Title
Personal Politicians: Biography and its Role in the Minds of Voters

Author
Goggin, Stephen Nicholas

Publication Date
2016

Peer reviewed|Thesis/dissertation

Personal Politicians: Biography and its Role in the Minds of Voters

by

Stephen Nicholas Goggin

A dissertation submitted in partial satisfaction of the

requirements for the degree of

Doctor of Philosophy

in

Political Science

in the

Graduate Division

of the

University of California, Berkeley

Committee in charge:

Associate Professor Gabriel Lenz, Chair
Professor Kevin Quinn
Associate Professor Laura Stoker
Associate Professor Robert Van Houweling

Spring 2016

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Abstract

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Despite the central role of politicians in representative democracies, political science has largely ignored how *who* candidates for elected office are shape campaigns and elections. By communicating biographical details about their family, occupation, education, religion, and other background, political candidates attempt to build trust and alter how they will be evaluated by voters. Using systematized biographies of all US congressional candidates from 2008-2014, television advertising data from 2008-2012, and six survey experiments, including four panel experiments, I demonstrate that biographical presentation by candidates is ubiquitous, systematic, and effectual in shaping the opinion of voters.

To assess biography's role in campaigns and candidate evaluation, I address and provide solutions to a number of theoretical and measurement problems in existing literature using a diverse set of methodological strategies. Grounded in literatures in both political science and psychology, I focus on the nexus between the strategic behavior of electoral candidates and voters' cognition. Because of the complexity of candidates' biographies, many scholars have often overlooked them in favor of more parsimonious measurement strategies, often overlooking critical variation in candidate backgrounds. Indeed, many of the interesting hypotheses and findings about the role of biography lie not in broad main effects – but in its interaction with other characteristics of candidates, elections, districts, or voters.

I find that a diverse set of biographical attributes are associated with candidates' partisan affiliation and particular types of campaigns, and are also independently related to electoral success. Candidates strategically present themselves to voters through television advertising, highlighting advantageous characteristics while glossing over others. In realistic over-time conjoint-style experiments, I find that biographical factors independently affect evaluations of candidates alongside party and policy information. I also find that the role biography plays in voters' cognition is affected by its importance to voters, its memorability, its timing and order of presentation, and its conformance to party stereotypes.

To Kim.

"I'm very highly educated.
I know words, I have the best words."

-Donald J. Trump

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Acknowledgments

As with any project, there are many others – personal and professional – to thank. And, particular institutions and programs for funding and resources that made this research possible. This project would not have been possible without their support.

First, and foremost, my dissertation committee. Many thanks to Gabe Lenz, Kevin Quinn, Laura Stoker, and Rob Van Houweling for their incredible feedback along the way. This project would be nothing close to what it is without their guidance. From big picture thoughts on selling the project, to providing advice on intricate experimental designs, to random comments in the hallway, to those comments I (probably erroneously) disagreed with, your comments and feedback have been most helpful. And, I thank you for the original motivation for the project – a frustration with the candidate trait literature – originating in a reaction paper in Rob's Congress seminar and refined into testable ideas in Laura's experiments course.

For funding and research support, I acknowledge the National Science Foundation Graduate Research Fellowship Program, the generous support of the Institute of Governmental Studies (IGS) at UC Berkeley, the Mike Synar Research Fellowship, and, of course, the Travers Department of Political Science. Human subjects data in this project were collected under UC Berkeley CPHS Protocols 2012-08-4558, 2012-09-4603, and 2014-01-5919.

To Travis Johnston, for helping to lead a team of research assistants in coding all the candidate and advertising data, and to Gabe Lenz for sponsoring the endeavor through the Undergraduate Research Apprentice Program (URAP) at Berkeley. And, to the research assistants that helped with this work: Daniela Dean, Kevin Fulgham, Kevin Gu, Maggie Hardy, Jake Kanter, Natalie Lam, Anne Luong, James McVey, Rachel Rubenstein, and George Vasquez.

To my good friends and colleagues at IGS at Berkeley – particularly Doug Ahler, David Broockman, John Brooks, John Henderson, Travis Johnston, Alex Theodoridis, and of course, Kim Twist, I am incredibly thankful for your constant engagement and feedback. For giving useful feedback on drafts or presentations of this work, I thank Ryan Enos, Sean Gailmard, Dan Hopkins, Taeku Lee, Eric Schickler, Merrill Shanks, and Robb Willer. Many seminar participants, too numerous to name, also provided helpful feedback at the Research Workshop in American Politics (RWAP) at Berkeley on multiple occassions, Empirical Implications of Theoretical Models (EITM) 2013 at Berkeley, and at the Midwest Political Science Association (MPSA) 2013-2016.

I am thankful for the guidance of Mike Byrne and Bob Stein at Rice University – where I first became involved in social science research and where I was able to figure out what I wanted to do with myself.

And, of course, my family. To Cheryl, Bill, and Michael, thanks for helping me be who I am today. And, to Kim. For your omniscient advice and support over the past five years, and for sharing the long road ahead.

Chapter 1

Why biography?

Despite voters, the media, and politicians often discussing the biographies of electoral candidates, political science has paid little attention to biographical characteristics. Attributes like family, occupation, education, and other pieces of biography are a common feature of campaigns and political rhetoric. This chapter discusses the background of what we know, why we do not know more, and sets a path for the dissertation.

1.1 The ubiquity of candidates' personal presentation

> "Your campaign rationale is the reason you are running for office...a convincing rationale will incorporate aspects of your personal, professional, and political biography that help to illustrate your reasons for running for office, what you hope to accomplish when in office, and the qualities that make you the best candidate for the office."
>
> Trost and Grossmann (2005, p. 54)
> *Win The Right Way*

Nearly all "how-to" guides to running for elected office emphasize establishing a core, central message for any candidate. This message, or a "campaign rationale", as Trost and Grossmann (2005) term it, is often central in all of a candidate's messaging. Rather than center these rationales on one's political party or one's policy stance on a single issue, nearly all candidates center it on something else – themselves. In the time before they ran for office, candidates were people – they had families, jobs, hobbies, they were educated and grew up somewhere, they held personal beliefs – yet, political science often ignores these things, focusing instead on summary descriptors of a candidate, e.g., "candidate quality", that are often poorly measured by proxies such as whether a candidate held prior elected office.

Yet, if we look at campaigns – if we look at what candidates impress upon voters, spending costly resources – we find a diverse, and often systematic, set of personal information. As we

see from six examples from the 2012 campaign, in Figure 1.1, candidates' core messages often revolve around their biography. Candidates want to be liked – and have voters' support – and to do so, they use their personal, professional, and political biography to appear relatable, competent, and warm.

Lee Anderson hails from rural Georgia, so he emphasizes his farming background. Reid Ribble highlights his large, smiling Midwestern family. Teresa Hensley demonstrates her legal competence and toughness with her background as a prosecutor, José Hernández denotes his intellect with his background as an astronaut, Dan Benishek fights against the Affordable Care Act as a surgeon, and Bill Driscoll features his service in the Marine Corps and his business experience. While I only present six here, examples are easy to find – from incumbents to challengers, well-funded to non-viable candidacies, Republicans to Democrats – the presentation of a candidate's personal background is ubiquitous.

Even when the center of a message is not biographical, personal background is still often presented. As shown in television ads in Figure 1.2, Travis Childers and Greg Davis, engaged in a hotly-contested US House race in 2008, both visually show their family and tie them to particular policies or programs on which they believe they hold an advantage. Personal background can be used to explain or justify support for particular policies – as Dr. Dan Benishek described in a statement on health care,

> "As a surgeon for over 25 years, Dr. Benishek has an acute appreciation for the delivery of health care services. By serving as a physician for a principally rural population, he further recognizes the fact that a one-size-fits-all federal solution cannot accommodate the unique and diverse health care challenges facing Northern Michigan."
>
> -Rep. Dan Benishek (R-MI-1), 2012

Biographies are prevalent in campaigns, yet we know little about when and how they are used systematically, nor do we know about their effects on voters' opinions of candidates or policies they encounter. So why has scholarship paid so little attention to candidates' biographies? First, assessing biography's role is a challenge. Simply, biographies are *complex*. Even relatively unqualified candidates can have résumés or CVs spanning more than a handful of pages, and biographical descriptions of prominent politicians can comprise entire books. Not only do candidates have a variety of biographical attributes – e.g., education, occupation, family – but, the number of levels on which these attributes can vary is enormous. For example, while we can quantify whether a candidate has a college degree or not, it becomes a much more difficult measurement problem to assess the role of where it was from, how successful they were in college, and the personal connections they formed in college. It becomes nearly impossible to perfectly systematize someone's biography. Yet, despite this difficulty, we can measure many relevant attributes that have long been ignored by political scientists.

If we can measure the biographical background of candidates for office, not just those who are elected, we can better understand how who they are relates to many other concepts we

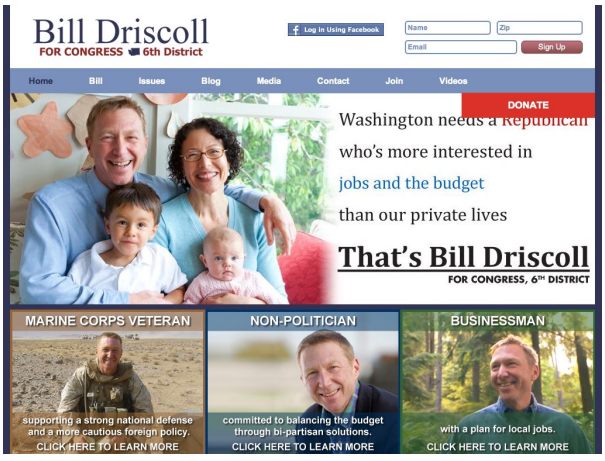
(a) Lee Anderson (R - GA12 Candidate), 2012

(b) Reid Ribble (R - WI8), 2012

(c) Teresa Hensley (D - MO4 Candidate), 2012

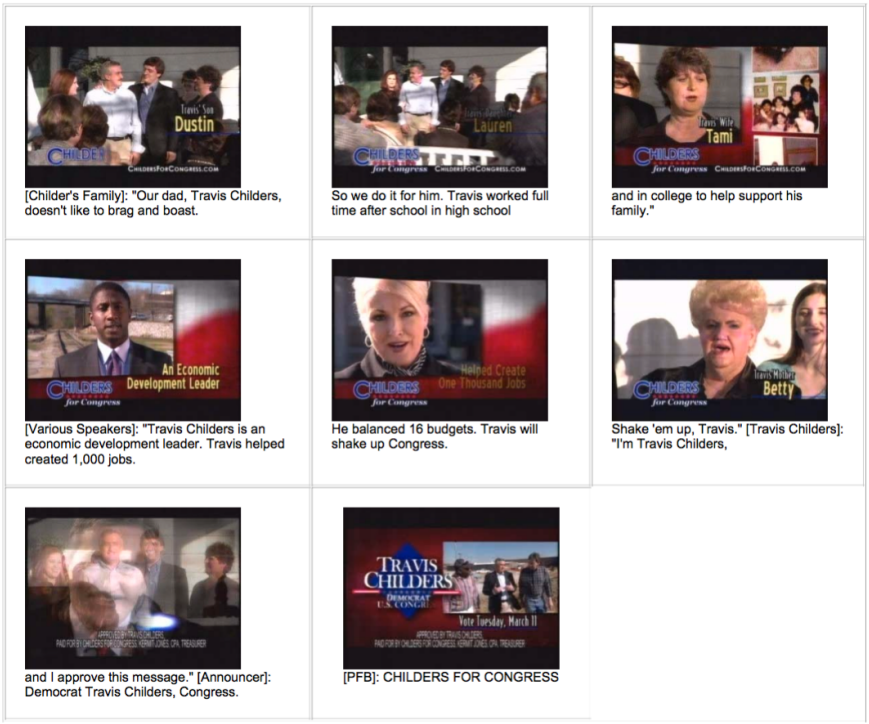
(d) José Hernández (D - CA10 Candidate), 2012

(e) Dan Benishek (R - MI1), 2012

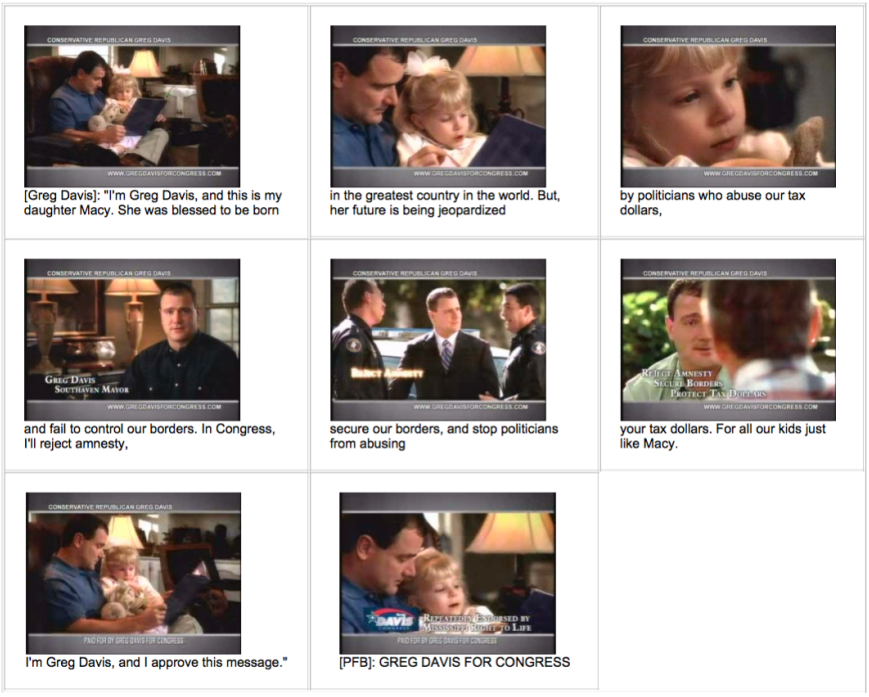


(f) Bill Driscoll (R - WA6 Candidate), 2012

Figure 1.1: Examples of personal presentation from campaign websites
NOTE: All six campaign websites are now defunct or have been updated for later campaigns: `http://voteleeanderson.com`, `http://www.ribbleforcongress.com`, `http://www.hensleyforcongress.com`, `http://joseforcongress.com`, `http://www.benishek2012.com`, `http://electbilldriscoll.org`



(a) Travis Childers (D - MS1), 2008 Promotion Ad, First Aired 03/09/2008



(b) Greg Davis (R - MS1 Candidate), 2008 Promotion Ad, First Aired 02/19/2008

Figure 1.2: Examples of personal presentation in television advertising
NOTE: Storyboards provided by Wisconsin Ads Project, Goldstein et al. (2011).

care about. We can assess party images, electoral success, campaign strategy, and of course, their role in the minds of voters. With four empirical studies, this dissertation explores who congressional candidates are, how they present themselves, the effects of diverse biographical information, and how other characteristics of campaigns, voters, and candidates changes their impact.

