panel 4 shows the results for the competence rating for Candidate B when Candidate A is a black woman. In this condition, it seems as if the competence cue did not matter at all. Candidate B always does better when the subject is ideologically close to him, but does not seem to do worse when he is incompetent looking (3.589 when he is ideologically close and competent looking, 3.529 when he is ideologically close and incompetent looking, vs. 3.376 when he is competent looking and ideologically close and 3.319 when he is incompetent looking and ideologically far). Interestingly, Candidate B receives the highest average ratings overall when he runs against a black woman and is ideologically consistent with the subject's views, regardless of the competence manipulation. This suggests that seeing a black woman candidate provides competence cues that negate the competence manipulation, per se. A white male candidate always seems more competent than a black female candidate, regardless of whether she looks particularly competent or incompetent.

Clearly, the effects of the four manipulations on competence ratings are complicated, but compelling, nonetheless. Appearance cues seem to influence this trait rating over and above information search and ideological preferences, particularly for the candidate who is always a white man. I turn now to feeling thermometer ratings, a broader measure of candidate evaluation, to examine whether these manipulations have an effect on general affect toward the candidates in the race. For Candidate A, the only manipulation that seems to influence feeling thermometer scores is gender. Male candidates receive higher scores than female

candidates (67.099 vs. 63.241, respectively, $p < .05$), regardless of ideological consistency, race, or competence of appearance.

Again, though, the effects of the four manipulations are much more profound when I consider ratings of Candidate B. As with the competence rating, Candidate B is rated higher when he faces a black opponent than when he faces a white opponent (66.917 vs. 60.715, respectively, $p < .05$). The 4-way interaction is statistically significant for this dependent variable, as well ($p < .001$), and the patterns generally mimic those seen in the 4-way interaction's effects on Candidate B's competence rating. Panel 1 of Figure 4.4 shows the effects of the 4-way interaction when Candidate A is a white male. As with the competence rating, Candidate B receives his highest ratings when he is competent looking and the subject agrees with him, ideologically (68.804), and 2nd-best when he is incompetent looking but ideologically close to the subject (65.778). When Candidate B is competent looking but ideologically far from the subject, his score is lower than this (60.541), but higher than when he is incompetent looking and an ideological mismatch (54.744). Again, this is a pattern that makes sense given the competence and ideology manipulations and is what I would expect to see if race and gender did not play a role.

Figure 4.4. Feeling Thermometer Rating for Candidate B



Results are from an analysis of covariance (ANCOVA), which includes candidate race, gender, competence cues, and ideology, and controls for the number of items accessed for the candidate. N=449. Results are significant at $p < .001$.

As in the analysis of competence ratings, however, race and gender clearly do have a role to play. Panel 2 shows results when Candidate A is a black man. Again, these results are similar to the results for competence ratings when Candidate A is black and male. Candidate B receives the highest rating when he is competent and ideologically close to the subject (72.092) and the lowest rating when he is

competent looking but ideologically far from the subject (59.38). When Candidate B is incompetent looking, the ideological manipulation does not seem to make a substantial difference, as the scores do not differ much when he is ideologically close to the subject than when he is ideologically far (71.34 vs. 68.783, respectively). Again, then, the ideology manipulation matters a great deal when Candidate A is incompetent looking, black and male, but not when Candidate A is competent looking.

Panel 3 shows the results for when Candidate A is a white woman. Again, the competence cue has a huge effect on Candidate B's feeling thermometer rating when the subject is ideologically close to him. When Candidate A is an incompetent looking white woman, Candidate B does very well (with a score of 69.643). When Candidate A is a competent looking white woman, though, he does far worse (36.001). When the subject is ideologically far from Candidate B, the pattern reverses. When Candidate A is competent looking and ideologically similar to a subject, the mean score is 69.643, while it is 60.897 when she is incompetent and ideologically close. As with the competence rating then, the appearance of competence seems to matter quite a bit for Candidate B when he faces a white woman as an opponent.

Panel 4 graphs the results for Candidate B's feeling thermometer rating when Candidate A is a black woman. Again mimicking results for the competence rating, the competence appearance cue does not seem to make much of a difference when Candidate A is a black female. Candidate B always receives a higher rating when the subject is ideologically close to him, and the competence cue makes little difference

(68.3 when Candidate B is ideologically close, and 67.404 when he is ideologically far). When the subject is closer to Candidate A, Candidate B's rating fall to 63.08 when he is competent and 65.012 when he is incompetent. Again, it seems as if the combination of the "female" and "black" cues make the competence of appearance manipulation irrelevant. Interestingly, while Candidate B received the highest competence ratings overall when he ran against a black woman, he receives the highest feeling thermometer ratings overall when he runs against a black *man*, particularly when he is ideologically close to the subject. While white, male candidates seem particularly competent compared to black, female candidates then, they are liked most when compared to black men.

It is also worth noting that in both the analysis of the competence rating and of feeling thermometer scores for Candidate B, the ideological agreement manipulation seems to have a stronger effect than any of the appearance manipulations in most conditions. For all conditions except for the one in which Candidate B faces a white, female opponent, Candidate B always receives higher competence and feeling thermometer scores when the subject is ideologically close to him than when the subject is closer to the other candidate. This suggests that, though appearance cues clearly play a role in candidate evaluation, ideology (and System 2 processing) may be more influential.

I turn now to an analysis of vote choice to see if these patterns still hold. Table 4.1 shows the results of three models, each predicting a vote choice for Candidate A. Model 1 includes the four manipulations only, Model 2 adds the total number of information items opened for each of the candidates, and Model 3 adds

the difference score between the competence rating for Candidate A and that for Candidate B (Candidate A – Candidate B).³⁴ Beginning with Model 1, the only manipulation that has a statistically significant effect on vote choice is ideological agreement ($b=.708$, $p<.001$).³⁵ Even though the appearance manipulations had an effect on candidate evaluations measures, then, the same does not seem to be true of vote choice. The ideological manipulation, on the other hand, certainly does, which suggests that the substantive information available about the candidates was more important than the information inferred from the candidates' pictures.

³⁴ The original versions of these models included traditional predictors of vote choice as covariates (such as subject education, income, race, gender, strength of party id, etc), but since I am predicting a primary vote choice, none of these covariates had a statistically significant effect and including them did not substantially change the results, so I have left the out of the final analysis for the sake of parsimony.

³⁵ Along with the main effects of these manipulations, I constructed models with all of the possible interaction effects between the manipulations, as well, and found no significant results. In the interest of space, I leave them out of the final model.

Table 4.1. Vote Choice for Candidate A

	Model 1	Model 2	Model 3
Constant	-.513* (.222)	-.554 (.360)	-.539 (.414)
Candidate Incompetent	.212 (.193)	.277 (.215)	.425 [†] (.242)
Candidate Black	.040 (.193)	-.012 (.214)	.092 (.241)
Candidate Female	-.072 (.193)	-.022 (.214)	-.045 (.240)
Ideological Agreement	.708*** (.193)	.684*** (.214)	.703** (.240)
Total Items Opened for Manipulated Candidate		.183*** (.024)	.142*** (.027)
Total Items Opened for Other Candidate		-.177*** (.024)	-.139*** (.027)
Competence Difference Score			1.871*** (.252)
Pseudo R-Square	.044	.265	.459

[†]p<.1, *p<.05, **p<.01, ***P>.001

Note: Values are logistic regression coefficients, n=449.

Model 2 provides further evidence that substantive System 2 type processing trumps heuristic System 1 processing in terms of vote choice. Here, the ideological agreement manipulation maintains significance (b=.684, p<.001), while both information search variables also have significant effects. The more information items a subject opens about Candidate A, the more likely s/he is to vote for him or her (b=.183, p<.001). At the same time, the more information a subject opens for Candidate B, the lower the likelihood that he or she will vote for Candidate A (b=-

.177, $p < .001$). Again, it seems as though the deliberate information search and learning about the candidates in the race ultimately determines whom subjects decide to cast their vote for, while appearance cues do not.

Finally, Model 3 adds the difference score between a subject's competence rating for Candidate A and Candidate B. Adding this variable does not change the effects of ideological agreement or information search ($b = .703$, $p < .01$ for ideological agreement, $b = .142$, $p < .001$ for items opened for Candidate A, and $b = -.139$, $p < .001$ for items opened for Candidate B). The competence difference score is also positive and significant ($b = 1.871$, $p < .001$), suggesting that evaluations of competence are indeed important in a voter's decision-making calculus. Interestingly, then, even though the experimental manipulations do not have a direct effect on vote choice, they do seem to have an indirect effect through evaluations of candidate competence. Since all of the appearance manipulations do influence competence ratings, especially for Candidate B, the influence of appearance cues should not be counted out completely in terms of vote decisions. Again, though, System 2 processing seems to be more influential.

Discussion and Conclusions

Clearly, the relationship between a candidate's appearance, candidate evaluation, and voting behavior is a complicated one. The analysis of the appearance manipulations on competence ratings shows that a candidate's appearance does seem to play a role in how he or she is evaluated, even after subjects are given access to a host of political and personal information about the candidates. For the white, male candidate, having a more competent appearance led to higher

competence ratings even after the campaign. This lends further support to previous findings that these sorts of judgments are persistent, even in the face of other information. Interestingly, a competent appearance does not seem to have the same effect when the candidate's race and gender also vary. Rather, it seems that it is the interaction between a competent appearance and race that mattered for Candidate A. For the competence rating, a competent appearance mattered for black candidates but not for the white candidates. This is an odd finding, given that a competent appearance did matter for Candidate B, who was always a white man. The only explanation I can come up with here is that it has something to do with the fact that subjects were evaluating two candidates simultaneously and this led to differences in how candidates were evaluated when both candidates were white, vs. when one was black.