1.2 A path forward

The plan for the project is as follows. In Chapter 2, I lay out what we know already from existing literature, and the foundation for what we can learn from the new empirical evidence presented in this dissertation. First, I examine biographical presentation from the lens of the candidate – how self-presentation can be tailored to convey qualification, identification, and empathy. Next, I examine how voters may respond to this information, digging into deep literatures on person perception in psychology, and more recent and applied literature on candidate evaluation in political science. Then, I lay out what I precisely mean by biography – a host of personal background information that candidates present in campaigns – and what little we know about the role of this information. Finally, I discuss several important factors that can shape biography's role in the minds of voters, including its memorability, its timing and order, its fit with partisan stereotypes, and the importance of biography to voters.

In Chapter 3, I turn to broad description questions about candidates' biographies. We know little about who runs and loses, despite some work on representation examining particular background characteristics of existing members of Congress. For this reason, I rely on data from Vote Smart for all Republican and Democratic general election candidates from 2008-2014, providing a broad picture of how biography varies across candidates. Then, using advertising data from the Wisconsin Ads Project and the Wesleyan Media Project, I examine how candidates present their biography in television advertising from 2008-2012. Through both hand-coded content analyses and automated text analyses of the underlying data, I find that many biographical attributes are associated with candidates of a particular party, and that many are independently related to electoral success, even when controlling for important factors that typically predict electoral success. Finally, I find that personal presentation varies throughout campaigns based on three factors: the party of a candidate, whether the candidate is running for the House or Senate, and electoral success.

In Chapter 4, I turn to the role of candidates' biographies in the minds of voters. Using two novel over-time experiments, I measure the relative impact of a wide variety of information, its subjective importance to voters, and its memory in the minds of voters. I find that while the impact of information fades over time, certain personal details like a candidate's occupation, religion, or political experience, can affect evaluations of the candidate. I find variability in whether voters deem particular pieces of information to be important – yet, voters do not weight information that they find most important more heavily in their decisions. When assessing memory, it is very clear that particular types of information are more memorable than others, with certain personal details, and even some policy positions,

remaining far longer in memory than others. Additionally, I find that while voters may forget the factual content of information, they often retain a valence for that specific information in a particular personal domain.

With Chapter 5, I turn to a closer examination of how the way in which campaigns unfold over time affects how candidates are evaluated. By randomizing the order in which information about candidates is revealed, I find that recent information is far more impactful than earlier information. Yet, these effects depend on whether the information is positive or negative, with more recent negative information more impactful than recent positive information. Additionally, I find an asymmetry by the type of information, with negative personal information more impactful when it is recent than negative policy attacks. These types of information also decay differentially in the memory of respondents.

In Chapter 6, I address the role of partisan stereotyping in voters' minds. Given party's omnipresence in American political campaigns, and the relatively robust images associated with each party, I assess how candidates' violations of (or conformance to) party stereotypes differentially affect voters' evaluations. Additionally, I assess how particular personal information can provide evidence of the ideological extremity or typicality of a Republican or Democratic candidate. I find that, despite party's powerful impact in the minds of voters, there is remarkable consistency in effects of many pieces of information about candidates, particular policy information. However, for highly stereotypical personal information, such as military service, family background, and business occupations, I find that candidates can benefit from holding counter-stereotypic biographical backgrounds. In addition to influencing voters' judgments about candidates, I find that particular policy justifications by Republican and Democratic candidates can differentially affect voters' policy attitudes.

Finally, in Chapter 7, I conclude by discussing the importance of candidates' biographies for a wide variety of literatures. While this dissertation provides strong evidence of the importance of candidates' biographies to party images, electoral success, representation, and democratic accountability, I discuss the many questions still yet unanswered. I also highlight important advances made in measurement throughout this dissertation, noting how they can be applied in other work.

Chapter 2

Politicians as people

Motivated by work in psychology on self-presentation, person perception, social identities, and stereotypical reasoning, this chapter lays out theoretical expectations for the behavior we should see among politicians, and expectations for how voters should make use of biographical information they receive about politicians. Particularly, I discuss strategic behavior from politicians regarding trust-building motivations, including appeals to commonality and expertise, as well as the broad set of information we expect politicians to present. With respect to voters, this chapter discusses how aspects of information – such as its subjective importance to voters, memorability, ordering, timing, and relationship to party stereotypes – should condition effects of this information on voters' electoral decisions and evaluations of candidates.

2.1 Candidates' view of the mass public

> "The ultimate response House members seek is political support. But the instrumental response they seek is trust. The presentation of self – that which is given in words and given off as a person – will be calculated to win trust."
>
> Fenno (1978, p. 56)

In order to get elected and reelected, politicians must appear favorably to – and be supported by – those who vote. To do this, politicians talk endlessly about themselves, attempting to portray themselves to their constituents in a favorable manner. While most scholarly work has focused on how political actors present policy positions, ideology, and related information, few efforts have systematically examined how candidates' biographical details shape candidate strategy, the resulting impressions that citizens form, and most importantly, democratic outcomes.

Fenno (1978) provides three motivations for House members to gain the trust of their constituents. The first, qualification, conveys to voters the capability and experience of a politician. The second, identification, gives voters a sense of commonality. Finally, the

third, empathy, impresses upon voters that the candidate truly cares about them and has their interests in mind. As Fenno describes, central to these goals is the strategic presentation of self, often relying upon explicitly personal background information.[1]

By gaining trust through the presentation of self, candidates give themselves greater flexibility in the issue positions they take and communicate. In addition to merely gaining trust, personal information can be used in the second of the three pieces of a congressperson's "home style"—the explanation of activities in Washington. Not only might politicians present personal information to demonstrate commonality, but they can use their background to explain their activities in Washington in a positive light to their constituents. Candidates for Congress (or any elected office) spend a great deal of time crafting messages and interacting with constituents in order to gain political support. Whether through campaigns, the media, or activity in government, politicians have strong motivations to strategically present certain information to their constituents, while avoiding the disclosure of other information.[2]

Drawing on interviews with a large number of campaign consultants, Arbour (2007) discusses three important reasons a candidate may make "background appeals," or discuss some aspects of their personal history: to show commonality with constituents, to provide evidence of a policy stance, or to demonstrate expertise at a given task.[3] Of course, "personal history" is not a single factor, nor does it only vary in a single dimension. As Trost and Grossmann (2005) discuss in a practical "how to" guide to running one's campaign at lower levels of office, one's personal, professional, and political biography can all be used as background appeals. The types of personal information a candidates' messaging strategist could draw upon in a campaign is quite broad, and different information may be useful for different reasons, depending on characteristics of one's constituents, the topic at hand, characteristics of one's opponent, or many other reasons.

As shown later in Chapter 3, candidates do invest time and resources in disseminating personal information about themselves, including occupation and familial information, but many questions linger about how this investment systematically varies. By linking an attribute of oneself to politically relevant skills, knowledge, or a policy position, candidates can transform a personal identity into an explicitly political cue or policy justification. This

[1]Fenno's original focus on presentation of self stems from Erving Goffman's sociological perspective in *The Presentation of Self in Everyday Life* (1959). As Goffman details, we can think of one's attempts to impress oneself upon others as a continuous, strategic theater-like performance of oneself: "...great care is taken to give the right impression and great anxiety is felt that the impression given might not be right. The strength of this concern is seen in the indignities that high-placed performers are willing to suffer in order to come off well: congressmen allow themselves to be made up and be told what to wear..." (p. 226).

[2]For a more psychological perspective on self-presentation and impression management, see Leary (1995). While the psychological perspective focuses much more on mundane, day-to-day interactions and presentation of self in these circumstances, there are nevertheless many guiding lessons from this literature. Particularly, motivations to not just present oneself positively, but also in role-congruent and situation-congruent ways, are largely in line with many of Fenno's descriptions. Politicians wish to appear qualified and empathetic, as these are characteristics people associate with quality and likable politicians.

[3]These largely parallel the three originally put forward by Fenno, but have a slight shift in focus to more policy-oriented explanation and justification.

process of politicization matters greatly, because while some information may be presented merely to suggest a common bond with constituents, other information can be used for explicitly political purposes to communicate certain issue or ideological positions. Presented information may also vary greatly by the party of a candidate, attempting to fill holes in (or bolster) one's party reputation.

There is remarkably good evidence that candidates view the presentation of personal information to voters as a necessary and strategic tactic in modern campaigns. Recent campaign content analyses paired with survey data convincingly demonstrate that campaigns invest time and advertising effort in influencing perceptions of their personality, and are often quite effective in the aggregate (Fridkin and Kenney, 2011b, 2009, 2011a). Yet, we know little about how voters view these strategies. Politicians and those who run campaigns clearly view them as valuable, but we do not know what specific appeals and biographical information are effective, and, if so, when and why they are.

2.2 The mass public's view of candidates

In a representative democracy, voters are tasked with choosing their representatives. Many factors shape voters' ability to do this competently, with extensive literatures examining this decision-making process. Yet, work has seldom started with a foundation in literatures on psychological person perception. Despite the obvious fact that politicians are people, many scholars of candidate evaluation have grounded their theories of voters' electoral choice in literatures on overtly-reasoned tasks. While choosing one's representative is clearly a different task than choosing a friend, spouse, or colleague, these literatures on candidate evaluation and electoral choice have often ignored the psychological roots that can guide both processes.

Person perception has always been an intriguing cognitive process for psychologists, with a long literature devoted to all aspects of first impressions and naive personality theories, the role of stereotypic and individuating information, and person memory and evaluation. Particularly, while the roots of this research often began in studies of basic decision-making, it was quite clear to many, even before some of this research had been done, that person perception was far different than perception of non-human objects. As Solomon Asch describes,

> "We have mentioned earlier that the impression of a person grows quickly and easily. Yet our minds falter when we face the far simpler task of mastering a series of disconnected numbers or words. We have apparently no need to commit to memory by repeated drill the various characteristics we observe in a person, nor do some of his traits exert an observable retroactive inhibition upon our grasp of the others. Indeed, they seem to support each other. And it is quite hard to forget our view of a person once it has formed. Similarly, we do not easily confuse the half of one person with the half of another. It should be of interest

> to the psychologist that the far more complex task of grasping the nature of a person is so much less difficult."
>
> - Asch (1946, p. 258)

This notion – that perceptions of people are unified, sticky in memory, and natural – should more strongly motivate our research on evaluation of political candidates. First, I consider these basic psychological mechanisms more closely – how automatic, innate first impressions of other people form – and how they subsequently anchor our later considerations of these people. As Uleman and Saribay (2012) describe, scholarship on impressions of others have typically been divided between the fields of personality and social psychology, with rather different perspectives and approaches. While social psychologists have been more concerned with fleeting impressions that dissipate upon receiving more information through interaction, personality psychologists have found remarkable evidence of stable and coherent impressions of personality over time.

Given that voters often possess very little information about a candidate, particularly in congressional and lower salience races, it is remarkably surprising how many experimental tests of psychological impression formation greatly resemble the experimental tests political scientists have used in the past several decades. Just as with many political experiments, simple descriptions or multimedia presentations of other individuals have been used to assess mechanisms, moderators, and other aspects of impression formation.[4] This broad literature has centered around debates on how impressions of others are stored – that is, what relevant information and attributes about the target are kept or discarded – and how these impressions are described to others.

While there is some dispute – traits, or descriptors of personality attributes – are generally considered to be the building blocks of impression formation. Park (1986) highlights the descriptions people use for their acquaintances in an educational setting, finding that traits were used 65% of the time, with behaviors, attitudes, demographics, and physical characteristics used far less commonly. This reliance on traits words (e.g., compassionate, intelligent) as descriptors for others has been replicated at all levels of familiarity with others.

Yet, others, such as Anderson and Sedikides (1991), have argued for an alternative typological model of personal perception. In contrast with associationistic models' reliance on basic trait associations and correlations between traits, and dimensional models, often relying on factor analysis of associationistic descriptions, typological models, as their name implies, emphasizes the role of "types" of people, particularly when those types are known and salient. This approach, more concerned with the reasoning process by which an overall impression of a person is derived, emphasizes the role of stereotypes and people's prior beliefs about the combination of traits, behaviors, attitudes, demographics, and physical characteristics that go together.

[4]These are more common in "zero acquaintance" designs, when perceivers are completely unfamiliar with the target to be described. This is admittedly a small segment of this literature, as how perceptions of others vary across extended familiarity and interpersonal interaction has been a large focus.