Indeed, an important contribution of this paper is that it points to a need to consider the appearance of *all* of the candidates in a given race if we want to understand how things like race, gender, and automatic trait inferences are influencing candidate perceptions. While the appearance of Candidate A did not have large effects on evaluations of Candidate A in most cases, assessments of *Candidate B* did seem to change in important ways based on how Candidate A looked. To my knowledge, this is not something that has been considered before in studies of race and gender-based stereotypes (though it clearly has been in studies of trait inferences). The fact that the white male candidate looks more competent and more likable in general when he faces a black opponent, but that the black candidate him or herself was not rated lower on these measures, raises interesting

implications for our understanding of how racial stereotypes work. It may be that since social norms have changed and it has become less socially desirable to express stereotypic views of African Americans, voters may be self-monitoring their evaluations of the black candidates, but not the black candidates' opponents. If subjects do still hold stereotypic views of black candidates, they may not be willing to say so, but they may be signaling that the white candidate looks better by comparison.

The results of the 4-way interactions on both competence ratings and feeling thermometer scores suggest an even more complicated story when we consider the effects of one candidate's appearance on another's evaluations. Both the competence cue and the ideological agreement manipulation seem to work as expected when Candidate B faces a white male candidate, but have interesting and more complex effects when he faces an opponent with a different race/gender combination. It is when he faces female candidates, in particular, that the joint effects of race, gender, competence, and ideological proximity begin to vary in important ways. When Candidate B squared off against a white woman, whether she appeared to be competent or incompetent mattered a great deal. In terms of both competence ratings and feeling thermometer scores, Candidate B did very well when his opponent was incompetent looking. When he faced a competent looking white woman, though, he did significantly worse. The competence of appearance cue clearly matters a great deal for white women.

Black women, on the other hand, do not seem to be affected by the competence of appearance manipulation in the same way. In fact, the competence

cue does not seem to matter at all when Candidate B faces a black woman as his opponent. Further, his competence scores are the highest when he faces a black woman than when he faces any other type of opponent, regardless of how competent she does or does not look. Again, this suggests that simply seeing a black woman causes her opponent to look particularly competent by comparison. The different effects of the four manipulations on candidates with different combinations of race and gender, but especially the differences for white women vs. black women, is an important indication that examining appearance cues in isolation is likely only telling part of the story. Race, gender, and competence cues clearly make a difference in terms of candidate evaluation and vote choice, but it is only by looking at how these cues interact that we can begin to acquire a more complete understanding of their significance in the political realm.

Another contribution of this paper is to demonstrate that these sorts of appearance cues matter at all when more deliberate information search also takes place. These differences in trait ratings appear even when controlling for the amount of information subjects access about each candidate. Recall that subjects could learn up to 25 unique pieces of information about each candidate in the race, each teaching the subject something about the candidate's background, character, or policy stances. That appearance cues affected what subjects thought of these candidates over and above what they learned in the campaign may have important implications for real-world politics. This is particularly true given that subjects' competence ratings predicted their ultimate vote choice.

At the same time, however, the ideological agreement manipulation generally seems to play a much greater role in determining candidate evaluations and vote choice. In terms of competence ratings and feeling thermometer ratings, Candidate B almost always did better when a subject was closest to him, ideologically, regardless of the various appearance manipulations. Similarly, ideological agreement is the only manipulation that had a significant direct effect on vote choice. It seems that there is a role to play for appearance cues and System 1 processing in a high information campaign environment, but it also seems as though that role is tempered by the availability of substantive information. Clearly, the relationship between appearance cues and political learning is complex, as is the relationship between race, gender, and competence inferences, but this paper takes an important step in attempting to further our understanding of the complicated nature of voter decision-making.

Chapter 5:
The Book or the Cover?
Physical Appearance vs. Information in Political Campaigns

There is much that contributes to a voter's decision-making process. Dual system theories of cognition (e.g. Chaiken and Trope 1999) posit that people have two separate methods of processing information—one which relies on the use of heuristics and other automatic associations and inferences (System 1), and another that employs deliberate thought and learning (System 2). In the political realm, we have traditionally assumed that voters employ System 2 processing, only—that they deliberately and consciously search for relevant information about candidates, then make an informed vote decision based on that information. It is becoming clearer, however, that System 1 processing has an important role to play in voter decision-making, and that the cues and heuristics utilized by voters to make quick decisions are sometimes based on seemingly arbitrary factors. For example, a candidate's physical appearance has been shown to influence how voters evaluate candidates, and even whether or not they will vote for those candidates. These 'appearance heuristics are ubiquitous and easily employed (Lau and Redlawsk 2001), but political scientists are only just beginning to understand their influence on voter behavior.

One emerging line of study looks at the influence of automatic trait inferences on candidate evaluations and vote choice. Social psychologists have found that individuals automatically (i.e. pre-consciously) make assumptions about others' personality traits based on nothing more than a brief exposure to their faces (e.g. Hall et al 2009; Hassin and Trope 2000). This observation has been applied to

political candidate evaluation in a series of studies by Todorov and colleagues (Todorov, Mandisotza, Goren and Hall 2005; Hall et al 2009; Ballew and Todorov 2007; Olivola and Todorov 2010a, Mattes, Spezio, Kim, Todorov, Adolphs, Alvarez 2010, Sussman, Petkova, and Todorov, 2013), whose findings indicate that the results of actual elections can, partially, be explained by spontaneous judgments about how competent the candidates look.

At the same time, a well-established literature in political science has examined the role of race and gender-based stereotypes in candidate evaluation and voting behavior. Specifically, much evidence suggests that women and African American candidates are perceived and evaluated differently than their male and white counterparts (e.g. Huddy and Terkildsen 1993; Kahn 1996; Sigelman, Sigelman, Walkosz and Nitz 1995; Williams 1990). Like automatic trait inferences, these stereotypes are fundamentally dependent on the appearance of a candidate—both race and gender are visual markers that people generally cannot help but notice (Lau and Redlawsk 2001). Further, many race and gender-based stereotypes relate to a candidate's personality traits, including competence. In particular, evidence suggests that both women and African American candidates are considered less competent than their male and white counterparts (Kahn 1996, Sigelman, et al 1995).

Taken together, these literatures provide a lot of evidence that perceptions of a candidate's physical appearance are an important aspect of candidate appraisal, and that perceptions of competence as derived from that appearance may be particularly important. Yet, while we know quite a bit about how appearance based

cues function in isolation and in very limited information environments (generally in very simple experiments), it is still unclear how they influence candidate appraisals in a more complicated, 'real-world' scenario. Every candidate has both a race and a gender, for example, and his or her facial composition may convey different information on top of these cues. Further, all previous studies of automatic trait inferences control for the race and gender of the candidates in the studies. Previous literature suggests that race and gender also have clear implications for how competent a candidate might seem, however, so it is important to begin to try to understand what happens when voters encounter multiple appearance cues at the same time. Indeed, when considered in isolation, the information provided by each individual aspect of someone's appearance may be quite different than the 'sum of its parts.'

Further, most of what we know about how appearance heuristics are used comes from experimental studies that ask subjects to evaluate candidates after only one exposure to how they look and very limited information about them. These studies are essentially asking subjects to make a judgment after a first impression of the candidates, only. While there is certainly value in understanding how a candidate's appearance influences evaluations of him or her apart from any other information, this scenario does not realistically model most real-world campaigns and elections. In high-level elections, in particular, there is often a wide array of information available for voters to learn and incorporate into their political judgments, apart from what a candidate looks like. Indeed, for very high-level elections like the presidency, there is far more information available than any one

voter could possibly keep track of. In order to more fully understand how appearance heuristics function in the real world, then (at least in high-information environments), it is necessary to account for the other kinds of information that might be available to voters, aside from a candidate's physical appearance.

This study seeks to add to our understanding of how a candidate's appearance influences candidate evaluation and vote choice both by incorporating multiple facets of physical appearance—race, gender, and automatic trait inferences—into an experimental design, as well as by exposing subjects to those appearance cues within a high-information context. Specifically, I use the Dynamic Process Tracing Environment (DPTE),³⁶ which is a web-based computer program that allows researchers to mimic the high volume and constant flow of information in an actual campaign environment, to simulate a presidential campaign and election. I manipulate the race and gender of the candidates in the race, as well as how competent a candidate looks, and examine how these appearance cues influence subjects' evaluations of the candidates and their ultimate vote choice after experiencing the campaign and gathering relevant information about them.

In particular, this paper focuses on a manipulation in the general election portion of this study in which subjects are shown an incompetent looking candidate and told that he or she is running in their party. They are then exposed to information that either confirms or contradicts this incompetence cue (i.e. the information available about the in-party candidate in the campaign either portrays him or her as being a competent candidate and politician or not). At the same time,

³⁶ Developed by Richard Lau and David Redlawsk with assistance from the National Science Foundation.

the race and gender of the in-party candidate is also varied in order to account for competence-based stereotypes based on these group memberships. If appearance-based competence cues influence political behavior even in this context, then that would give us a good indication that a candidate's appearance matters a great deal in politics, regardless of what other information voters have about them (and, in essence, that System 1 processing is winning out). If the nature of the other information in the campaign tempers this effect, however, that will provide evidence that the effects of physical appearance are not as straightforward as we once may have thought, particularly when voters have the option of employing deliberate, System 2 processing, as well.

Literature Review

A number of social psychological studies have found that, in all forms of human interaction, individuals frequently make automatic, pre-conscious trait inferences based on others' physical appearance, and especially their faces (e.g. Hall et al 2009; Hassin and Trope 2000; Olivola and Todorov 2010). Judgments made based on faces tend to be reliable, in that people infer the same traits from the same faces (Hassin and Trope 2000), but most evidence suggests that they are not accurate, in that these inferred traits do not necessarily correlate with the actual traits possessed by individuals (Cohen 1973, Alley 1988; but see Berry and Zebrowitz 1990). These inferences are involuntary and made very rapidly—possibly in as little as 33 milliseconds (Todorov and Uleman 2003; Olson and Marshuetz 2005; Todorov 2008)—and happen regardless of a person's race, gender, age, or any other social group membership.

It is still unclear exactly what features a face must possess in order to appear competent, trustworthy, charismatic, etc., but some evidence suggests that such inferences seem to depend on aspects of an individual's face that signal maturity and attractiveness, such as the distance between someone's eyes, how round his or her face is, and angularity of his or her jaw (Oliviola and Todorov 2010). Other findings suggest that trait inferences depend on the extent to which someone's facial structure resembles people in various emotional states—faces that look happy, structurally, tend to be seen as more trustworthy, for example (Montepare and Dobish 2003).

Whatever the triggers, because these sorts of trait inferences are occurring frequently and automatically, it is perhaps not surprising that they affect individuals' decision-making in a number of domains, including selection of romantic partners (Oliviola et al 2009), judicial decisions (Ziebowitz and McDonald 1991), and in the business world (Naylor 2007). Politics seems to be no exception. In a series of studies, Todorov and colleagues (Todorov, Mandisotza, Goren and Hall 2005; Hall et al 2009; Ballew and Todorov 2007; Oliviola and Todorov 2010a) found that subjects' spontaneous inferences about a candidate's traits—competence, in particular—correctly predicted the outcomes of actual Congressional and Gubernatorial elections between 60% and 73% of the time. Inferences were made after seeing still images of the candidates' faces, only, and those rated as more competent by the subjects were more likely to win (or have won) in actual elections. While multiple trait ratings were collected, perceived competence was the only trait

found to have this effect. Traits like trustworthiness and charisma did not predict vote choice in the same way.³⁷

The evidence from these spontaneous inference studies suggests that perceptions of competence are particularly important in predicting candidate evaluation and vote choice and, though competence may be a reasonable heuristic on which to base candidate evaluation, inferred competence from rapid exposure to a candidate's face may not be the most reliable indicator. Further, previous studies of spontaneous trait inferences and political candidates are limited to evaluations made after first impressions. It is clear that there is a relationship between automatic trait inferences and ultimate vote choice, but what is the role of political learning in this process? Do these automatic judgments still matter if and when other information available in the campaign contradicts these initial judgments? Further, what happens when other visual cues become salient, such as a candidate's race or gender?

Scholars of political behavior have found ample evidence suggesting that women and African American candidates are subject to stereotypes based on their gender and race, respectively, including those related to personality traits (Huddy and Terkildsen 1993, Kahn 1996, Carroll and Dittmar 2010, Sigelman et al 1995, Williams 1990), issue specializations (Cook, Thomas and Wilcox 1994; Dolan 2004; Rosenwasser and Seale 1988, McDermott 1998; Sigelman et al. 1995; Williams 1990), and ideology (Alexander and Andersen 1993; Koch 2000, Schneider and Bos 2009). Importantly, both women and African American candidates are perceived as

³⁷ Though Mattes, Spezio, Kim, Todorov, Adolphs and Alvarez (2010) also find that more threatening faces are less likely to win election.

less competent than their male and white counterparts (Huddy and Terkildsen 1993, Kahn 1996, Sigelman et al 1995). Further, Ditonto, Hamilton, and Redlawsk (forthcoming) have found that subjects in a DPTE study search for more information related to competence for female candidates than for male candidates.

These stereotypes based on race and gender are cognitively cheap—it does not take a lot of mental energy to look at someone and notice that he or she is a man or a woman, black or white. Further, because long-term memory is usually conceptualized as a series of interconnected nodes in which associated concepts are activated together, preconceptions about what traits women or African Americans possess tend to automatically accompany those observations (Anderson 1983). Also, even people that know very little about politics are used to making person judgments in everyday life. For this reason, these sorts of appearance heuristics are particularly salient for most people, regardless of their level of political sophistication (Rahn, et al 1990, Lau and Redlawsk 2001).

Method

While much has been learned from these studies of automatic trait inferences and stereotypes, they have all been limited to evaluations made at one point in time, based on first impressions, only, and almost all of them look at only one aspect of appearance at a time. It is clear that candidate appearance has a role to play in political decision-making, but it is not clear how multiple cues function when studied in tandem, nor is it understood how and whether these appearance-based cues matter when voters take the time to learn the politically relevant information about candidates that is available during a political campaign. In order to explore

these questions, I conducted a computer-based experiment using dynamic process tracing (Lau and Redlawsk 2006), which simulates the rich and constantly changing environment in a political campaign and allows researchers to track the amount and content of information that subjects choose to access about each candidate.

The experiment was conducted in the Spring and Summer of 2012³⁸ and was completed by 449 total subjects. 106 of those subjects were recruited from the Central New Jersey area and took the experiment in the lab at the Center for the Experimental Study of Politics and Psychology at Rutgers University. The remaining subjects were recruited through Amazon Mechanical Turk and took the study online using their own computers.³⁹ The sample is 58% female, 76% white, 9% African American, 9% Asian and 5% Latino. The median age is 32, and 55% had at least a college degree. 16% of the sample identified as Republican, 48% as Democrat, and 31% as independent.

The experiment lasted approximately one hour. Subjects first saw a series of instruction screens, then were asked to complete a pre-election questionnaire, which collected information on subjects' issue positions, ideology, party identification, demographics, political participation, political knowledge, ratings of interest groups, and racism and sexism scales. They then participated in a 2-minute practice campaign in order to gain some experience using the software, after which they were asked to choose whether they wanted to participate in the Republican

³⁸ With support from the National Science Foundation, grant # 1123231

³⁹ Very few differences were found between the two sub-samples or in their performance in the study. See Kleinberg, Ditonto, Andersen, and Lau (2013) for more information on the comparison of these sub-samples.

primary or the Democratic primary,⁴⁰ and assigned to the appropriate 11-minute primary campaign. Two candidates ran in each of the party's primaries and, though subjects could only vote in one primary election, they saw information about the candidates in both races. Subjects were then asked to vote in the primary election for their own party and to answer a series of questions about the candidates they saw in the campaign. They then moved on to the general election campaign, which lasted approximately 10 minutes and featured one candidate from each political party. After the general campaign, voters were asked to cast a vote for one of the two candidates and then to answer a series of questions about each of them.

During a DPTE campaign, individual pieces of information scroll down the subject's computer screen, each remaining available for a period of time (in this experiment, 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).⁴¹ 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, creating an opportunity

⁴⁰ 133 subjects chose the Republican primary, 316 chose the Democratic Primary

⁴¹ See the appendix for images of a DPTE campaign and an information box.

cost for subjects. As they learn one thing, they miss out on the chance to learn others, so they must choose which information is most important for them to learn.

Subjects could access information about the candidates' stances on a number of policy issues, their ideology, family, education, and prior experience in work and politics. Each piece of information appeared twice during the campaign and the software randomly decided the order in which the boxes were seen by each subject. In the primary, subjects had the opportunity to access 25 unique pieces of information about each of the two candidates in their primary, as well as 25 pieces of information about the two candidates in the other party's primary. There were also 12 group endorsements, each of which supported one of the four candidates. In the general election, there were 35 unique items available about each candidate (25 of which repeated from the primary, but 10 of which were new). Again, each piece of information was available twice. With 364 pieces of information available, in total, during the experiment, there is far more information available to learn than any one subject could. By overwhelming subjects with so much information, DPTE mimics the abundance of information available during a real-world campaign and forces subjects to choose what is most important to them.

Because this paper focuses primarily on manipulations presented in the general election campaign, I will be brief in my description of the primary. Subjects experienced a 2x2x2 experimental manipulation, in which the picture of one of the candidates in their party's primary (Candidate A) varied by race, gender, and whether the candidate had a competent or incompetent appearance. Whether a picture appeared to be competent or incompetent was based on pre-tests of pictures

conducted by 148 undergraduates. Pictures were taken from state legislatures' websites in multiple states, and pre-test subjects were asked to rate a series of 64 pictures on a series of traits including competence. There were 8 pictures in each race/gender combination, so there were 8 white men, 8 white women, 8 black men, and 8 black women. Subjects rated each of the 8 pictures in each category on a 1 through 4 scale (Banducci et al 2008) on each trait, and the pictures with the highest and lowest competence scores were selected for use in the experiment. Each picture and competence score is available in the appendix, but the average competence score for the competent-looking candidates was 3.21, while the average competence score for the incompetent-looking candidate was 2.44.

Each party's primary included both a moderate candidate and either a liberal or conservative candidate, depending on the party (i.e. subjects in the Republican primary saw a moderate and a conservative candidate, while those in the Democratic primary saw both a moderate and a liberal candidate). Which candidate received each ideological position was randomly assigned so that Candidate A was moderate half of the time and Candidate B was moderate the other half of the time. This allowed me to control for subjects' ideological preferences. All of the information about the candidates was non-evaluative in tone.

Candidate A, then, could be black or white, male or female, and either competent-looking or incompetent-looking. Candidate B was always a white man and either looked competent or incompetent depending on whether Candidate A received a competent or incompetent picture. If Candidate A was competent-looking (regardless of the race or gender manipulation), Candidate B was always an

incompetent-looking white man. If Candidate A was incompetent-looking (again, regardless of race or gender), Candidate B was always a competent-looking white man.

Regardless of whom a subject voted for in the primary, the incompetent-looking candidate from his or her party always advanced to the general election. This means that the subject's in-party candidate was always incompetent-looking, but could have been either a black man, a black woman, a white man, or a white woman. The out-party candidate was always a competent-looking, ideologically moderate white man from the out-party's primary.⁴² The in-party candidate was always incompetent-looking in order to pit this appearance cue against the overwhelmingly influential party heuristic. I wanted to ensure that subjects would be forced to grapple with the incompetence cue in the context of a candidate for whom they would otherwise most likely vote. Also, the ideology of the candidate in each party was randomly assigned. A subject's in-party candidate could either be moderate or more extreme (liberal for Democrats, conservative for Republicans).⁴³ Race and gender are manipulated in order to ascertain whether an incompetent appearance functions differently in the context of a general election for men vs. women, and blacks vs. whites.

Along with the race and gender manipulations, the general election had one further manipulation in which the content of the information available about a

⁴² The same picture was always used for the out-party candidate, regardless of party.