While much of the debate over these models of person perception is somewhat esoteric and not relevant to the discussion at hand, their contrast highlights a number of important, and often overlooked, factors inherent in political candidate evaluation. The lengthy history of political science research on candidate evaluation has typically focused on personality traits of candidates, as perceived by survey respondents, largely settling on four politically relevant traits: competence, integrity, leadership, and compassion (Kinder et al., 1980; Kinder, 1983, 1986; Funk, 1996, 1997, 1999; Miller, 1990; Hayes, 2005, 2010). These traits, however, are merely inferences drawn by citizens about the candidates, based on some underlying information – traits are outcomes themselves, and often derived from party, policy, and other non-personal information (e.g. Rapoport et al. 1989, Campbell and Cowley 2014, Hayes 2005). The conflation of traits with personality has largely confused the literature's focus – while many researchers have sought to examine the effects of candidates' personal backgrounds, they have largely done so only using perceived traits.

These trait inferences from voters, while descriptive, overlook the nature of the political landscape and the decision tasks that voters encounter. Rather than approaching a political candidate as a blank slate, with little idea of what this person might be like, voters generally have some idea about the *types* of people that are politicians, the *types* of politicians that are Republicans and Democrats, and the *types* of people that discuss particular policies, values, or ideologies. This background knowledge and stereotypic information can lead to a completely different inferential process about who this person is than would describing the person with no prior whatsoever. As Walter Lippman famously described person perception,

> "But modern life is hurried and multifarious, above all physical distance separates men who are often in vital contact with each other, such as employer and employee, official and voter. There is neither time nor opportunity for intimate acquaintance. Instead we notice a trait which marks a well known type, and fill in the rest of the picture by means of the stereotypes we carry about in our heads. He is an agitator. That much we notice, or are told. Well, an agitator is this sort of person, and so he is this sort of person. He is an intellectual. He is a plutocrat. He is a foreigner. He is a South European. He is from Back Bay. He is a Harvard Man. How different from the statement: he is a Yale Man. He is a regular fellow. He is a West Pointer. He is an old army sergeant. He is a Greenwich Villager: what dont we know about him then, and about her? He is an international banker. He is from Main Street."
>
> - Lippmann (1922, p. 89)

Or, as Samuel Popkin described in terms more specific to candidate evaluations,

> "Because we generate narratives about kinds of people, it is easier to take personal data and fill in the political facts and policies than to start with the political facts and fill in the personal data. This has an important political implication

> in decision making and evaluation: campaign behavior can dominate political history."
>
> - Popkin (1994, p. 78)

To provide a cohesive and complete picture of how citizens use information about candidates' personal backgrounds, it is necessary to look beyond traits – outcomes themselves – and consider the biographical information that leads citizens to generate narratives. Whether a candidate is a Democrat, a "Harvard Man," a "South European," an "intellectual," a "plutocrat," or from Main Street, these types can all shape both trait inferences and overall impressions and evalautions. While traits may be useful in studying overall candidate impressions once they are formed, we must understand politicians as *types* of people first in order to understand how personal information can impact these evaluations. Because a wide variety of biographical and political attributes can lead to stereotypic inferences, shaping not only the overall impression of a candidate, but impressions of other information as well, we have to examine the attributes themselves.

2.3 Beyond perceived traits: Personal and political background

> "People don't make up their minds on the basis of reading all our position papers. We have twenty-six of them, because some people are interested. But most people get a gut feeling about the kind of human being they want to represent them."
>
> Congressman D, (Fenno, 1978, p. 95)

What personal and political data undergird evaluations of candidates? The long literature on assessing electoral choice has often segmented the world of candidate information into separate silos: policy, party, personal (operationalized as perceived traits), and performance (operationalized as economic performance).[5] Yet, this simplification obscures far more interesting variation in the type of information that undergirds these broad categories and their interdependence. While numerous studies have examined subsets of these types of information independently, the personal background of candidates has received far less attention than policy, party, and even economic (or performance) information.

While Congressman D's account of what matters to voters is quite simplistic, much survey evidence corroborates his story – personal differences, or the "kind of human being" – matter to constituents. In fact, examining the open-ended responses that American National Election Studies (ANES) survey respondents have given about what they like or dislike about

[5]This segmentation is largely a result of their treatment and operationalization in early survey research predicting electoral decisions. For instance, in Campbell et al. (1960) and many studies using early American National Election Studies (ANES) data, these pieces of information are discussed in separate sections and entered in predictive models separately.

candidates for the House of Representatives since 1972, we find that 41.9% of respondents who offered an answer mentioned a personal characteristic of a candidate.[6]

Physically observable, and largely immutable, personal attributes – such as race, ethnicity, gender, and attractiveness – have been the focus of extensive scholarly work, yet few other candidate biographical details (or the strategic presentation thereof) have been systematically studied.[7] A notable exception to this lack of attention to biography is Arbour (2007), who uses an array of interviews with campaign consultants and some advertising data to examine "background appeals", or biographical references in campaign strategy. For those experimental studies that have, the focus is often on a single, relatively narrow, personal attribute, e.g. religion (Campbell et al., 2011) or social class (Carnes and Sadin, 2015), or have very limited realizations of attributes (Campbell and Cowley, 2014). Or in other studies, like Rogowski and Sutherland (2016), the authors use a bundled set of biographical attributes as a holistic "biography" treatment. However, all these studies have a limited ability to separate the role of individual biographical attributes in voters' minds.

Personal attributes that are more malleable and difficult to quantify, such as occupation, family, and education, receive very little attention from scholars, who instead continue to rely on judged personality traits.[8] Despite the difficulty in quantitatively examining variation in these characteristics and theorizing the large number of dimensions on which they vary, they nevertheless warrant full consideration.

To derive a comprehensive list of the types of "data" about a candidate voters could use, it is necessary to look at what information is available to them. While this obviously may change from election to election given the actions of any particular candidate (e.g., the political relevance of a tamale)[9], we can nevertheless describe nearly all information in eleven categories: party, policy, political experience, occupation, military background, education, family, religion, local ties, hobbies, and scandal. These relatively exhaustive categories, while not fully mutually exclusive in their presentation, and often correlated in the levels they take,

[6]There are obvious problems with making causal claims from open-ended mentions. See, for instance, the discussion by Rahn et al. (1994) about rationalization and derivation processes in candidate evaluation. Additionally, explicit mentions of importance do not necessarily correlate with their actual use as information in decision-making processes. This estimate is calculated from the ANES Cumulative Data File's Full and Collapsed Like/Dislike variables - VCF1020-VCF1043b. (American National Election Studies, 2012)

[7]See, for instance, Citrin et al. (1990), Sigelman and Sigelman (1982), McDermott (1998), and Lenz and Lawson (2011) for several experimental and observational studies of the effect of race, gender, age, and appearance on voting behavior. While these attributes can vary in their emphasis and may be mutable to some degree, they are nevertheless more stable than varied presentation in one's occupational history, for instance.

[8]Recent conjoint experimental designs are notable exceptions to this claim, e.g. Hainmueller et al. (2014) and Goggin et al. (2016), however the focus of these studies is often not on the theoretical role of this information in voters' cognition. Campbell and Cowley (2014) also experimentally test the role of candidates' education, occupation, and location as cues in British elections, with limited paired comparisons of candidates.

[9]President Gerald Ford's faux pas in trying to eat the entirety of one, including the husk, as described by Popkin (1994, p. 1) and in many other publications, let to many inferences about his knowledge of not only Latin American cuisine, but regional relations in general.

provide us with a broad array of candidate information from which to start.

These categories of information were derived from an exhaustive content analysis of all available communications from a sample of 61 United States House races in 2012, with 122 candidates total. This sample, stratified on incumbency and seniority, competitiveness, ideological extremity, and the presence of corruption accusations, allowed for large variation in the type of campaigns candidates could run, as well as the type of information available to be presented. From official house.gov websites, campaign websites, official and campaign emails, to Facebook, Twitter, and Youtube content, the self-presentation of these candidates was closely examined to ascertain what information was within the realm of possibility for candidates to present, both positively and negatively.[10] Over the next several pages, I describe the types of information encountered, particularly what we know from existing literature on the effects of that information.

Political party

Central to any discussion of electoral choice is the role of political party – both of the candidate – and of the voter themselves. Since *The American Voter*, the partisanship of a voter has been considered the most important predictive factor in shaping the evaluations of a candidate for office. Whether we consider party as a perceptual screen (Campbell et al., 1960), running tally (Fiorina, 1981), social identity (Green et al., 2002; Greene, 2000, 1999, 2004; Huddy et al., 2010; Nicholson, 2012) or any of the numerous roles it has been given in political cognition, it is clear its effects on the cognition of voters are tremendous. Furthermore, as discussed later in this chapter, its role as stereotype and party image cannot be understated.

Yet, due to party's incredible power in electoral decisions, many who study other aspects of candidate evaluation have often omitted it or held it constant in their experimental studies, as described by McGraw (2011). Efforts at controlling for its effects, except for the relatively few studies that have randomized party alongside other information, limit the inferences we can make about how party images can interact with other provided information. For this reason, while not a biographical characteristic itself, assessing the effects of candidates' political parties alongside other attributes is crucial.

Policy

Long held as the ideal standard for democratic competence, issue voting – or choosing candidates based on their issue positions – has been found to have limited empirical support in recent years. The notion that policy space can be mapped in a dimensional framework, guiding voters' choices over candidates (or parties), is largely rooted in the canonical work of Downs (1957). Yet, many problems lie in the way of voters choosing candidates in this idealistic manner, primarily relying on policy positions.

[10] A digital archive of all this content, totaling over 100GB, due to the large quantity of unedited Youtube videos of campaign events, is available upon request.

First, voters' understanding of issues is imperfect – and as Carmines and Stimson (1980) describe, many issues are in fact quite "hard." While voters can seem to choose candidates based on "easy" issues, they may have great difficulty doing so when policies are relatively unclear and ambiguous. Indeed, voters may even have a preference for ambiguous policy stances (Tomz and Van Houweling, 2009). When policy positions are clearly presented to voters in experimental work, such as in Tomz and Van Houweling (2008), voters have been found to choose candidates based on their policy proximity. Yet, policy positions are often quite complex semantically, often more closely resembling the scale items presented by Ahler and Broockman (2016) – while there may be an underlying ideological structure to the policy positions stated, certain issues may be more or less clear to respondents, particularly when the status quo is less clear and the issue is not well-known.

Second, as Lenz (2013) demonstrates across a wide range of policies, voters often do not select leaders based on their policy stances. Rather, they learn the policy stances of their leaders on less salient or more complex issues, and they move their own opinions closer to those espoused by politicians they prefer. Another alternative role of policy in electoral decisions is that of projection, in which voters give politicians the benefit of the doubt and presume their policy positions are more in line with their own preferences than they actually are (Conover and Feldman, 1982).

While we may observe relatively strong correlations between the issue preferences of voters and the candidates they choose, we have little reason to believe that voters are choosing a candidate based solely on a wide range of issues. Indeed, for many, partisan affiliation precludes a choice based on policy.

Yet, the presentation of policy stances or priorities remains an integral part of an electoral campaign. Candidates spend enormous amounts of money advertising their own popular issue stances while highlighting their opponent's unpopular ones, often on easy issues. Because of the ubiquity of taking issue positions in campaigns, as well as because these stances on issues can signal partisan strength or ideological cohesion, it is important to assess their relative role alongside many other biographical attributes.

In addition to their ubiquity, explanations or justifications for particular policy stances can often link a candidate's personal background and their policy stance. A long line of literature has found that policy explanations, a key component from Fenno (1978), can shape public opinion. These accounts of policy, often taking the form of excuses or justifications, can include a wide variety of other information about the politician and their reasons for their policy stance, and are impactful in voters' minds (McGraw, 1990, 1991; Grose et al., 2015).

Political experience

As Fenno (1978) highlights, politicians wish to convey a sense of qualification to their constituents. This practice – communicating one's political experience and accomplishments – seems an obvious choice for many campaigns. Yet, given the negative valence of "career

politician" and other derisive characterizations of political experience in recent decades, communicating one's political background is not necessarily always a strategic advantage.

Yet, nearly every observational study of electoral performance has found that candidates who have previous elected experience do well (Jacobson, 1989). Whether this experience is at the level they currently seek – that is, they are an incumbent – or it is at a lower level of elected office, it is nevertheless beneficial to have this experience if one seeks to win election.

More specifically than just holding office, candidates, and not just officeholders, often take credit for particular accomplishments. This practice, described as credit-claiming by Mayhew (1974), typically narrowly refers to the behavior of sitting members of Congress taking credit for particular goods and services that they provided to their district. However, as Johnston (2015) describes, both challengers and incumbents engage in this practice, taking credit for not just narrow particularistic goods, but also broader policy accomplishments, even if they played little role in their delivery.

Presenting one's professional political background – experience as either an incumbent in the current position or a lower elected office – is a common tactic. While a candidate may not highlight their ties to existing government and/or run as an "outsider" candidate, they nevertheless will highlight the things they have accomplished while in political office, particularly if it allows them to draw contrast between themselves and another candidate.

Occupation

Even if a candidate has not held elected office previously, she presumably has experience in some occupation. In forming initial impressions of others, a central piece of information is often one's occupation – it tells the perceiver who someone is, and it can be bundled with social class and other related traits. Any occupation a politician has held could be used positively in a messaging strategy simply by highlighting positive connotations of that occupation. Unlike immutable biographical characteristics of individuals, many politicians have had multiple previous occupations, and these occupations can be described in more than one way. It is no coincidence that, despite the relatively high prevalence of individuals holding law degrees running for office, many of these individuals describe themselves as "small businesspersons" when asked to describe their occupation to voters. Relatively humble occupational experience can be used to demonstrate commitment, hard-work and a relatability to the masses, as Carnes and Sadin (2015) describe. Indeed, Pessen (1984) describes in detail how, despite their rhetoric to the contrary, every US President has come from a relatively privileged upbringing and from relatively high-status occupations. Portraying upward social mobility and occupational success lends a notion of qualification to a candidate.