⁴³ I tried incorporating the random ideology manipulation as a predictor in the analyses that follow, but it never has a statistically significant effect, so I leave it out of the final models. Thus, ideological differences between the candidates did not have an effect over and above party identification.

subject's in-party candidate either confirmed the incompetence cue available in the picture by portraying the candidate as politically incompetent, or contradicted it by portraying him or her as politically capable. Specifically, there were 6 information items about the in-party candidate that varied with this manipulation—a summary of the in-party candidate's debate performance, comments about the candidate from a newspaper editorial, a summary of the candidate's job performance in previous office, a description of the candidate by a political opponent, a summary of the candidate's past political experience, and a description of the candidate by a former staff member. In the "competent information" condition, these items all portrayed the candidate as very experienced in politics and someone others viewed as a competent politician. In the "incompetent information" condition, the candidate is portrayed more negatively, as inexperienced and having made questionable decisions while in previous office. The debate performance summary was a "forced" information item that appeared and opened on the screen at the same point during the campaign, and all subjects were forced to close it before moving on. This ensured that all subjects were exposed to the manipulation.

Analysis and Hypotheses

I am interested in how these manipulations influence subjects' ultimate evaluations of the candidates in the race, as well as whom they decide to cast their vote for. My dependent variables of interest are feeling thermometer scores for the subject's in-party candidate, as well as a subject's ultimate vote choice.⁴⁴ The feeling

⁴⁴ I planned also to include subjects' ratings of candidate competence after the general election as a dependent variable but, due to a programming error, data for these questions were not collected.

thermometer score is measured on the traditional 0-100 point scale, while vote choice is measured using a dichotomous variable for which a score of 1 indicates a vote for the in-party candidate, while a score of 0 indicates a vote for the out-party candidate (subjects were forced to make a choice between the two).

I begin by conducting a within-subjects repeated measures analysis of covariance for the feeling thermometer score, in which the three between-subjects general election manipulations are included as factors (race, gender, and the competent/incompetent information manipulation), and the repeated measure is the thermometer score for both the in-party and out-party candidate. I also control for the total number of information items subjects opened in the general election, which is the covariate in these analyses. I then conduct a series of OLS regressions for the difference score between the two candidates' feeling thermometer scores (such that the out-party candidate's rating is subtracted from the in-party candidate's rating), and logistic regressions for the vote choice variable. Three regression models are specified for each dependent variable, each of which adds new predictors of interest. Model 1 includes the three manipulations (race, gender, and competence of information) along with a number of traditional vote choice and candidate evaluation control variables including the subject's race, ethnicity, gender, age, income, political sophistication, placement on the lib-con scale, and whether they registered for the Republican primary. I also include a measure of whether the subject voted for his or her general election candidate in the primary, with the expectation that he or she should be more likely to vote for the incompetent-looking in-party candidate if s/he did so in the primary. Finally, I include the subject's

competence rating for his or her in-party candidate after the *primary* election, expecting that subjects will be more likely to ignore the incompetent appearance cue and vote for their in-party candidate and rate them highly if they found them to be competent after the primary election.

Model 2 adds to Model 1 four interaction terms between the three between-subjects manipulations (candidate race X candidate gender, candidate race X incompetent information, candidate gender X incompetent information, and candidate race X candidate gender X incompetent information), in order to ascertain whether unique combinations of these factors influence candidate evaluation and vote choice. Finally, Model 3 adds information search variables, in order to determine whether the amount of information subjects accessed about the candidate influenced their appraisals of him or, and/or their willingness to vote for him/her. Specifically, I look at the number of competence-related items subjects accessed about the in-party candidate (i.e. the 6 items listed above that changed based upon the condition the subjects were in).⁴⁵ I also include an interaction between the total number of competence items accessed and whether the subject was in the competent information condition.⁴⁶

⁴⁵ I also ran models in which the search for competence items was replaced by total overall search for the in-party candidate. These results were very similar to the models including competence search, so they are not included in the paper.

⁴⁶ I also constructed models that included a number of other interaction terms, including the interaction between whether the subject voted for their in-party candidate in the primary election and the manipulations of interest with the expectation that the manipulations would matter more for subjects who did not vote for the in-party candidate in the primary election. These interactions were not significant, however, so were dropped from the models.

I expect to find that candidates who are female, black, and those who are in the incompetent information condition will receive lower thermometer ratings and will be less likely to receive votes than candidates who are male, white, and in the competent information condition. Recall that all in-party candidates are incompetent looking, so I expect that being female, black, and having incompetent information associated with that candidate should reinforce that incompetence cue. At the same time, being white, male, and seeming competent in the available information should contradict the incompetence cue, and lead to a higher thermometer score and a greater likelihood of winning subjects' votes.

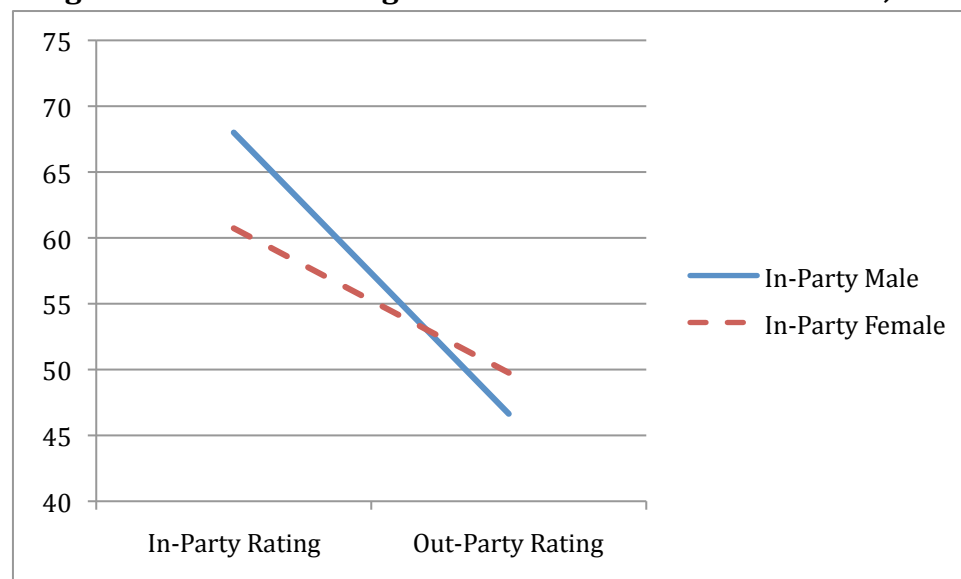
Further, I expect that interactions between the three manipulations should reveal subtler facets of the relationships between these cues. In particular, a candidate who is black and/or female should do better in terms of candidate evaluation and vote choice if he or she is also in the competent information condition, and worse when he or she is in the incompetent information condition.

Finally, I expect that the amount of competence-related information accessed by subjects will also play a role in determining thermometer ratings and vote choice, but that this should interact with whether a subject was in the competent or incompetent information condition. For subjects in the competent information condition, searching for more competence-related items should lead to higher feeling thermometer scores and a greater willingness to vote for their in-party candidate. For those in the incompetent information condition, the opposite should be true.

Results

I begin with the repeated measures ANCOVA results for subjects' feeling thermometer scores for their in-party candidate. First, subjects tended to rate their in-party candidate higher than the out-party candidate, all else equal (in-party candidates received an average rating of 64.4, while out-party candidates received an average score of 48.2, $p < .001$), even though their in-party candidate was always incompetent-looking and the out-party candidate is always competent, white, and a man. This suggests that party ID trumps this particular appearance cue, and also suggests a high level of experimental realism in this study, as I would expect the same results from a real election. Taking the three other manipulations into account, however, begins to tell a more complicated story.

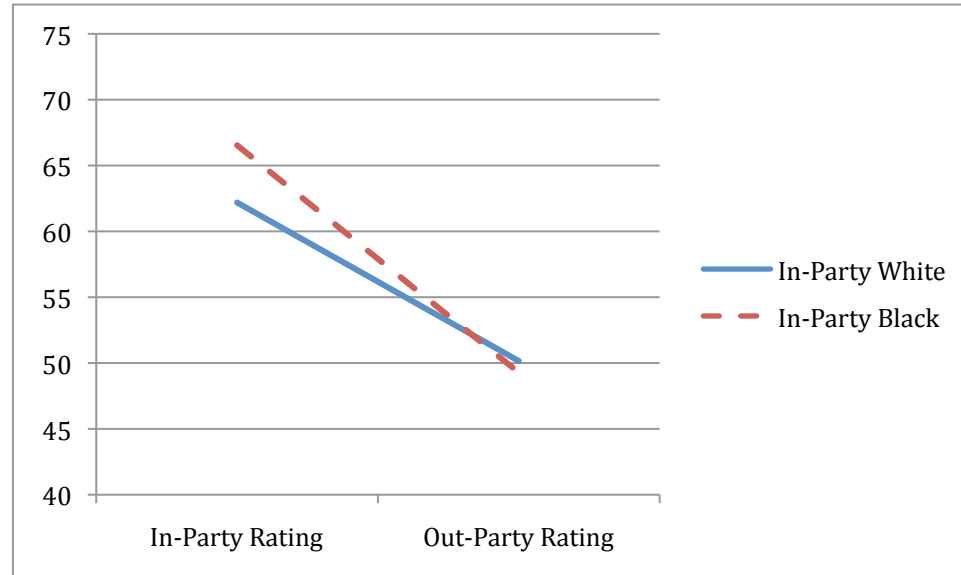
Figure 5.1.
Feeling Thermometer Ratings for General Election Candidates, Gender



Results are from a repeated-measures ANCOVA, which includes candidate race, gender, and the competence of information condition, and controls for the number of items accessed for the candidate. N=449.

Figure 5.1 shows the difference in feeling thermometer scores between the in-party and out-party candidates by the in-party candidate's gender. When a subject's in-party candidate is male, he receives an average rating of 68, while the out-party candidate who faces him receives an average score of 46.64. This is a difference of 21.36 points. When a subject's in-party candidate is female, however, that difference is significantly smaller (60.73 for the in-party candidate, vs. 49.76 for the out-party candidate, which is a difference of 10.97 points). This difference by gender is significant at $p < .01$ and fairly substantial. It appears that, while the out-party candidate's score does not change much, the in-party candidate is liked significantly less when she is a woman.

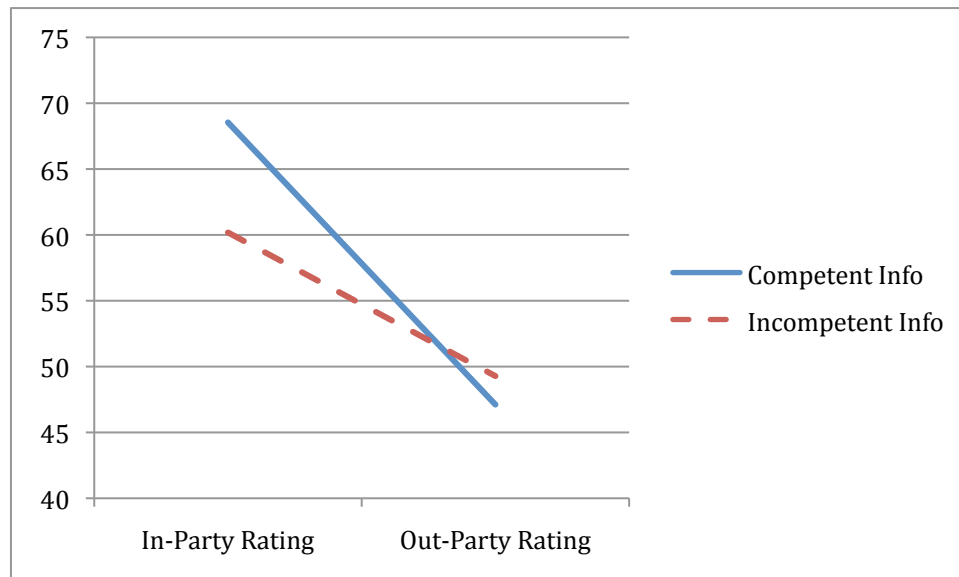
Figure 5.2.
Feeling Thermometer Ratings for General Election Candidates, Race



Results are from a repeated-measures ANCOVA, which includes candidate race, gender, and the competence of information condition, and controls for the number of items accessed for the candidate. N=449.

Figure 5.2 shows the difference in thermometer scores by the in-party candidate's race. Interestingly, subjects appear to rate their in-party candidate somewhat higher when s/he is black than when s/he is white (66.54 vs. 62.19, respectively). The scores for the out-party candidate are virtually identical, however (49.28 when the in-party candidate is black vs. 50.16 when the in-party candidate is white). Again, this difference is statistically significant ($p < .05$), though the relationship is not in the expected direction. It appears that subjects like their incompetent looking in-party candidate even more when s/he is also black, than when s/he is white. While I expected stereotypes of African American candidates as less competent to exacerbate the incompetent nature of the picture, that does not seem to be happening here.

Figure 5.3.
Feeling Thermometer Ratings for General Election Candidates, Information Condition



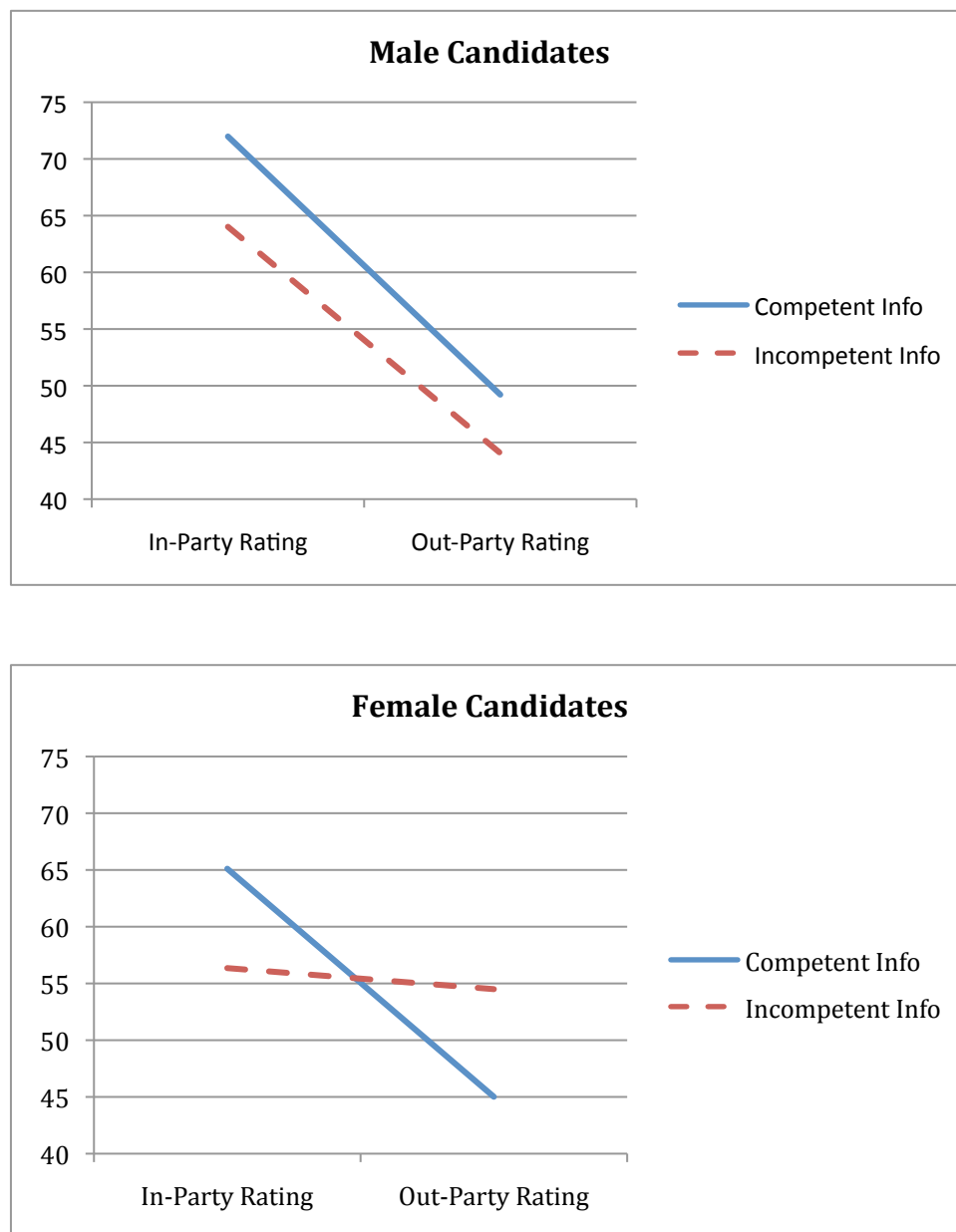
Results are from a repeated-measures ANCOVA, which includes candidate race, gender, and the competence of information condition, and controls for the number of items accessed for the candidate. N=449.

Figure 5.3 charts the difference in feeling thermometer scores by whether subjects were in the competent information condition or the incompetent information condition. Here again, there is a significant difference caused by this manipulation ($p < .01$) and, as with candidate gender, it is in the expected direction. For subjects in the competent information condition, in-party candidates receive an average score of 68.54, while the out-party candidate receives a mean rating of 47.11 (a difference of 21.43 points). For subjects in the incompetent information condition, however, the in-party candidate receives an average score of 60.19, while the out-party candidate receives an average rating of 49.28 (a difference of 10.91 points). As expected, the nature of the information available about the candidates in the race seems to have an effect on ultimate candidate appraisals. Incompetent-looking candidates who otherwise objectively seem competent appear to be at less of a disadvantage than those who are also portrayed as being incompetent in their performance.

I also find a significant effect for the interaction between candidate gender and the competence of information manipulation. ($p < .05$). Figure 5.4 graphs this interaction. Panel 1 shows the effects of the nature of the information in the campaign on feeling thermometer scores for men. Being in the incompetent information condition seems to depress scores for both the in-party and out-party candidates. When the in-party candidate is competent, his/her score is 71.98, while the out-party candidate receives a score of 49.22. When the in-party candidate is portrayed as incompetent, s/he receives a score of 64.02, and the out-party candidate is rated at 44.06. The difference between the differences in the in-party

and out-party scores in the two conditions is very small, however (22.77 in the competent condition vs. 19.96 for the incompetent condition). While the difference is slightly larger in the competent condition, the slopes of the lines are clearly very similar.

Figure 5.4.
Feeling Thermometer Ratings for General Election Candidates, Gender X
Information Condition



Panel 2, on the other hand, shows a stark difference in the effects of the information manipulation on feeling thermometer scores when the in-party candidate is a woman. When a subject's in-party candidate is female and portrayed as competent, she receives an average score of 65.11, while the out-party candidate who competes against her receives a mean rating of 45.01 (a difference of 20.1 points). When the female in-party candidate is also portrayed as incompetent, however, the difference in the scores for the two candidates becomes extremely small (56.35 for the in-party candidate vs. 54.5 for the out-party candidate, a difference of less than 2 points on a hundred point scale). Clearly, being portrayed as incompetent matters a great deal more for female in-party candidates than it does for male in-party candidates.

In order to more fully explore the feeling thermometer ratings of the two candidates, I turn now to a series of OLS regression models for the difference score between subjects' in-party and out-party candidates (in-party – out-party).⁴⁷ This allows me to expand upon the repeated measures analysis by adding a number of subject-level covariates to the equation that may have an effect on feeling thermometer scores. Table 5.1 shows the results of these analyses. Model 1 includes the control variables and the main effects of the three manipulations, only. It is interesting to note that registering for the Republican primary has a significant negative effect on in-party thermometer ratings ($b = -10.403$, $p < .05$), while both having voted for the in-party candidate in the primary election and rating the in-party candidate as more competent after the primary are positively correlated with

⁴⁷ I completed this analysis with the raw feeling thermometer score for the in-party candidate as the dependent variable and received the exact same pattern of results.

voting for the in-party candidate ($b=7.350$, $p<.01$ and $b=7.264$, $p<.001$, respectively). While it makes sense that voting for one's candidate in the primary and rating them as more competent should predict higher feeling thermometer scores, the finding related to Republicans is unexpected and difficult to explain.