However, more prestigious and higher-status occupations can be used to connote leadership skills and intelligence, as well. Not only does an occupational reference give candidates the ability to relate positively on a personal level, but it also allows them to reference their background specifically in relation to particular policy domains. More than just a label itself, occupation can also connote a wide variety of desirable (or undesirable) attributes; a long literature has established that many occupations hold relatively well-defined stereotypes. In

one of the earliest studies to focus on the content of stereotypes in psychology, Rice (1926) examines occupational stereotypes and personal appearances, later expanding the influence of occupational and other information into judgments of political candidates as well. While much of this early work lacked empirical rigor, there is no doubt a long literature on the subject, an occupation can be central to the impression one forms of another (Cauthen et al., 1971; Crowther and More, 1972; Levy et al., 1988).

Surprisingly few studies have examined the role of candidates' occupation in electoral choice. McDermott (2005) finds that occupational cues printed on ballots in California can alter vote choice, particularly in low-information elections. However, we know little about what types of occupation are most preferred by voters, how preferences can vary across voters, or why voters hold these preferences.

While some authors have largely conceived of occupations as unidimensional on a status gradient similar to social class, arguing for the use of occupational prestige scores (e.g. MacKinnon and Langford 1994), this obfuscates the wide array of information that occupation brings to the table. Learning the occupation of a person could dramatically influence one's perception of the personality traits that person possesses — Levy et al. (1988) finds a two-factor space in which occupations vary in terms of the personality characteristics they connote. Specifically, occupations vary between helping and achievement orientation (with nurse and business executive as exemplar occupations, respectively), as well as in what the authors term educational level, but could also be interpreted as a competence, knowledge-ability, and status dimension.

Military background

While it could be considered a specific type of occupation, a candidate's military service (or lack thereof) can be a powerful signal to voters. In Campbell et al. (1966), the authors discuss how the image as a victorious military leader for both President Eisenhower and Charles de Gaulle contributed to both their success. While few candidates may be prominent military leaders, many do have a background in one of the armed services, even if they do not still currently serve.

Military background could be used to convey expertise on particular policies, as well as more generally be used as a positive, patriotic qualification. As Bianco (2005) describes, military experience is becoming less common among elected officials, leading to minor, yet demonstrable changes in collective representation in Congress on foreign policy issues. Yet, we do not know how many individuals with military experience run for office, or how this qualification can affect voters' decisions.

Education

Related to, and often correlated with occupation, is a candidate's educational background. While certain occupations (e.g. doctor, attorney) connote highly specific educational

backgrounds, educational background itself can carry many powerful signals for voters, including social class and prestige. While one could consider both education and occupation together as signals of a single characteristic – social class – I separate them for an important reason. Simply, rarely do politicians explicitly present social class – e.g., "I am rich" – but do so by presenting parts of their biography that indicate class. These parts, education and occupation, while quite highly correlated, can independently vary.

Even within objective levels of education – such as all candidates with a college degree – there can be remarkable variance in the reliability and expertise implied by a degree, depending on the granting institution. While a degree from an Ivy League school may connote intelligence in some domains, it may also signal to voters an undesirable upper-class or elitist background. Additionally, education from a particular institution may signal one's commonality and reliability to voters. Across levels of education, particular degrees may connote savviness in certain domains, e.g., MBAs for business and economic policy.

While additional levels of education may not greatly influence voter perceptions of politicians, voters may possess strong preferences for qualified candidates with a minimum level of education. For example, while the difference in preferences between a candidate with a BA or MA may be small, a candidate without a college degree, or without a high school degree, may be viewed as completely unqualified. That is, there may be a nonlinear, or merely threshold effect, of education.

Family

Despite how common it happens in campaigns, scholars have mostly ignored politicians' references to their family. References to one's family—whether parents, grandparents, spouse(s), or children—can be used to appear relatable or to signal certain policy considerations, and can be emphasized or deemphasized as needed. Despite having demonstrations of a candidate's familial status as a fixture of political campaigns, few scholars have studied how these presented identities affect candidate impressions and evaluations. The work that has taken place on family politics has typically focused on the role of family – particularly parenthood – on political attitudes (Elder and Greene, 2012).

Familial identities of politicians are often presented visually as well as through verbal description — by politicians making public appearances as a member of their family, rather than a single individual. The cluster of possible familial identities (e.g., mother, father, son, daughter) suggest a clear role for identity-based effects on candidate impressions and evaluations. Shared identity as a mother or father can have powerful effects on evaluations of the candidate. While having a child may be a cue to some that a candidate would care about school and education policy, it can also provide a common bond and inferences of responsibility. Of course, presenting one's family can also mean a variety of different things depending on the gender of the candidate.

Religion

Of the set of candidates' personal attributes, religion has generally been scholars' focus. From accounting for its role in members' voting behavior once in the chamber (Burden, 2007), to its association with party stereotypes (Campbell et al., 2011), to the evangelical or Catholic label being used as a cue for voters (McDermott, 2007, 2009), it has been relatively well-established that a religious background – particularly an evangelical one – can affect electoral choice and representation in multiple ways.

Additionally, it has become a relatively commonplace piece of information in electoral campaigns, particularly with Republican candidates signaling their Christian religious beliefs to voters. Given the Republican party's relatively strong correlation with evangelical Protestant voters and candidates in the recent political landscape, a candidate's professed religion can send a strong partisan and ideological signal to voters. While many have historically discussed the role of John F. Kennedy's Catholic faith in the 1960 election, few have examined the role of candidates' religious backgrounds for denominations or religions besides Christian ones. Yet, a significant number of Jewish and nonreligious politicians have run for federal elected office.

The religious background (or lack thereof) of candidates can send strong independent signals to voters, particularly based on a voter's own religious affiliation, and can also to convey the overall empathy and possible charitable disposition of a candidate.

Local ties

Those holding elected office have constituencies – people from a particular place – that they intend to represent. Fenno's discussion of a candidate's attempt to identify with voters often rests strongly on a candidate sharing the background of and local interests of a community. Of course, a local area may be quite diverse, with a candidate representing a broad array of economic, ethnic, and urban/rural constituencies, to say nothing of US Senators representing entire states.

Very little work has sought to examine how candidates' local roots impact their electoral success and connection with a particular community; Herrnson et al. (2011) find that being from the same state can positively impact electoral success, particularly in more rural areas and the South. Through candidates' educational backgrounds, their religious congregation, their occupation or military background, or their political experience, candidates can also strongly signal local ties to a particular geographic area or a particular constituency of voters.

Hobbies

While they have not been the focus of systematic study, candidates' personal hobbies, including participation in sports, have not been systematically studied. Yet, these activities can play a crucial role in humanizing a candidate and attempting to make them appear relatable to constituencies. When the media and campaigns highlight particular activities

of a candidate, such as the candidate playing golf, these activities can shape perception of a candidate's social class and commonality with particular voters.

Scandal

Finally, explicitly negative information about a candidate can find its way into a campaign. Scandalous information – whether severe indictments of a candidate's moral character or more simple faux paus indicative of a candidate's ignorance – can strongly shape electoral success. A long line of literature on this topic has taken a wide variety of empirical approaches, and generally (and unsurprisingly) found that scandalous information has a negative effect on impressions of a candidate.

Highlighting the role of revelations of sexual impropriety in the downfall of presidential candidate Gary Hart, Stoker (1993) finds that the impact of the scandal was strongest among those voters who more heavily relied upon character-based assessments of candidates. Other work centered on particular salient examples of scandal, such as Chanley et al. (1994), have found that particular explanations, excuses, or candidate strategies post-scandal can mitigate some of their effects. More recently, a wide variety of experimental approaches, with various hypothesized moderating or mediating effects, have also found that scandalous information can be impactful, particularly when it undermines the character or credibility of a politician (Funk, 1996; Woessner, 2005; Miller, 2010; Doherty et al., 2011; Mitchell, 2014; Doherty et al., 2014). Larger-scale observational analyses of both congressional and presidential primary scandals largely corroborate these findings, particularly noting the large variation in impact of scandal depending on the specific facts at hand (Basinger, 2013; Rottinghaus, 2014). While scandals can vary widely in their content and impact, they are a mainstay in the modern political media era – as Romano (2014) describes, media attention to scandal is remarkably high, and candidates for elected office perpetually use scandal information to attempt to win elections.

This broad array of information represents nearly all types of information that voters can encounter about politicians that may affect their electoral choice. However, of course, it does not mean they incorporate all of it. It has been well-documented how little voters know about politics in general, and candidates specifically (e.g., Carpini and Keeter 1997) – yet whether they remember it or not, voters often encounter many of these pieces of information about candidates through both incidental and purposive exposure. Rather than segment information and only expose voters to a particular type of information at one time, we can learn much about the relative role of all these candidate characteristics by assessing their prevalence in voters' judgments and memory.

Yet, as may seem obvious from discussions of the above information, it is not necessarily strategic to present all the above information at any one time, particularly if it is not a favorable or broadly-liked characteristic of oneself. I now turn to factors at the level of the individual voter and those in a particular electoral context that can shape the impact of these candidate attributes.

2.4 Contingent effects: The lack of a universal strategy

Given the wide variety of information a candidate can present to voters, why not present it all? A number of factors, both at the level of an individual voter, and at the context of a particular election, can shape the usefulness of particular information to candidates in building trust with voters. In this section, I highlight four: subjective importance, memorability, ordering/timing, and stereotypicality. These factors, as I show in Chapters 4-6, can strongly shape the overall effects of particular information, leading it to be extremely powerful in some contexts, while utterly irrelevant in others.

Subjective importance

Put simply, we have no clear benchmark against which to hold respondents' use of candidate attributes in their electoral decisions. If a voter uses some information in their decision, yet ignores other information, how do we determine whether this is a competent move on the voter's part? The subjective importance of candidate attributes to voters matters because it determines how voters perceive and evaluate political candidates. It is imperative to measure importance because we need a solid benchmark against which to hold voters, and to understand why some information matters and some does not.[11]

If we assume all information is important, or ourselves dictate a subset of information that is, we run the risk of dramatically overstating or understating voters' democratic competence.[12] Of course, attempts to define voter competence are not new. A number of attempts to assess "correct" voting have been made, and these efforts have sometimes included ways to control for importance. By defining "correct" voting as whether a voter casts their ballot the same as under full information, Lau et al. (2008) presume that voters will use some information and discard others, accounting for variations in importance.

The subjective importance voters place on candidates' attributes should condition voters' attitudes towards the candidate based on those attributes. The importance of a particular attitude, or centrality (Judd and Krosnick, 1982), should be expected to influence voters' usage of that attribute in their decision.[13] That is, attitudes that are central or important (in this case referring to the attitude that a particular attribute is important for politicians

[11] As discussed in Chapter 4, voters encounter a wide variety of information about politicians, and there is no reason to assume that all voters find all of it useful in their decision-making. Furthermore, weighting all information equally in our theory and empirical designs can result in satisficing, described by Hainmueller et al. (2015). If we know what information is important to voters, and if this corresponds to its impact on evaluations, we can then design experiments tailored to respondents' important information.

[12] Traditional conceptions of candidate evaluation by political scientists often stress the importance of policy positions and issue priorities due to our normative belief of their importance. Rather than posit the relative importance of information voters *should* use, we can hold them to their own standard by measuring importance.

[13] The notion of centrality is not unique to this theory of attitude structure. For example, both Fiske (1980) and Ajzen and Fishbein (1977) describe similar concepts in discussions of related literature.

to possess) should be weighted more heavily in an evaluation of a politician. More central issue attitudes should more heavily guide political decisions (e.g. Petty and Krosnick 1995). However, few efforts have been made to measure importance to voters across a variety of attributes, with scholars instead focusing solely on issue positions or issue attitudes (e.g. McGraw et al. 1990; Grynaviski and Corrigan 2006). Because of this, individual-level analyses of the impact of importance across types of attributes do not exist in the literature.

Within the issue-importance literature, a common technique has been to ask individuals how "personally important" an issue is (e.g. McGraw et al. 1990). This technique is appealing – it is the simplest way to explicitly ask respondents what information they value – but it has only been asked with respect to policy information.[14] I use this direct measurement strategy, asking respondents to explicitly rate the importance of different candidate attributes, which allows us to gauge subjective importance to respondents across a much broader set of candidate attributes. This measurement strategy is simple and provides a basic test of whether voters' memories and evaluations match the normative standards they set for themselves. It is one of the few ways of separating importance from memory and impact on evaluations, as less-direct measures conflate these constructs.[15]

Memorability

When considering the ways in which information may affect voters' decision-making processes, it makes sense to consider two important pieces separately: memory and evaluations. While candidate evaluations are ultimately are of interest to those interested in electoral behavior because they shape the choice between candidates, voters' memory of candidate information is both separate from evaluations and important in its own right. Furthermore, the relationship between memory and evaluation is the focus of an extensive literature (e.g. Lodge et al. 1989, 1990; McGraw et al. 1990; Lodge et al. 1995). In memory-based processing, memory of particular information may can be a necessary mediator for information to impact evaluations.

The late 1980s saw a wealth of literature that began to reassess the normative standards to which we should hold voters to in their decision-making. Particularly, advocates of online processing (spurred by Hastie and Park 1986), argued that scholars who disparaged

[14]How we should measure the variability of importance of information is not a trivial question. Early accounts of voter decision-making, using ANES data, quickly turned to the open-ended "likes" and "dislikes" that respondents were asked to mention about candidates (Campbell et al., 1960, 1966). Unfortunately, this method conflates declarative memory and importance, among other issues. Alternatively, some have sought to measure importance based on information-seeking behavior (Redlawsk, 2001; Lau and Redlawsk, 2006). However, these measures may encourage satisficing in information acquisition and the information environment may not closely resemble actual campaigns.

[15]Alternative measurement strategies, such as ranking (not rating) the information classes, were eschewed because they would force variation in importance even if there were none. While this method might help generate more variance in importance, the current method allows respondents to rate all/none of the information as important if they wish to. As shown in the results, the precise question wording variations for importance produce little variation in ascribed importance.

voters' inability to remember information were looking in the wrong place. Voters may not remember the information, they argued, but voters did update their on-line tally of whether they liked or disliked the candidate. This on-line tally was viewed as sufficient to hold well-formed opinions of candidates, and often operationalized as a single tally based on issue positions (Lodge et al., 1989, 1990, 1995).