Mimicking the results of the repeated measures analysis, when the in-party candidate is female, the difference between the two candidates' ratings is significantly smaller, indicating that she is liked less than when subjects see a male in-party candidate instead ($b=-9.671$, $p<.01$). The coefficient for the candidate being black is positive, as was seen in the previous analysis, but the coefficient is not statistically significant when other covariates are taken into account ($b=4.697$, n.s.). Finally, the main effect of the competent information condition is positive and significant ($b=7.013$, $p<.01$), again confirming the results of the previous analysis, even in when relevant covariates are included in the model.

Table 5.1.
OLS Regression Results for Feeling Thermometer Difference Score

	Model 1	Model 2	Model 3
Constant	-2.828 (9.936)	-2.436 (9.948)	2.988 (10.337)
Subject Male	-4.006 (2.893)	-4.464 (2.868)	-3.624 (2.868)
Subject Non-white	-2.947 (3.462)	-3.162 (3.431)	-3.193 (3.434)
Subject Hispanic	12.301 [†] (6.425)	13.979* (6.384)	13.020* (6.356)
Age	-.038 (.112)	-.034 (.111)	-.028 (.115)
Income	-.794 (.641)	-.700 (.637)	-.586 (.638)
Political Sophistication	1.850* (.808)	1.835* (.800)	1.772* (.801)
Lib-Con	-1.185 (1.239)	-1.011 (1.223)	-1.086 (1.246)
Republican Primary	-10.403* (4.253)	-11.447** (4.231)	-11.985** (4.276)
Subject Voted for In-Party Cand. In Primary	7.350** (2.881)	7.923** (2.863)	7.461** (2.866)
In-Party Competence Rating after Primary	7.264*** (2.242)	7.088** (2.236)	7.344*** (2.282)
In-Party Cand. Female	-9.671** (3.705)	-27.681*** (7.475)	-26.846*** (7.441)
In-Party Cand. Black	4.697 (3.426)	8.712 (5.630)	7.747 (5.611)
Competent Information	7.013* (2.786)	6.470 [†] (3.438)	-5.368 (5.464)
In-Party Female X Competent Information		24.656* (9.974)	24.168* (9.913)
In-Party Black X Competent Information		-14.077 [†] (8.096)	-13.041 (8.055)
In-Party Female X In-Party Black		14.387 (10.662)	15.284 (10.604)
Female X Black X Competent Information		-7.353 (14.666)	-8.711 (14.581)
Total Competence Search			-2.052* (.902)
Total Competence Search X Competent Info			3.710** (1.330)
R-square	.137	.154	.166

[†]p<.1, *p<.05, **p<.01, ***p<.001

Note: Values are OLS regression coefficients, n=449.

Model 2 adds the two-way and three-way interaction terms between the three between-subjects manipulations of interest. The interaction between the in-party candidate's gender and the competent information condition is significant and positive ($b=24.656$, $p<.05$), while the marginal effect for gender (that is, the effect of being female when the candidate is also portrayed as being incompetent) is negative and significant (-27.681 , $p<.001$). This suggests that, while incompetent-looking female candidates in the incompetent information condition are clearly liked less when compared to their opponents, that is not true when the information available in the campaign contradicts the incompetence cue (and, possibly, the incompetent stereotype stemming from their gender). It seems that the appearance cues are outweighed in this instance by the factual information available about the candidates.

Model 3, finally, adds a variable measuring the total number of competence related information items subjects accessed during the campaign, as well as the interaction between this variable and a subject experiencing the competent information condition. While we continue to see the same effects for candidate gender and the gender by information interaction, adding these two search variables shows that the amount of relevant information accessed by subjects also affects feeling thermometer scores. The interaction between search and being in the competent information conditions is positive and significant (3.710 , $p<.01$), suggesting that seeing more information that portrays an in-party candidate as competent leads to higher ratings for the in-party and lower ratings for the out-party, regardless of the fact that the in-party candidate has a less competent

appearance than the out-party candidate. The marginal effect for total competence search (which shows the effects of search for subjects in the incompetent information condition) is negative and significant, on the other hand ($b = -2.052$, $p < .05$), suggesting that the more information subjects access about their in-party candidate that confirms the incompetence cue, the less they like their in-party candidate.

I turn now to an analysis of subjects' ultimate vote choice. It is first worth pointing out that almost 30% of my sample voted for their out-party candidate, which seems quite high. I can only speculate that this is a result of the fact that their in-party candidate always looked incompetent, but it seems a plausible explanation. Another possible reason for this is that subjects may or may not have voted for their in-party candidate in the primary election (indeed, a subject's preferred candidate made it to the general election less than half of the time). Subjects may be more willing to give the out-party candidate a chance if the in-party candidate they voted for was defeated (and I test for this in the analyses that follow). Again, I conduct a series of three logistic regressions predicting a vote for the subject's in-party candidate. Model 1 shows the results of this analysis including the control variables and the three manipulations, only. Again, registering for the Republican primary is negatively associated with voting for one's in-party candidate ($b = -.818$, $p < .01$); and both voting for the in-party candidate in the primary and rating him or her higher in terms of competence after the primary are positive predictors of vote choice ($b = .531$, $p < .05$ and $b = .608$, $p < .001$, respectively).

As in the candidate evaluation analyses, subjects who see a female candidate in their in-party are less likely to vote for their in-party candidate than those who see a male candidate ($b = -.603, p < .05$). Surprisingly, subjects whose in-party candidate is black are actually more likely to vote for their in-party candidate than when he or she is white ($b = .506, p < .1$). This also coincides with the feeling thermometer findings, but contradicts my expectations. Finally, subjects who are exposed to the competent information condition are also more likely to vote for their in-party candidate than those exposed to the incompetent information condition ($b = .583, p < .05$). This again shows that the nature of the information available in the campaign makes a big difference for candidates whose appearance may not convey competence.

Based on Model 1, subjects who see male candidates running in their party have about an 80% chance of voting for him. When the in-party candidate is female, however, that probability drops to 65%. In terms of race, subjects have a 68% chance of voting for their in-party candidate when s/he is white, and a 78% chance of doing so when s/he is black. Finally, subjects have a 79% chance of voting for their in-party candidate in the competent information condition, but only a 67% chance of doing so when they are exposed to incompetent information.

Table 5.2.
Logistic Regression Results for In-Party Vote

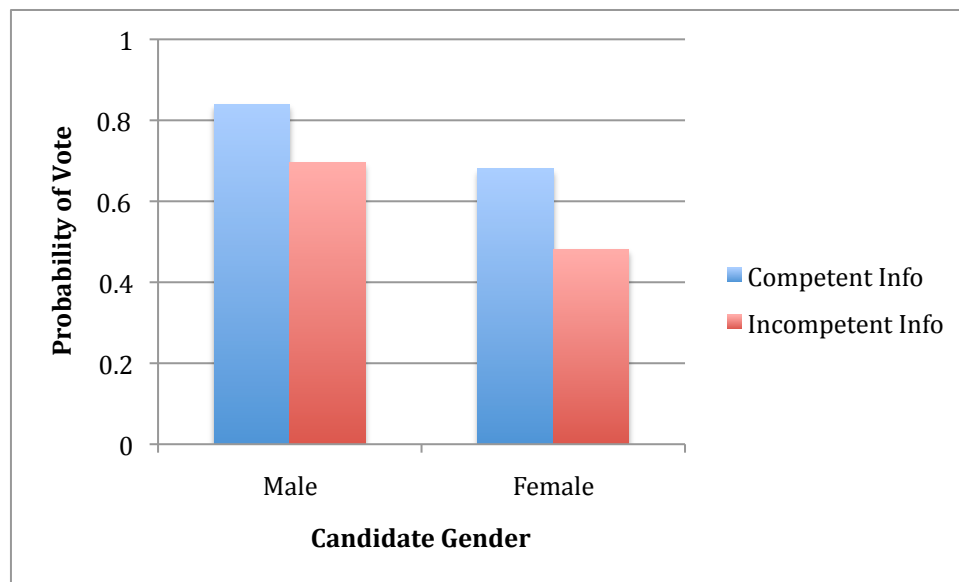
	Model 1	Model 2	Model 3
Constant	-.669 (.826)	-.766** (.848)	-.512 (.893)
Subject Male	-.128 (.246)	-.176 (.251)	-.134 (.255)
Subject Non-white	-.505 [†] (.273)	-.496 [†] (.285)	-.476 (.290)
Subject Hispanic	.637 (.593)	.709 (.623)	.606 (.620)
Age	-.002 (.010)	-.002 (.010)	.003 (.010)
Income	-.040 (.055)	-.035 (.056)	-.036 (.057)
Political Sophistication	.091 (.069)	.095 (.070)	.078 (.071)
Lib-Con	-.126 (.101)	-.115 (.105)	-.123 (.108)
Republican Primary	-.818** (.333)	-.938** (.345)	-.928** (.353)
Subject Voted for In-Party Cand. In Primary	.531* (.246)	.553** (.240)	.553* (.255)
In-Party Competence Rating after Primary	.608*** (.190)	.641*** (.196)	.601** (.202)
In-Party Cand. Female	-.603* (.305)	-1.692** (.592)	-1.679** (.590)
In-Party Cand. Black	.506 [†] (.299)	.878 [†] (.522)	.836 (.524)
Competent Information	.583* (.239)	.544 [†] (.298)	-.355 (.477)
In-Party Female X Competent Information		2.013* (.860)	2.067* (.874)
In-Party Black X Competent Information		-1.191 (.749)	-1.107 (.756)
In-Party Female X In-Party Black		.936 (.896)	.959 (.893)
Female X Black X Competent Information		-1.130 (1.298)	-1.226 (1.314)
Total Competence Search			-.060 (.076)
Total Competence Search X Competent Info			.296* (.125)
Pseudo R-square	.238	.255	.252

[†]p<.1, *p<.05, **p<.01, ***p<.001

Note: Values are logistic regression coefficients, n=449.