Put simply, these authors argued for a complete disconnect between memory and evaluations, arguing that, controlling for on-line evaluations, there should be no correlation between memory and evaluations. More recently, these rather strong claims have been weakened by research demonstrating specific instances when memorability of information does, in fact, have an independent effect on evaluations (Redlawsk, 2001; Kim and Garrett, 2012). Indeed, later experimental work has often induced memory-based or on-line processing with experimental protocols, as it is clear that both operate in the real campaign environment (Druckman et al., 2010). Furthermore, theorizing online processing as a singular tally across all types of information may be too restrictive. One could imagine that voters would retain a valence for a particular type or area of information, even if the information content itself is forgetten, and this valence is not integrated into an overall candidate evaluation.

Unfortunately, a common problem in all this literature is a heavy reliance on policy information to adjudicate between the on-line and memory-based models of information processing. Particularly, while personal information may be presented in these experiments, it is not entered into an on-line tally or measured for its memorability, limiting the tests of the two models and the scope of the conclusions. Only recently have a few notable exceptions tested for memorability of information other than policy information.[16] Because the extensive on-line versus memory-based processing literature almost exclusively measures these processes with policy or issue information, we know little about how a variety of candidate attributes will likely be processed by voters in memory.

Because of these issues, it is imperative to measure both the memorability and impact on evaluations of the full set of information available to voters, which includes a great deal of personal information. Additionally, examining both memory and evaluations and delaying the measurement of both has additional benefits for the external validity of research.[17] Of course, there is not simply one type of memory. For this reason, I assess the memorability of information in three distinct ways in Chapter 4. First, respondents were asked to recall up to five items about the candidate, with open-ended boxes capturing their responses. Second, respondents were asked to recall the valence of information within each information domain – that is, whether they felt favorable or unfavorable about that candidate's attribute.[18]

[16]For example, Mitchell (2014) examines the impact of scandal information in memory. Because scandals are universally negatively valenced, there was no need to control for an on-line tally.

[17]Particularly, due to concerns about the explosion of vignette experimentation and strong treatments, delaying measurement of these outcomes lessens concerns that survey experiments lack external validity, as Barabas and Jerit (2010), among others, have argued. Delayed measure insures that, to some degree, the impact of the information was retained and impactful.

[18]This could be thought of as a domain-specific on-line tally, as respondents are recalling the valence, but not necessarily the underlying information.

Finally, respondents completed a multiple-choice battery testing memory accuracy.

Ordering & timing

The election schedule also dramatically shapes what candidates present. Because a primary election pits relatively like-minded candidates (in terms of policy) against one another, they often are forced to differentiate themselves based on personal characteristics (Popkin, 1994). Because primary elections require candidates to heavily publicize personal characteristics before going into the general election, these personal attributes and their relevant identities are often the first thing citizens learn about a candidate. The order in which personal, policy, and other political information is presented to citizens should affect the information and evaluations they retain for a later decision task. Importantly, personal vs. performance evaluations may differ dramatically depending on the ordering of presentation. While some studies have found massive recency effects in performance evaluations (e.g. economic performance), the literature on impression formation and personal and affective evaluations suggest this front-loading of personal information may have dramatic effects on later decisions.

Despite much research on how the timing and order of information can effect memory and evaluations, few studies in political science or psychology have examined the particular role of timing of information on candidate evaluation. Yet, many have implicitly made arguments regarding its role (e.g. Hill et al. 2013). These arguments, largely about recency effects, rest on a very simple foundation: Voters do not spend a lot of time thinking about politics, and they forget what they learn rather quickly.

Arguments for recency often rest on conceptualizing voters' reasoning about politics as a memory-based, rather than online process. While the distinction between memory-based processing and online-processing has been rather well-tread (see, e.g., Lau and Redlawsk 2006, Mitchell 2008, Lodge et al. 1989, McGraw et al. 1990, Hastie and Park 1986, Hill et al. 2013) in discussions of candidate evaluation over time, it is worth briefly clarifying its role in the argument for recency effects in electoral campaigns. While both types of processing are clearly present in the electorate, a large body of evidence suggests that memory-based processing is more common, as few voters think effortfully about the information they encounter to update their online tally of the target they are evaluating. Specifically, if we expect that evaluations of candidates are memory-based and driven by whatever information, or considerations, a voter currently has about the candidate, then the most accessible considerations should drive evaluation (Zaller, 1992). The argument for recency rests on this notion of accessibility—that more recent memories should be accessible to influence one's evaluation. Yet, if a particular piece of information is vivid or salient enough to anchor one's evaluation, earlier information may be more valuable.

Partisan stereotypicality

Finally, we know that the bundles of information that voters receive about candidates are not randomly assigned – they often contain the same type of information together – and nearly always contain information about a candidate's partisan affiliation. This affiliation can serve as an incredibly powerful influence in how voters respond to candidates by serving as a stereotype. Stereotypes, or "qualities perceived to be associated with particular groups or categories of people" (Schneider, 2005, 24), allow us to go beyond the information at hand when thinking about other people. Long literatures have sought to assess the usefulness and accuracy of stereotypes, often pointing to many places where their application leads us to inaccurate inferences.

The consideration of stereotypes in candidate evaluation is by no means novel; the most extensive literature centered around their use is on the powerful effects of gender stereotyping of political candidates (Sanbonmatsu, 2002; King and Matland, 2003; Sanbonmatsu and Dolan, 2009; Dolan, 2010; Dolan and Sanbonmatsu, 2011; Hayes, 2011; Dolan, 2014). While some work, including Rahn (1993), Arceneaux (2008), Dolan and Sanbonmatsu (2011), and Hayes (2011) has focused on the role of party stereotypes, the study of their application alongside other individuating policy and personal information is relatively new.

Voters may possess party stereotypes with meaningful personal and/or policy content about politicians, but a number of factors may condition whether they might apply them, including the presence and quantity of individuating information. If a voter is only told a candidate's party, then it is very likely that information will lead them to infer a wide variety of other information about the candidate. However, if a voter is told multiple details about the candidate, then the party stereotype might not be applied as strongly.

Notably, however, we might expect the role of party stereotypes to be exceptionally powerful when the information presented alongside a party label violates the expected qualities for that party. The power of expectancy violations in decision-making is quite clear, and authors in the ownership literature have discussed strategies of candidates for focusing on either issues associated with their own party (Egan, 2013; Petrocik et al., 2003; Petrocik, 1996; Brasher, 2003; Pope and Woon, 2009) or on issues associated with the other party, often called "trespassing" (Damore, 2004; Holian, 2004; Kaplan et al., 2006; Sides, 2006; Sigelman and Buell, 2004). With respect to both policy and personal information, candidates could differentially benefit by possessing qualities not typically associated with their party. But, others would expect the opposite – that bolstering one's party image may lead to more positive evaluations, particularly from co-partisans. Unfortunately, the ownership literature offers differing predictions about how counter-stereotypical individuating information will effect evaluations of politicians.

While no one would dispute the importance of partisan stereotypes, measuring their application is not an easy task. Because voters are also often affiliated with one of the two parties, party stereotypes may not be identical across voters belonging to different parties. Given that we know party can serve as a perceptual screen, it may lead to different, more positive inferences, for copartisan candidates, while lead to negative inferences for those

candidates of the other party. Therefore, in order to assess party stereotypes, we must separate them from partisan identity effects. This task is by no means easy; in Goggin and Theodoridis (2016), the authors apply a difference-in-differences approach to separate the effects of shared stereotypes from partisan boosting resulting from a voters' own partisan identity. If one has estimates of ratings of both Democratic and Republican candidates from both Democratic and Republican voters, then one can utilize this approach to assess whether there appears to be a shared stereotype amongst voters of both parties.

In addition to boosting candidates of one's own party in evaluations and ascriptions of positive qualities, different types of voters (e.g., Democrats and Republicans) may differentially value particular candidate qualities, issue priorities, or issue positions. That is, Republican voters may more positively regard candidates with business backgrounds, or candidates with families. To account for these differences, the analyses I present are often broken down not just by the candidate's party, but by a respondent's party identification as well. Whether differences in evaluations from partisan respondents are due to partisan identity effects or differential valences of information, however, we cannot discern. As Schneider (2005) details, despite the extremely long literature on stereotypes, studies of the exact content of stereotypes have been relatively rare. Because stereotype content can be varied and not universally shared, representative samples are needed, and assessing sometimes implicitly assumed associations is a difficult measurement problem.

From the background literatures in both psychology and political science, we have numerous expectations about candidates' strategies in presenting their biography, the effects biography may have on voters, the types of information candidates may present, and the factors that may shape biography's impact, but we have little empirical evidence of any of these. Many hypotheses espoused in the literature are derived from particular candidates, particular elections, or particular times, but we know few generalizable things about systematic variation in candidates, how they present themselves, and the impact on voters. In the remaining chapters, I turn to answer each of these questions, relying on both large-scale observational datasets and a series of experimental approaches on surveys to gauge the role of candidates' biographical information in voters' minds.

Chapter 3

Candidates' biographies: Who runs, who wins, and strategic presentation

While some studies of campaigns and elections have used coarse measures of candidate quality to assess what role candidates' personal backgrounds play in the electoral process, we know surprisingly little about how candidates' rich biographies are presented in campaigns and how they relate to partisanship and electoral success. Efforts at examining candidates' biographies have often been limited to studies of electoral winners (i.e. the representation provided in office by a particular type of candidate), or far more easily measured core demographic attributes of candidates (e.g. race, gender). This chapter uses new, systematized candidate profiles from Vote Smart for all Democratic and Republican congressional candidates from 2008-2014 to examine how biographical attributes, such as family, education, religion, military service, occupation, and civic participation, are related to candidates' partisanship and electoral success. Additionally, using television advertising data for all congressional candidates from 2008-2012, I assess how these underlying biographical characteristics are strategically presented by candidates over the course of congressional campaigns.

3.1 Selling a candidate

A central question for any representative democracy is who runs for office, because it affects many others – to what degree the representatives reflect their constituents, why certain candidates win and lose, what party structures and stereotypes exist, among others. While a long literature in legislative representation has examined the correspondence between candidate attributes and their constituents on a wide variety of things, from policy preferences, policy priorities, and ideology, to demographic attributes such as race or gender, studies have overlooked the biographies of those who run and lose. Most of the work on personal attributes of politicians has focused on the racial/ethnic background or gender of elected representatives, with surprisingly few studies focusing on the complex biographies of elected officials, including many important, formative characteristics such as educational

background, occupation, family, military service, religion, local roots, and service in community groups.

While some recent work such as Burden (2007) and Carnes (2013) has made important contributions in examining the role things like religion and social class have in driving legislative behavior within the US Congress, we still do not know about the role of these personal backgrounds in campaigns and elections, as well as how these attributes can influence the decisions of candidates and representatives on how to present themselves to voters.

Those literatures that have grappled with personal background of candidates and their electoral effects have often largely concerned themselves with conceptualizing a single characteristic – candidate quality (Jacobson, 1989; Carson et al., 2007; Buttice and Stone, 2012). Due to obvious data limitations, particularly over the history of congressional elections, candidates' entire biographies are often measured as a simple dummy variable – whether the candidate has held prior elected office.[1] While this measure, in some sense, is an important candidate characteristic for electoral success, it misses a large variety of attributes that can affect a candidate's ability to relate to voters and get elected. Furthermore, it obscures any important variation in the *type* of candidates who run as Democrats or Republicans in congressional elections, limiting our ability to understand how the parties might come to "own" a trait or issue (Petrocik, 1996; Hayes, 2005; Goggin et al., 2016).

To better understand the role that candidates' backgrounds play in their electoral success and electoral strategy, I rely on two underutilized sources of data. First, using candidate surveys and its own researchers, Vote Smart provides extensive biographical information, including education, occupation, family, religion, military service, and community group affiliation for nearly all recent candidates for the US House or Senate. These records provide a comprehensive and relatively unstrategic presentation of candidates' background, as they are formatted and presented as a basic resume or CV in a series of open-response text-boxes.

Second, I examine television advertising data from the Wisconsin Ads Project and the Wesleyan Media Project to examine how many of these same candidates present themselves to voters. While candidates are somewhat constrained in how they present their biography to voters, examining this communication is crucial, as many biographical characteristics are mutable in their portrayal, unlike most demographic attributes, such as race and gender. These two sources of data allow us to better understand the relationships between the personal backgrounds of candidates, their electoral success, their campaign strategy, and party images and stereotypes.

The analyses presented in this chapter advance our understanding of the role of candidates' biographies in campaigns and elections in three important ways. First, because we have rich biographical details for both winning and losing congressional candidates, we can examine the backgrounds of candidates that fail in their quest for elected office. Many arguments about representation based on social class and other biographical attributes (e.g. Carnes 2013) hinge on the notion that recruiting more representative candidates should help

[1] A notable exception is Buttice and Stone (2012), who use expert survey data rating candidates' "leadership qualities," which strongly resemble perceived trait ratings previously discussed.

ameliorate these issues. However, if candidates from more representative backgrounds (e.g., less wealthy) are, in fact, seeking office and failing, suggestions to remedy the representational disconnect may be misguided.

Second, this study moves beyond coarse measures of candidates' backgrounds and examines the role of a wide variety of biographical factors, including family, education, occupation, military service, religion, and community involvement. Rather than collapse these biographical details to a measure of quality, we can examine not just how these characteristics relate to electoral success, but also to partisan stereotypes and variations in the types of candidates in different electoral contexts.