Model 2 adds the interaction terms between the three independent variables of interest. Again, the interaction between seeing a female candidate and the competent information condition is positive and significant ($b=2.013$, $p<.05$) while the marginal effect for seeing a female candidate remains negative and significant (-1.692 , $p<.01$). It seems that, as with feeling thermometer ratings, female candidates are particularly disadvantaged in the incompetent information condition, but that seeing information that portrays them as competent can negate these effects. None of the other interaction terms reach statistical significance.

Figure 5.5
Predicted Probability of an In-Party Vote,
Gender X Information Condition



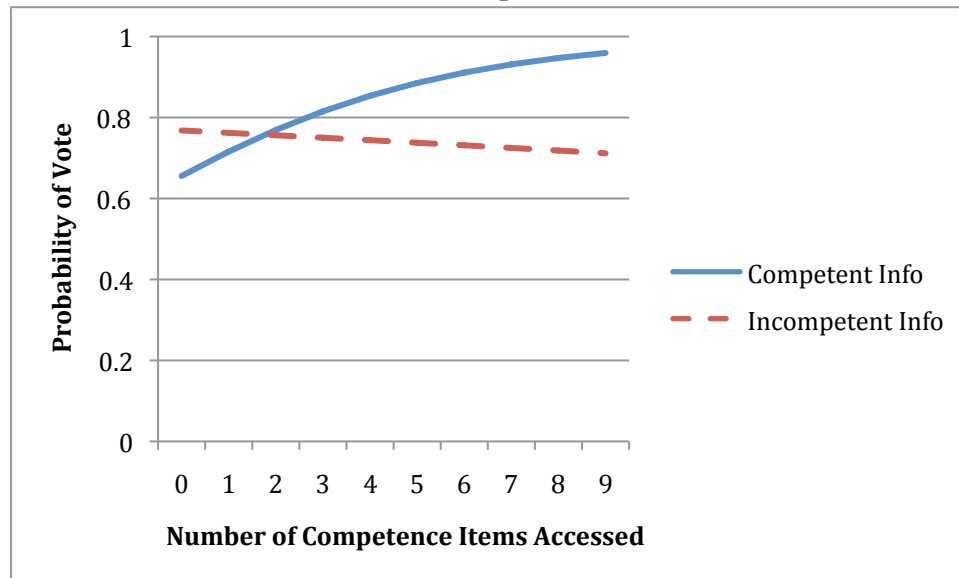
Results are predicted probabilities holding all other independent variables at their means.

Figure 5.5 shows the predicted probability of voting for the in-party candidate when both gender and the information condition are taken into

consideration. When the in-party candidate is male and competent, subjects have an 84% chance of voting for him. When he is in the incompetent information condition, that probability falls to about 70%. Subjects have a lower probability of voting for the in-party candidate when she is female, regardless of the information condition, but the effects are striking when she is in the incompetent information condition. When she is portrayed as competent, subjects have a 68% chance of voting for her, but when subjects view information that makes her seem less than competent, their chances of voting for her drop below the 50% mark (to 48.1%). This means that in the female, incompetent information condition, subjects are actually more likely to vote for the *other* party's candidate. In this particular instance, the combination of gender and an incompetent portrayal (combined with the candidate's otherwise incompetent appearance) are enough to overpower party identification.

Model 3 again adds the competence search variable and the interaction between competence search and experiencing the competent information condition. Here again, the interaction term is positive and significant ($b=.296, p<.05$), indicating that, for subjects in the competent information condition, searching for more competence-related items increases their likelihood of voting for their (incompetent-looking) in-party candidate. In this case, the marginal effect of total competence search is negative but not significant, suggesting that the amount of competence-related information may not matter as much for subjects in the incompetent information condition. Perhaps when a candidate appears incompetent, it does not take much confirmatory evidence to persuade voters to consider voting for the other candidate.

Figure 5.6.
Predicted Probability of an In-Party Vote,
Information Condition X Competence Information Search



Results are predicted probabilities holding all other independent variables at their means.

Lastly, Figure 5.6 shows the predicted probability of voting for the in-party candidate when the number of competence-related items is taken into account. For subjects in the competent information condition, those who search for no information (but were exposed to the manipulation once via the forced debate performance item) have about a 66% chance of voting for their in-party candidate. Subjects' likelihood of voting for their candidate increases as the number of competence items accessed increases until, for those who looked at 9 items (the most, out of 12, that any one subject looked at), we see a 96% chance of voting for the in-party candidate. For those in the incompetent information condition, the effect is the opposite, though weaker. Those who saw only the forced competence

item in the incompetent condition had a 77% chance of voting for their in-party candidate, while those who accessed 9 had about a 72% chance of doing so.

Discussion and Conclusions

Clearly, the relationship between different appearance cues, as well as the relationship between appearance cues and other kinds of information, is a complicated one. My analysis shows support for many of my hypotheses, though not for all. Incompetent-looking female candidates are indeed disadvantaged when compared to male candidates, both in terms of evaluation and vote choice. This is particularly true when she is also portrayed as incompetent in the information available about her in during the campaign. It is striking that subjects in the female/incompetent information condition gave essentially the same feeling thermometer rating to both their in-party and out-party candidate and, perhaps even more so, that they were *more likely* to vote for the out-party candidate in this condition. The combination of a female candidate who looks incompetent and seems to, in fact, be less than competent in her job performance is such a potent combination of cues, that it even trumps subjects' party identification. At the same time, women in the competent information condition fared much better (though still not as well as male candidates in *either* information condition). This suggests that, even for female candidates who are perceived as incompetent based on appearance, the actual information available about them matters a great deal. This is heartening, in that neither gender cues nor automatic trait inferences seem to be insurmountable for female candidates, as long as they are in fact qualified candidates.

While I found the expected results for female candidates, the same cannot be said of my race manipulation. I expected to see the same pattern for African American candidates that I did for female candidates, but the relationship between candidate race and competence is very weak and seems to be in the direction opposite to my expectations. While the information condition seems to work in the same way for both black and white candidates (i.e. incompetent looking candidates of either race are less likely to win votes and tend to receive more negative evaluations), black candidates are actually more likely to win subjects' votes (at least, using a one-tailed test). I can only speculate as to an explanation for this, but it is possible that it is a result of having a black president currently in office. Perhaps Obama's election to office eased any doubts about an African American candidate's ability to serve in office that seemed to exist before. It is also possible that social desirability is playing a role here. It is well-established that people often self-monitor their responses to survey questions about race and African Americans, so this may be a result of subjects 'over-compensating' for their true attitudes. Whatever the reason, the findings related to race in this paper are unexpected and worthy of further investigation.

I also find support for my hypothesis that candidates in the competent information condition would fare better than those in the incompetent condition, regardless of their appearance. Indeed, the more information that subjects see that points to a competent in-party candidate, the more likely they are to vote for that candidate and the higher they tend to rate him/her. This may seem intuitive, but is important in establishing that appearance cues like race, gender, and competence

may be secondary to the politically relevant information available about candidates during a campaign. Previous studies that only take aspects of candidate appearance into consideration, then, seem to be missing a very important consideration and may even be misleading, at least in terms of high-information elections. It is not that cues like competence and gender do not matter—clearly, they do—but, the ways in which they matter seem to change depending on the information environment in which they are embedded. Again, this is arguably a positive thing for candidates who might otherwise be at a disadvantage based on how they look. As long as enough information is available that paints them in a positive light, they seem to be able to overcome those disadvantages.

Of course, like all studies, this one has certain limitations. Most obviously, because subjects always see an incompetent-looking candidate in their in-party, it is impossible to know how these results might change for competent-looking in-party candidates. This is a manipulation to test in future studies. Another important area for future study is the inclusion of other types of appearance cues, such as age and general attractiveness. There are many factors that may contribute to appearance-based impressions of candidates, each of which must be systematically studied if we are to more fully understand the impact of a candidate's appearance on their chances of electoral success. While there is clearly still much to do, this paper is an important step in the right direction, and demonstrates that there is a need for continued research in this area.

Chapter 6: Conclusion

Candidate Appearance, Information, and Voting Behavior – What We Have Learned

Clearly, the relationship between how a candidate looks, the information environment in which they run, and the way they are perceived by voters is a complicated one. The preceding four papers offer several unique insights, however, that help us begin to better understand that relationship. First, it is apparent that a candidate's appearance does, in fact, matter. Race, gender, and whether a candidate looks competent or incompetent all make a difference in terms of how voters evaluate him or her and, in many cases, whether they are willing to vote for him/her, as well. Second, the relationship between a candidate's physical appearance and how they fare in an election is more complicated than previous studies would have us believe. The effects of a particular appearance cue seem to be contingent on a number of things. Specifically, they depend upon the availability and nature of other politically relevant information in the campaign, other aspects of a candidate's physical appearance, and certain voter characteristics, as well.

Chapters 2 and 3 focus on information environment and voter characteristics, and ultimately shed new light on our understanding of how race and gender-based prejudice function. For both forms of prejudice, it is the nature of a prejudiced voter's information search that actually disadvantages women and minority candidates. Racially prejudiced voters choose to learn less about black and Hispanic candidates than they do about white candidates, while sexist voters learn less about women candidates than men. In terms of racial prejudice, the effects of symbolic racism on candidate evaluation and vote choice drop out when the amount

of information searched for by subjects is taken into account, suggesting that information search mediates the relationship between levels of symbolic racism and these dependent variables. In the case of gender-based prejudice, sexism does not even appear to influence candidate appraisal or vote choice *until* information search variables are added to the model.

In both of these instances, incorporating a measure of the campaign's information environment fundamentally changes the nature of how prejudice works. This is an important finding given the state of the literatures surrounding both racial and gender-based prejudice. In both cases, recent evidence has begun to cast doubt on how influential these sorts of biases actually are in a political context. There is an active debate among race and politics scholars about the changing nature of racism in the American electorate (traditional forms of racism vs. modern/symbolic racism vs. implicit racism, e.g.), while the effects of sexism on women candidates have been all but discounted among gender and politics scholars. While the evidence and debates are different, the nature and effects of prejudice related to both race and gender are far from clear, and many scholars discount their importance altogether in a contemporary political setting. Evidence from Chapters 2 and 3, however, suggests that, not only does a candidate's appearance matter, but so do the prejudices that voters hold related to that appearance. What is interesting, and has been missing from previous studies, is that it is in the process of learning about the candidates that these prejudices seem to matter most.