Finally, this study pairs these largely objective descriptions of candidates' backgrounds with advertising data, allowing us to examine what information politicians expend scarce campaign finances on presenting to voters, as well as what details they decide to omit. These data allow us to examine whether Democratic or Republican candidates differentially value certain personal attributes in their presentation to voters, as well has how certain biographical details may be distorted in their portrayal.

3.2 Who are congressional candidates?

In order to systematically examine how candidates' biographical details relate to their electoral success, partisanship, and other campaign-related factors, it is first necessary to assemble extensive biographical records for congressional candidates. To do so, I collected candidate biographies from Vote Smart, `http://www.votesmart.org`. Founded in 1992, Vote Smart collects biographical information for each candidate by contacting the candidates with the "Political Courage Test," which asks candidates for their positions on a variety of policy issues, and for their relevant personal details. Although some candidates do not fill out the survey, Project Vote Smart employees do supplement the survey responses with data collection efforts of their own. An example profile, as displayed to a voter on the web, can be seen in Figure 3.11 in the Appendix.

To collect this information systematically, the Vote Smart API and the R package 'pvsR' (Matter, 2014) were used to download candidate biographical information for all general election (Democratic and Republican) US House and Senate candidates in 2008, 2010, 2012, and 2014.[2] This yields 2267 unique candidates, as many candidates (particularly incumbents) ran for office in more than one of the four elections.[3]

The Vote Smart biographies contain many pieces of useful information about the candidates' backgrounds, and, while some data is missing, it is overwhelmingly complete for general election major party candidates. For example, for the "candidate.family" field, which

[2]These records were downloaded for 2008, 2010, and 2012 on July 25th, 2014, and for 2014 on January 26th, 2015. These years were collected because of the high level of missing data for years prior to 2008.

[3]Because the types of candidates who run are of primary interest, the unit of observation for nearly all analyses presented here is the candidate. However, for analyses involving electoral outcomes, the unit of observation is the candidate-year.

details the candidate's marital status and children, there is data for 1977 of the 2267 unique candidates, or a completion rate of 87.2%. Because the rate of missingness varies slightly across personal details, and certain fields' missingness may indicate a candidates' specific desire to not report that field, the analysis in this paper includes the percent missing category for every tabulation involving mutually-exclusive categories. As I further demonstrate below, candidates with missing data are largely "low-quality," also likely to have missing records in Federal Election Commission (FEC) data and more likely to lose elections, indicating they did not collect or spend significant amounts of campaign funds or perform well.

Of the available data fields, several were closely examined and hand-coded by undergraduate research assistants for their content, as there is no universal pattern to how the candidates responded to each question.[4] These response fields from Vote Smart, *family*, *birthPlace*, *education*, *profession*, *political*, *religion*, and *orgMembership*, contained details the candidate entered into the Political Courage Test survey. Candidates can enter multiple responses into each field; for example, the *profession* field often contains several entries, with candidates' work experience listed in chronological order. Because of the complexity of these fields, research assistants hand-coded them to precisely measure their content.

To examine the systematic patterns in these biographies, I present two types of results below. The first utilizes the hand-coded data, allowing us to tabulate important biographical characteristics, such as a candidate listing military service in their professional background. The second uses basic unsupervised text analysis to examine the types of words and titles candidates used in describing their education, their profession, their religion, and their membership in civic organizations.

Figure 3.1 displays the proportion of Democratic and Republican general election candidates for US House or Senate who ran from 2008-2014.[5] Several patterns are immediately striking - both overall, as well as disparities that emerge by the partisanship of the candidate. First, corroborating much of the evidence using only elected members of Congress, there are far more male candidates for office than female candidates. There is notably a large gender disparity by party, with far more Democratic female candidates than Republican female candidates.[6] Second, with respect to family, the vast majority (74.8%) of candidates reported being married, with significantly more Republican candidates (77.3%) reporting being married than Democratic candidates (72.4%). Democratic candidates also reported slightly higher rates of divorce than Republican candidates. The vast majority of candidates reported having at least one child, with Republican candidates significantly more

[4]Due to labor constraints, we have not formally calculated reliability statistics of these codings yet. However, for a random sample of 100 candidates, two independent coders agreed completely on all 33 hand-coded fields for all 100 candidates. This perfect agreement is likely due to the relatively easy nature of this coding task, as it mostly involves assessing the presence of a given attribute or level, or providing a count of items.

[5]As described above, the observation here is at the level of the candidate, with each candidate included only once, even if they ran in multiple elections (either as an incumbent or challenger).

[6]The gender of a candidate is the only field that has no missing data - all candidates, regardless of their response to the biographical survey, had this information recorded by Vote Smart.

likely to have children (76.5% vs. 73.4%).[7] Although not shown in Figure 3.1, Republican candidates reported significantly more children (2.3) than Democratic candidates (1.9), $t(2175) = 5.6, p < .001$.[8]

With respect to education, many interesting patterns emerge, with many partisan differences at all levels of education. First, the vast majority of Congressional candidates possess at least a college degree, with 76.0% of Democratic candidates and 71.2% of Republican candidates holding a BA or BS or equivalent. This partisan asymmetry holds for nearly all advanced degrees as well – PhDs, JDs, MDs, or any advanced degree. The most common advanced degree is a law degree, with 23.3% of candidates holding a JD. Only a very small proportion of either party's candidates possess only a high school degree, although slightly more Republican candidates than Democratic candidates fall into this category (2.4% vs. 1.0%). Regarding whether those that possess a college degree went to a private or public university, we see that significantly more candidates possess degrees from public colleges or universities than private ones.[9]

When we examine candidates' professional and military backgrounds, we again see variation by the partisanship of the candidate. Overall, candidates who responded to this question listed an average of 3.68 (SD = 2.17) professions in the provided text box, with no differences by candidate party, $t(1894) = 0.16, p = .87$. For simplicity, all but one of the analyses presented here record the candidate's most recent profession. While 33.6% of candidates' last employment before elected office was in the business sector, 41.1% of Republican candidates fall into this category, while only 26.7% of Democratic candidates do so. This disparity continues to exist if we look at candidates who listed their last job as not just in the business sector, but as a business executive (27.8% vs. 14.9%). We see the opposite partisan pattern for those candidates who listed their last employment as an attorney, with 19.6% of Democratic candidates and only 13.0% of Republican candidates. We see a similar pattern for those candidates who listed their most recent occupation as a public sector service job (e.g. teacher), with 17.0% of Democrats and only 7.6% of Republicans. Interestingly, we see no partisan asymmetries, and less than 10% of candidates with military or law enforcement, a political profession, technical profession, or blue collar profession as their last employment. Even if we broaden the blue-collar category to those that listed any working experience meeting this definition, we see no partisan difference (6.3% of Republicans vs. 5.9% of Democrats). 18.7% of candidates indicated having US military service at some point in their past, with significantly more Republicans (21.5%) than Democrats (16.0%) listing this background.

[7] As most candidate survey responses record the names of the children, coders also recorded the presumed gender of the children. However, despite the differences in the overall number of children, no child gender asymmetries appear to exist by party.

[8] Candidates that did not list any children, but did put text in the family field (regarding their marital status) were recorded as having zero children.

[9] These proportions do not sum to one because of candidates who responded merely with their degree and no institution, foreign institutions, or cases where it was impossible to discern whether the college or university listed was public or private.

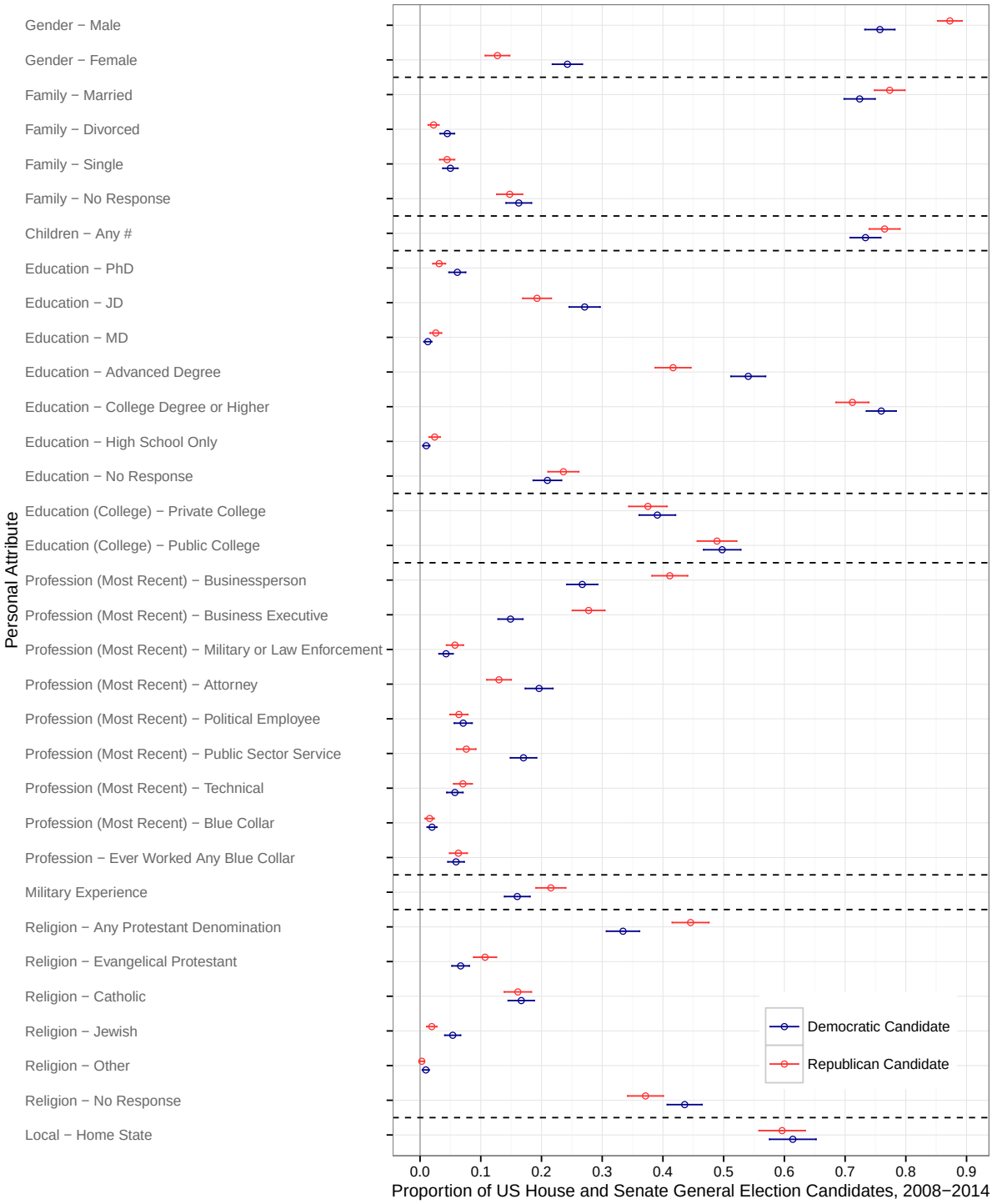


Figure 3.1: Biographical attributes of US House/Senate candidates by party, 2008-2014

NOTE: $N = 2267$. 95% confidence intervals shown. Candidates who ran in more than one election from 2008-2014 are only counted once. Only general election candidates included. All percentages without a "No Response" category are percentages of valid responses in that category. For example, the private and public college education variables are percents of those with college degrees.

With respect to religion, we find the expected partisan asymmetry between Republican and Democratic candidates and both evangelical Protestant and any Protestant background, with 10.7% of Republican candidates and only 6.7% of Democrats calling themselves evangelical. Roughly equal percentages of Democratic and Republican candidates (16.7% vs. 16.1%, respectively) identify as Catholics, while significantly more Democratic candidates identify as Jewish (5.4% vs. 1.9%). Interestingly, religion provides an important case for why the item-level nonresponse to Vote Smart may be strategic (e.g., for those who are nonreligious), with significantly more Democratic candidates declining to list their religious background than Republican candidates (43.6% vs. 37.1%). The final line in the figure displays the proportion of candidates whose listed birth state matches the state in which they are seeking office; there is no difference between Democratic and Republican candidates, with roughly 60% of candidates running in the state in which they were born.

Finally, although not shown in Figure 3.1, we also coded the quantity of civic organization memberships that candidates listed, separating these by whether they were local (e.g. a place-specific Rotary Club), or national (e.g. the National Rifle Association). Overall, candidates listed an average of 2.26 (SD = 2.81) local civic groups and 1.47 (SD = 2.12) national civic groups in this repsonse field. There is no difference between Republican and Democratic candidates in the quantity of national civic organization memberships (1.44 for Democratic candidates, 1.49 for Republican candidates, $t(2259) = 0.46, p = .65$), however Republican candidates listed significantly more local civic organizations, 2.41 versus 2.12, $t(2200) = 2.48, p = .013$.

Of course, we are also largely interested in how these personal characteristics relate to the electoral success of candidates. Figure 3.2 displays the proportion of winning and losing candidate-elections with each personal attributes.[10] The figure reveals many striking patterns, some surprising, but many in line with expectations regarding candidate quality and the type of personal characteristics that make a successful, winning candidate for either party.

First, across the board, not responding to a particular field of the candidate survey is far, more prevalent among losing candidates than winning candidates. This holds true for family, education, and religion. While the moderate prevalence of missing data in the full sample is cause for some worry, it helps assuage many concerns, as those with missing data are often non-serious candidates who raise essentially no funds and spend no funds on their campaign.[11]

With respect to gender and family, it is first clear that female candidates are slightly more likely to be losing candidates than winning candidates (19.5% vs. 17.2%). Winning candidates are far more likely to be married than losing candidates (both as measured by reporting a candidate is married, as well as by reporting a candidate is single). Similarly,

[10]So, for instance, an incumbent candidate running in 2008 and 2010 is recorded twice, once with their biographical attributes in 2008 and once with their biographical attributes in 2010, as well as whether they won or lost in each year.