Interestingly, Chapters 2 and 3 also find direct effects of prejudice on correct voting for both women and African American candidates. This finding, together with

the important role that information search plays, suggests that scholars of race and gender may be looking for effects of prejudice in the wrong places. Traditional self-report measures such as feeling thermometer ratings and vote choice are likely subject to social desirability bias, or subjects' self-monitoring, in order to avoid appearing racist or sexist. Both correct voting and the amount of information accessed during a campaign are subtler measures of preference, and neither is subject to self-monitoring in the same way that more traditional dependent variables are. The effects of prejudice may not be as straightforward and obvious as they once were, then, but this project suggests that their influence is still there if you know where to look.

Chapter 4 focuses on the combination of different appearance cues and finds that automatic inferences of competence function differently for white male candidates than they do for black and female candidates. For the white male candidate, having a more competent appearance led to higher competence ratings and feeling thermometer scores even after the campaign, while the same was not true when race and gender varied. This suggests that studies of automatic competence inferences should be including other aspects of appearance like race and gender in their experimental designs, rather than simply controlling for them. Previous studies by Todorov, et al have used pairs of candidates that have the same race and gender, only. My results suggest that these effects may not apply to all candidates equally, and that they may be particularly salient among white men, specifically. Though I can only speculate as to why I find the results I do, it is possible and likely that, since women and African American candidates are subject

to competence-related stereotypes based on their gender and race, respectively, that these cues present other competence-related information that changes the nature of how subjects infer competence from a candidate's face.

Chapter 4 also finds that a candidate's evaluation depends not only on multiple aspects of his or her own appearance, but on the appearance of other candidates in the race, as well. A white candidate looks more competent and receives a higher feeling thermometer rating when he faces a black opponent, for example. At the same time, the black candidate him or herself is not rated significantly lower than when subjects are presented with a white subject instead. This is an unexpected and interesting finding that also speaks to the importance of the overall information environment in which a candidate runs. Aside from substantive information provided by a campaign or the media, voters also glean information about a particular candidate from the other candidates in the race. Judgments are not made in a vacuum, and it seems that a candidate's perceived traits are relative to the characteristics possessed by a voter's other options.

This finding that candidate evaluations are relative also has interesting implications for our understanding of how stereotypes work in a political setting and may be another indication that we should be looking for the effects of race and gender based stereotypes and prejudice on subtler measures. Just as prejudice had a stronger effect on correct voting and information search than traditional measures of preference in Chapters 2 and 3, subjects in this study may be self-monitoring their evaluations of the black candidates, but not the black candidates' opponents. If subjects do still hold stereotypic views of black candidates, they may not be willing

to say so, but they may be signaling that the white candidate looks better by comparison.

Chapter 5 also speaks to the importance of considering multiple appearance cues in tandem, as well as the influence of the nature of the information available about the candidates in the race. In this general election context, it is female candidates who seem to be particularly disadvantaged when compared to male candidates, both in terms of evaluation and vote choice. This is particularly true when she is also portrayed as incompetent in the information available about her during the campaign. In fact, subjects who are given a female in-party candidate who is also portrayed as incompetent gave essentially the same feeling thermometer rating to both their in-party and out-party candidate and were more likely to vote for the competent male *out-party* candidate. Interestingly, the same is not true when subjects' in-party candidate is a man—subjects are always more likely to vote for their in-party candidate when he is male, regardless of which competence condition they were in. This suggests that vote choice is not simply a matter of competence/incompetence as portrayed in either physical appearance or the information available about a given candidate. Rather, competence cues clearly function differently for female candidates than they do for male candidates.

Gender differences aside, I do find that candidates who seem more competent in the information available about them fare better than those who are portrayed as incompetent, regardless of race or gender. The more information that subjects see that points to a competent in-party candidate, the more likely they are to vote for that candidate and the higher they tend to rate him/her. This may seem

intuitive, but is important in establishing that appearance cues like race, gender, and competence are influenced by, and may be secondary to, the politically relevant information available about candidates during a campaign. Previous studies that only take aspects of candidate appearance into consideration, then, seem to be missing a very important consideration and may even be misleading, at least in terms of high-information elections. It is not that cues like competence and gender do not matter—clearly, they do—but, the ways in which they matter seem to change depending on the information environment in which they are embedded.

Ultimately, the findings from these four chapters point to an important role for candidate appearance in voter decision-making, but one that may be surmountable for those who would be affected negatively by them. Chapters 2 and 3 suggest that information search mediates the effects of prejudice on vote choice and evaluation, which suggests that if otherwise prejudiced individuals could somehow be exposed to more information about candidates against whom they have a bias, that information could have a mitigating effect. Theoretically, if voters high in prejudice took the time to learn about those candidates, the effects of prejudice may go away completely. Of course, the nature of the information that voters encounter about these candidates probably makes a difference, as well. If the information available about women and black candidates confirms negative stereotypes and/or portrays a candidate whose ideological preferences are far from a given voter's, the effects of increased information search would likely diminish.

Chapter 5 begins to examine the role that the nature of the information available about a candidate plays, though it considers competence-related

information, specifically. This sort of competence-relevant information seems to matter most for female candidates, which supports this idea that the type of information that voters are exposed to is particularly important for candidates who are subject to appearance-based stereotypes and prejudices. This, too, can be seen as a positive thing for female, black, and “incompetent-looking” candidates, though. Even when a candidate faces an appearance-related obstacle, the type of substantive information available about him or her still matters and can, at least, diminish some of the effects of the appearance cue.

Subject Race and Gender

Interestingly, the pattern of my results in each chapter is largely constant regardless of a subject’s race or gender. That is, the race and gender of a political candidate seems to affect a voter in a particular way, regardless of whether that voter is male or female, black or white. In Chapters 2 and 3, it is levels of race and gender-based prejudice, as well as information search, that lead to disadvantages for minority and female candidates, and, when those prejudice and information search variables are included in the model, subject race and gender do not negatively affect voting behavior (either in terms of main effects or interaction effects with prejudice). Similarly, in Chapters 4 and 5, neither subject race nor subject gender ever has a significant effect on how black or female candidates are evaluated.

Given previous findings in both the race and gender literatures (e.g. Sanbonmatsu 2006), the overall lack of results for subject gender is surprising. It suggests, however, that voters tend to infer the same sorts of information from the same appearance cues, regardless of their own characteristics. It may be that

exposure to stereotypic ideas about women and African Americans in the media and society at large reach all voters and that those ideas are internalized to some extent by everyone. It may also be that System Justification Theory (SJT; Jost and Banaji 1994) has a role to play here. SJT posits that all people have a psychological need to maintain order and stability in their lives, which leads to a motivation to defend the status quo, even if that status quo is disadvantageous to their own social groups. Whatever the reason, it is clear that the psychological mechanisms behind how appearance cues influence voting behavior are somewhat universal.

Limitations and Future Research

Like all studies, this dissertation has important limitations that should be noted. First, any experimental study of voting behavior is subject to criticisms based on external validity. Though DPTE experiments more closely mimic a real-world campaign scenario than other types of experimental methods, they are still simulations. Ultimately, it would be ideal to replicate my current findings using a real-world campaign, such as in Lau, Redlawsk, Andersen, Kleinberg, and Ditonto (2013), in which a DPTE experiment was run during the presidential campaign of 2012 and the “campaign” provided factually accurate information about the candidates in the race. If I were to find similar effects of race, gender, and competence in such a scenario, that would provide further support for the findings in this project. Though it would clearly not be possible to manipulate a candidate’s race or gender in a real-world setting, it would be possible to find particularly competent or incompetent-looking pictures of him or her. Also, if this experiment were conducted on a Congressional or state level legislative level, it is likely that I

would be able to find a series of races in which the race/gender/overall competence of the candidates varied.

Another fairly obvious limitation of the current set of studies is that they are limited in terms of the appearance cues that are included. I consider the effects of race, gender, and competence inferences, only. However, there are several other aspects of physical appearance that could very well play a role in how a candidate is evaluated, as well. For example, in future studies, I would like to manipulate candidate age and overall attractiveness, as well. These traits, in particular, have also been shown to influence, individually, candidate appraisal and vote choice, so it is likely that their effects are also contingent on the appearance cues considered in this study. Age and attractiveness both likely interact with gender, for example, in ways that are different for women and men. The 2008 presidential elections provide interesting examples of the ways in which gender, competence, age, and attractiveness can function differently for different candidates, with the media providing a narrative of a young, attractive, and incompetent Sarah Palin facing off against a much older, less attractive, and more competent Hillary Clinton. Indeed, as more speculation begins to surface surrounding a potential presidential bid by Clinton in 2016, a study that examines the ways in which gender and age interact to influence a candidate may become particularly timely.

Another important step in understanding the relationship between candidate appearance and the information environment of a particular campaign will be to manipulate other aspects of the information available in the campaign. The experiment in Chapter 5 systematically varied the nature of the competence-related

information available about the candidates, but there are clearly other facets of the information that may become important. For example, both women and black candidates are subject to other kinds of stereotypes, aside from competence, so what happens when the information available in a campaign provides signals related to a candidate's compassion or trustworthiness? Women and black candidates are also stereotyped in terms of the policy issues in which they are thought to be especially strong or weak, as well. Can information that portrays a female candidate as particularly strong on foreign policy or the economy overcome stereotypes that female candidates are generally weak in these areas, for example? There is still much work to be done in terms of the content of information available about a candidate.


Clearly, there are many factors that may contribute to appearance-based impressions of candidates, each of which must be systematically studied if we are to more fully understand the impact of a candidate's appearance on his/her chances of electoral success. While there is clearly still much to do, this project is an important step in the right direction, and demonstrates that there is a need for continued research in this area.


APPENDIX


Screenshot of a DPTE Campaign


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.

Screenshot of Open Information Box in a DPTE Campaign

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

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Candidate Pictures and Competence Ratings



3.29



3.15



3.17



3.20



2.45



2.55



2.36



2.43

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