[11]Separate analyses of these candidates by FEC-reported data, not shown here for brevity, show that many of the non-responding candidates here also did not file FEC returns indicating any campaign spending.

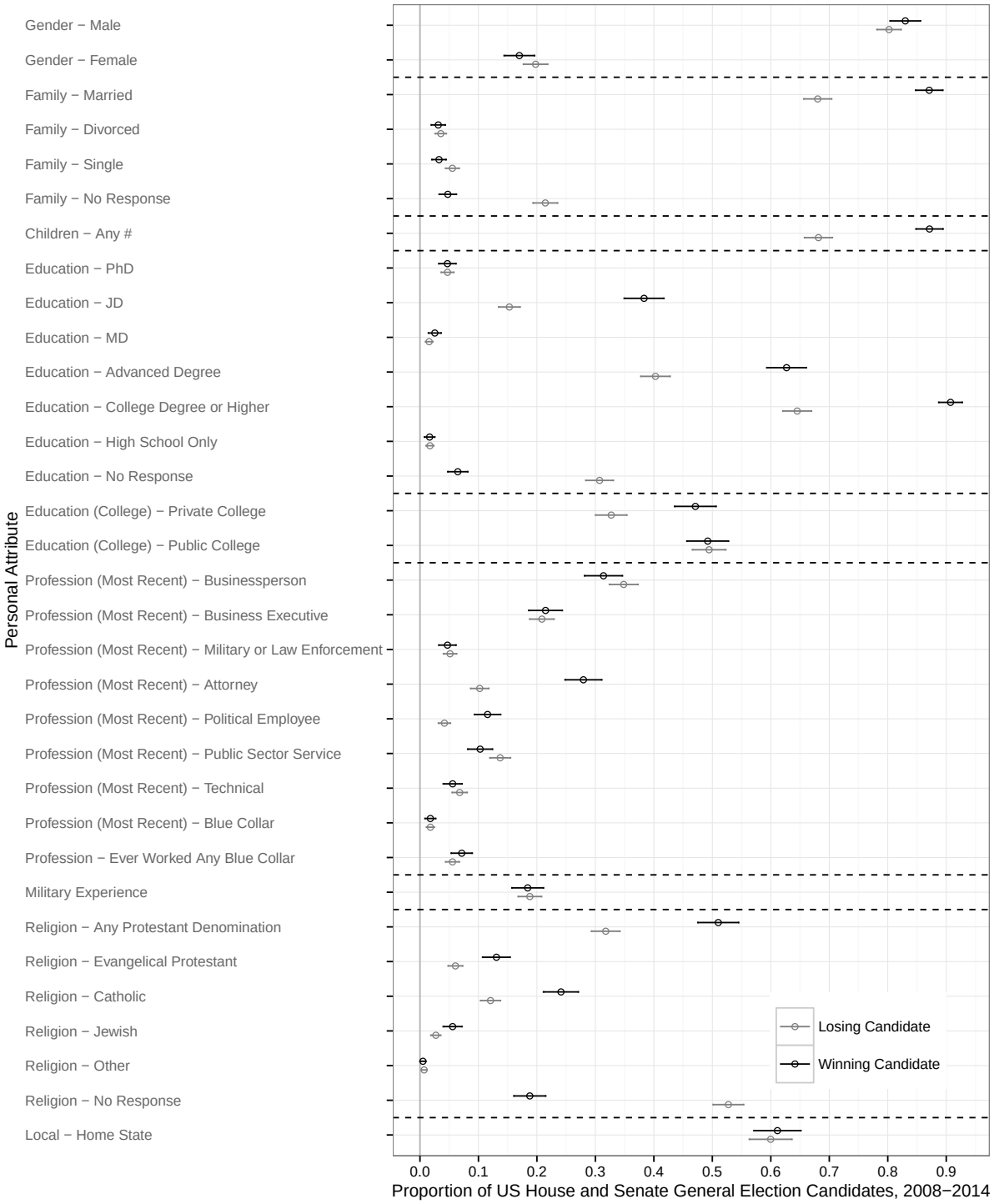


Figure 3.2: Biographical attributes of US House/Senate candidates by electoral success, 2008-2014

NOTE: $N = 3721$. 95% confidence intervals shown. Winners and losers defined by general election electoral success. All percentages without a "No Response" category are percentages of valid responses in that category. The private and public college education variables are percents of those with college degrees.

candidates reporting having any children are significantly more likely to be winning candidates. This different holds upon when examining the number of children, as well, with winning candidates having an average of 2.4 children, while losing candidates have only an average of 1.9, $t(3345) = 9.6, p < .001$.

Higher education appears to be positively associated with winning, as winning candidates are more likely to have a college degree or higher. Interestingly, those candidates with a PhD fared about equally as well (5.0% of winning candidates versus 4.7% of losing candidates). Also surprisingly, candidates who attended a private college are more likely to be winning candidates, while those who attended a public college appear to be about equally as likely to win or lose.

Across nearly all professions, except for attorneys and political employees, candidates with those professional backgrounds are more likely to be losing candidates than winning candidates. While, obviously, there are many other causal factors at work, this is likely due to the large supply of candidates with these backgrounds who unsuccessfully run. If we look beyond just the most recent profession listed, we see that candidates who ever worked any blue collar job are more likely to be winning candidates (7.7%) than losing candidates (6.0%). If we count the total number of professions listed, we see winning candidates list significantly more (3.85 vs. 3.65, $t(2638) = 2.6, p < .01$).

Candidates with any military experience listed are slightly more likely to be losing candidates than winning candidates (20.4% vs. 17.8%). Very few meaningful patterns emerge with respect to religion – listing any religion is positively associated with being a winning candidate. There is no clear association between a candidate being born in the state in which they are running and their electoral success.

Finally, the number of local and national civic organizations listed is very strongly associated with electoral success. Winning candidates listed an average of 3.5 local civic groups, while losing candidates listed an average of only 1.8, $t(3713) = 17.7, p < .001$. Similarly, winning candidates listed an average of 2.7 national civic groups, while losing candidates only listed an average of 0.9, $t(3559) = 24.9, p < .001$.

To assess how these biographical characteristics are associated with overall electoral success, I also collected a variety of common variables associated with successful congressional election campaigns. Table 3.1 displays the results from an OLS regression of vote share on many biographical variables, as well as several control variables typically related to successful candidacies, for all 2008-2012 candidates.[12] While inferences of causality are tenuous at best, the regression results suggest that, in fact, many of these biographical attributes are independently associated with electoral success, and not merely proxies for other, better measures of candidate quality. Notably, marriage, a law degree, a profession as a business owner/executive, a previous profession as a politician, and the number of local and national civic organizations one belongs to are all positively associated with higher vote share, even when controlling for the typical slate of variables in an analysis of congressional election

[12]These control variables come from Bonica (2013)'s Database on Ideology, Money, and Elections. Candidates from 2014 were dropped from this analysis because they are not yet contained in this database.

outcomes.

Controls		Coefficient	SE
	2004 Presidential Party Voteshare	.647***	0.030
	Incumbent	12.590***	0.856
	Total $ Spent (in Millions)	−0.588	0.422
	Total # of Contributors (in 1000s)	0.344*	0.148
	Democratic Candidate	3.198***	0.592
	Extremity - Abs Value cf_score	−3.216***	0.682
Biography			
	Gender - Female	0.461	0.695
	Family - Married	1.656+	0.880
	Family - Any Children	−0.745	0.827
	Education - College Degree	1.273	0.902
	Education - More than College	−0.608	0.729
	Education - JD	1.514+	0.839
	Education - MD	0.131	1.964
	Education - PhD	−1.561	1.420
	Profession - Business Executive	1.702*	0.711
	Profession - Current Politician	3.714***	0.947
	Profession - Public Sector	0.363	0.807
	Profession - Blue Collar	−0.609	1.001
	Profession - Total #	−0.001	0.145
	Military Experience	0.498	0.735
	Religion - Protestant	0.340	0.663
	Religion - Catholic	0.425	0.858
	Religion - Jewish	−2.429+	1.314
	Organizations - Local #	0.270 ∗ ∗	0.093
	Organizations - National #	0.371 ∗ ∗	0.124
Other			
	2010 Dummy	0.855	0.663
	2012 Dummy	2.167 ∗ ∗	0.726
	Intercept	7.323***	1.953
	Adj. R^2	0.578	
	N	2067	

Table 3.1: Regression of general election voteshare on biographical candidate characteristics, 2008-2012

NOTE: OLS regression of general election voteshare (0-100) on above variables. Standard errors are clustered at the level of the candidate. All variables coded as previously described. All effect estimates are relative to omitted categories of biographical attributes - typically data not provided and/or low status categories. $+ = p < 0.1$, $* = p < .05$, $** = p < .01$, $*** = p < .001$.

We can also examine the biographies provided to Vote Smart without relying on the judgment of coders. While we could analyze the text provided in response to the questions about candidates' education, profession, religion, and civic organizations in a number of ways, I present a simple unsupervised approach here, merely counting the words appearing in these entries. I do so primarily because the text is already relatively structured - many of

the same common words should appear, given each field is provided for a relatively specific purpose.

Tables 3.2 and 3.3 display the 50 most commonly used words in candidates' education and profession responses, broken down by a candidate's party.[13] Several important patterns quickly emerge, largely corroborating the previous results from the hand-coded biographies. For example, in the education field, "PhD" appears 70 times for Democrats, while it only appears 27 times for Republican candidates. "Law" appears 258 times for Democratic candidates, while only 163 times for Republican candidates. "Business" appears 111 times for Republicans, while only 77 times for Democratic candidates.

We see similar partisan differences in the words used in the profession field, with terms such as "attorney," "law," "professor," "teacher" all appearing far more frequently in Democratic candidates' professional descriptions. Conversely, military-related terms, as well as business-related terms, appear far more frequently for Republican candidates. If we look to the results for religion in Table 3.3, we also see similar confirmation of the earlier hand-coded patterns.[14] The results for civic organization membership also reflect relatively clear partisan differences. Due to the onerous nature of hand-coding all civic memberships, this analysis provides us the best evidence of the type of civic organizations to which Democratic and Republican candidates belong. While many of the most-used words are basic titles (e.g. "member"), other words appear differentially in the top 50 for candidates from the two parties. Particularly, education-related, business-related, law-related, religious, and diversity-related terms appear with differing frequencies between the candidates of the two parties.

If we analyze this text by whether a candidate won or lost the election, we also see important differences between candidates. Tables 3.4 and 3.5 display the same word count process as above, except this time, broken down by winning and losing candidates. Because candidates could run in multiple elections between 2008-2014, the unit of observation is now the candidate-election. First, given the strong association between missing data and losing an election, we see significantly lower counts for nearly all words among losing candidates. Despite this, we still see many words that are typically thought of as describing stronger candidates, as we would expect, listed more commonly among winning candidates. Particularly, within the education field, we see well-regarded educational institutions and advanced educational degrees far more commonly among winning candidates. We also see many high-status occupations listed far more commonly among winning rather than losing candidates.

Having closely examined who congressional candidates are – Democrats and Republicans, winners and losers – I now turn to how this personal information feeds into what we more

[13] As before, only unique candidates are displayed here. All punctuation and numeric characters were removed and replaced with spaces before the word counts were calculated. Counts could include multiple entries from the same candidate.

[14] It is also striking how much lower the raw counts are, given the larger amount of missing data in the religion field. Also, given the relatively few words one can use to describe one's religion, we see far more clustering on several key words.

	Education		Profession	
Order of Frequency	Republicans	Democrats	Republicans	Democrats
1	university (1180)	university (1611)	united (508)	united (455)
2	college (334)	college (366)	states (494)	states (423)
3	school (246)	school (305)	present (431)	attorney (400)
4	state (223)	state (268)	owner (291)	present (360)
5	attended (220)	law (258)	attorney (245)	director (287)
6	law (163)	science (249)	president (237)	university (280)
7	science (162)	attended (225)	former (232)	former (256)
8	political (127)	political (219)	director (197)	school (204)
9	business (111)	harvard (102)	company (176)	state (192)
10	administration (76)	california (95)	army (160)	law (190)
11	california (76)	point (92)	manager (155)	assistant (189)
12	graduated (68)	average (85)	officer (155)	owner (174)
13	mba (65)	grade (85)	incorporated (151)	professor (169)
14	history (62)	administration (82)	chief (139)	teacher (162)
15	point (61)	business (77)	business (138)	department (157)
16	management (60)	education (74)	founder (134)	army (142)
17	average (56)	phd (70)	assistant (132)	manager (142)
18	grade (56)	graduated (69)	executive (129)	president (140)
19	economics (55)	economics (68)	state (120)	county (135)
20	new (53)	history (66)	university (115)	officer (129)
21	engineering (52)	new (66)	law (102)	office (128)
22	states (49)	public (64)	air (94)	chief (125)
23	united (49)	bachelors (60)	national (91)	executive (121)
24	community (47)	washington (60)	department (84)	incorporated (119)
25	texas (47)	texas (58)	vice (84)	business (117)
26	education (46)	government (56)	county (82)	company (114)
27	bachelors (43)	engineering (52)	office (81)	district (109)
28	institute (43)	studies (52)	corporation (80)	founder (104)
29	public (43)	masters (51)	general (79)	national (98)
30	florida (42)	psychology (50)	school (79)	new (98)
31	academy (39)	carolina (48)	consultant (78)	staff (95)
32	masters (39)	community (48)	force (76)	consultant (94)
33	illinois (37)	mba (48)	limited (75)	public (91)
34	carolina (35)	management (45)	served (74)	corporation (88)
35	harvard (35)	north (45)	employee (73)	practice (86)
36	studies (34)	cornell (44)	medical (70)	private (86)
37	international (33)	michigan (44)	professor (69)	college (85)
38	washington (33)	international (42)	teacher (66)	employee (85)
39	high (32)	york (42)	corps (64)	general (84)
40	north (32)	southern (40)	liability (64)	center (82)
41	york (31)	american (37)	new (64)	community (82)
42	technology (30)	florida (37)	partner (64)	health (79)
43	saint (29)	institute (37)	staff (63)	adjunct (74)
44	southern (29)	saint (37)	navy (61)	development (74)
45	pennsylvania (28)	georgetown (35)	group (60)	city (72)
46	phd (27)	yale (35)	district (59)	court (72)
47	san (27)	bucknell (33)	public (59)	services (69)
48	virginia (27)	missouri (32)	author (58)	high (68)
49	finance (26)	mpa (30)	small (58)	partner (67)
50	georgia (26)	states (30)	college (57)	senior (66)

Table 3.2: Most common words in Republican and Democratic education and professional biographies, 2008-2014

NOTE: $N = 2267$. Raw counts in parentheses. The same word could appear multiple times in a single candidates' biography.

	Religion		Organizations	
Order of Frequency	Republicans	Democrats	Republicans	Democrats
1	catholic (166)	catholic (192)	member (3007)	member (2811)
2	christian (166)	roman (84)	board (952)	board (1079)
3	baptist (72)	christian (83)	association (778)	association (831)
4	roman (65)	methodist (64)	former (409)	present (407)
5	methodist (50)	jewish (59)	present (365)	president (371)
6	presbyterian (45)	baptist (56)	president (358)	national (353)
7	protestant (40)	episcopal (46)	national (339)	former (325)
8	lutheran (26)	lutheran (32)	church (313)	chair (303)
9	episcopalian (24)	presbyterian (30)	chair (307)	american (281)
10	jewish (21)	episcopalian (22)	county (277)	county (259)
11	church (20)	protestant (21)	club (255)	council (217)
12	christ (15)	church (17)	american (239)	bar (203)
13	day (15)	united (16)	council (232)	club (200)
14	latter (14)	christ (13)	commerce (231)	women (188)
15	jesus (11)	unitarian (13)	chamber (229)	state (180)
16	saints (11)	non (8)	state (180)	directors (178)
17	episcopal (10)	universalist (8)	directors (178)	united (177)
18	united (9)	day (7)	foundation (169)	church (174)
19	southern (7)	saints (7)	committee (163)	foundation (155)
20	evangelical (6)	denominational (6)	society (156)	committee (149)
21	god (5)	jesus (6)	united (156)	university (147)
22	mormon (5)	latter (6)	republican (148)	advisory (143)
23	orthodox (5)	orthodox (6)	advisory (140)	founder (138)
24	assembly (4)	african (5)	bar (136)	new (135)
25	anglican (3)	greek (5)	university (131)	commerce (132)
26	nazarene (3)	mormon (5)	school (128)	center (131)
27	reformed (3)	southern (5)	america (124)	community (131)
28	saint (3)	congregationalist (3)	center (112)	volunteer (129)
29	scientist (3)	disciples (3)	founder (102)	chamber (125)
30	adventist (2)	god (3)	saint (96)	coalition (119)
31	born (2)	buddhist (2)	rifle (90)	vice (119)
32	congregationalist (2)	community (2)	volunteer (90)	school (111)
33	denominational (2)	evangelical (2)	rotary (88)	society (108)
34	follower (2)	hindu (2)	community (87)	democratic (106)
35	greek (2)	humanist (2)	vice (86)	saint (90)
36	lds (2)	muslim (2)	scouts (83)	college (89)
37	non (2)	none (2)	new (82)	america (88)
38	pentecostal (2)	ucc (2)	young (82)	league (87)
39	american (1)	adventist (1)	women (81)	education (80)
40	assemblies (1)	agnostic (1)	christian (78)	organization (80)
41	buddhist (1)	anglican (1)	boy (77)	law (79)
42	cottonwood (1)	applewood (1)	veterans (76)	executive (69)
43	east (1)	atheist (1)	baptist (75)	trustees (66)
44	eastern (1)	believe (1)	director (74)	director (64)
45	eclectic (1)	beth (1)	states (73)	states (61)
46	elca (1)	born (1)	coach (65)	institute (60)
47	father (1)	brethren (1)	international (65)	international (60)
48	first (1)	caholic (1)	life (65)	union (60)
49	foursquare (1)	christianity (1)	league (63)	alumni (59)
50	free (1)	congregational (1)	college (62)	development (57)

Table 3.3: Most common words in Republican and Democratic religion and civic organization biographies, 2008-2014

NOTE: $N = 2267$. Raw counts in parentheses. The same word could appear multiple times in a single candidates' biography.

	Education		Profession	
Order of Frequency	Winners	Losers	Winners	Losers
1	university (3275)	university (1831)	united (1095)	present (781)
2	college (817)	college (494)	states (1068)	united (657)
3	school (746)	attended (365)	attorney (974)	states (616)
4	law (660)	state (352)	director (584)	owner (358)
5	science (560)	school (306)	former (572)	director (342)
6	political (515)	science (244)	university (512)	former (326)
7	state (515)	law (199)	assistant (498)	attorney (289)
8	attended (405)	political (189)	state (458)	president (269)
9	california (197)	point (166)	president (443)	manager (259)
10	harvard (188)	average (156)	law (441)	university (243)
11	history (165)	grade (156)	owner (430)	incorporated (226)
12	administration (161)	business (149)	school (338)	army (220)
13	business (155)	graduated (131)	professor (327)	officer (217)
14	texas (147)	california (125)	office (323)	company (212)
15	economics (143)	administration (114)	county (313)	business (207)
16	new (129)	education (107)	army (308)	school (191)
17	public (128)	engineering (100)	chief (308)	teacher (190)
18	cornell (124)	mba (100)	company (304)	founder (181)
19	government (116)	management (99)	executive (295)	department (179)
20	north (115)	bachelors (97)	staff (286)	chief (175)
21	carolina (114)	community (94)	present (279)	executive (172)
22	florida (108)	new (89)	private (273)	state (170)
23	phd (102)	history (83)	department (258)	assistant (165)
24	mba (98)	masters (83)	national (256)	consultant (156)
25	bucknell (96)	economics (82)	founder (250)	professor (135)
26	education (95)	studies (76)	officer (249)	law (130)
27	washington (95)	texas (74)	district (248)	employee (126)
28	southern (89)	united (73)	practice (246)	corporation (124)
29	international (85)	states (72)	new (239)	national (117)
30	saint (85)	phd (69)	house (221)	county (115)
31	georgetown (84)	institute (68)	public (217)	air (109)
32	community (80)	public (68)	business (204)	general (105)
33	mpa (77)	harvard (66)	teacher (197)	office (105)
34	agricultural (74)	washington (64)	manager (192)	navy (104)
35	illinois (74)	psychology (58)	court (190)	college (101)
36	american (73)	york (55)	incorporated (188)	medical (100)
37	michigan (72)	international (53)	general (180)	vice (99)
38	institute (69)	academy (50)	served (175)	center (95)
39	yale (68)	illinois (50)	community (172)	engineer (91)
40	york (67)	high (49)	judge (172)	force (90)
41	angeles (64)	carolina (48)	vice (169)	corps (89)
42	los (64)	southern (48)	partner (168)	public (89)
43	mechanical (64)	graduate (44)	center (167)	new (87)
44	georgia (60)	virginia (44)	representative (167)	development (85)
45	graduated (60)	florida (43)	corporation (166)	group (85)
46	management (57)	michigan (43)	adjunct (163)	services (84)
47	engineering (56)	san (43)	counsel (161)	district (83)
48	south (56)	american (43)	legislative (161)	retired (83)
49	columbia (55)	north (40)	representatives (161)	associate (82)
50	ohio (55)	saint (38)	college (158)	sales (82)

Table 3.4: Most common words in winning and losing candidates' education and professional biographies, 2008-2014

NOTE: $N = 3721$. Raw counts in parentheses. The same word could appear multiple times in a single candidates' biography.

	Religion		Organizations	
Order of Frequency	Winners	Losers	Winners	Losers
1	catholic (500)	christian (215)	member (9406)	member (3107)
2	roman (276)	catholic (208)	board (3071)	board (1052)
3	baptist (204)	baptist (66)	association (2364)	association (857)
4	christian (167)	methodist (61)	former (1300)	present (752)
5	methodist (167)	roman (58)	national (1116)	president (427)
6	episcopal (133)	jewish (37)	president (953)	national (357)
7	presbyterian (124)	lutheran (37)	chair (865)	former (335)
8	jewish (112)	protestant (33)	american (755)	county (334)
9	episcopalian (96)	presbyterian (28)	council (745)	chair (325)
10	protestant (81)	church (23)	county (709)	american (303)
11	lutheran (75)	united (22)	church (703)	church (287)
12	church (48)	christ (16)	club (638)	club (276)
13	christ (37)	episcopalian (16)	commerce (608)	council (224)
14	day (31)	day (14)	chamber (600)	directors (212)
15	jesus (25)	latter (14)	state (564)	commerce (196)
16	latter (24)	episcopal (12)	bar (527)	foundation (192)
17	saints (24)	unitarian (12)	united (504)	chamber (187)
18	southern (18)	saints (11)	advisory (498)	committee (187)
19	united (17)	jesus (9)	directors (459)	state (179)
20	mormon (16)	non (9)	foundation (459)	society (176)
21	orthodox (16)	god (8)	university (443)	united (175)
22	greek (14)	universalist (8)	center (415)	women (173)
23	african (13)	denominational (7)	committee (403)	volunteer (158)
24	scientist (10)	evangelical (7)	founder (377)	bar (156)
25	adventist (7)	orthodox (7)	women (367)	new (129)
26	community (7)	southern (7)	school (358)	community (128)
27	congregationalist (7)	anglican (5)	society (350)	america (127)
28	seventh (7)	mormon (5)	coalition (333)	advisory (124)
29	buddhist (6)	assembly (4)	new (319)	university (123)
30	evangelical (5)	greek (4)	community (307)	center (122)
31	unitarian (5)	hindu (4)	vice (293)	vice (117)
32	american (4)	saint (4)	saint (286)	republican (116)
33	applewood (4)	born (3)	america (285)	saint (115)
34	denominational (4)	nazarene (3)	organization (269)	school (115)
35	eclectic (4)	ucc (3)	present (263)	founder (114)
36	father (4)	adventist (2)	states (244)	league (106)
37	islam (4)	agnostic (2)	volunteer (238)	director (83)
38	lebanese (4)	congregationalist (2)	congressional (236)	international (79)
39	missouri (4)	follower (2)	college (235)	executive (76)
40	mother (4)	humanist (2)	rotary (226)	christian (75)
41	muslim (4)	lds (2)	baptist (221)	college (75)
42	nazarene (4)	none (2)	young (211)	scouts (75)
43	neighborhood (4)	pentacostal (2)	director (196)	north (73)
44	non (4)	pentecostal (2)	law (192)	leadership (72)
45	raised (4)	presbytarian (2)	democratic (189)	coalition (71)
46	reformed (4)	african (1)	scouts (186)	education (71)
47	synod (4)	assemblies (1)	league (185)	trustees (69)
48	umc (4)	atheist (1)	republican (184)	veterans (69)
49	disciples (3)	believe (1)	education (180)	coach (68)
50	elca (3)	brethren (1)	institute (179)	young (68)

Table 3.5: Most common words in winning and losing candidates' religion and civic organization biographies, 2008-2014

NOTE: $N = 3721$. Raw counts in parentheses. The same word could appear multiple times in a single candidates' biography.

commonly think of when we think of elections, the campaign itself. While some of these biographical attributes may relate to a candidate's propensity to fit with a party image or win an election, it likely cannot do so unless it somehow enters into the electoral process through voters. Unless these attributes are known, they are unlikely to have an effect on electoral outcomes. For this reason, I now turn to how candidates present this information about themselves.

3.3 How congressional candidates portray themselves

To examine how congressional candidates strategically present themselves to voters, I rely on data from the Wisconsin Advertising Project and the Wesleyan Media Project (Goldstein et al., 2011; Fowler et al., 2014, 2015). These data allow for a clear picture of what information candidates find valuable to present to voters, covering all television advertising for US House and Senate candidates in 2008, 2010, and 2012.

I first present evidence of broader patterns in personal presentation in television advertising using all three years of data, encompassing 4,355,200 total ad airings across all 210 US media markets. Then, to more closely examine the content presented, I present results from a content analysis of all 2008 advertising only.[15] In addition to the already-provided variables from the Wisconsin Advertising Project, the 2008 storyboards were coded for both visual and spoken content about a candidate's personal background by a team of undergraduate research assistants. This allows for a detailed picture of the presentation of many biographical details. Coders recorded both verbal and visual occupational/professional, military service, family, local, and religious references in the ads. Because the closed-captioning text is also provided, basic automated text analysis can be performed to isolate common words used in the advertising. However, this simple bag-of-words model yields little evidence of any common themes – personal or policy – across ads, as shown in Table 3.9 in the Appendix.[16]

The 2008 advertising data consists of all ads aired for US House and Senate candidates in all 210 US media markets, encompassing 654,721 ad airings, and 1,995 unique advertisements.[17] In addition to information on all ad airings (including exact dates, times, channels, programs, and approximate cost), the data include storyboards that capture an image of

[15]This is merely due to labor constraints, as research assistants did not have time to complete all three years. Additionally, the 2008 data presents the ads in storyboard format, making them easier to code. The 2010 and 2012 data consist of full-length video advertisements. All 2008 ads were coded for their visual and verbal personal content by research assistants at least twice. Across the eleven coded variables used in the analysis below, there was an average of 92.2% agreement between coders, with individual item agreement ranging from 83.4% to 99.5%. For the analyses contained in this paper, disagreements were broken at random. Future work will have a third coder adjudicate disagreements.

[16]While the common words in these advertisements do have meaning, many are impossible to interpret without greater context from the ad. Because of these issues, manual content analysis was chosen to help isolate particular personal content.

[17]A small percentage of ads had only airings data or a storyboard and were excluded. The 1,995 ads include only those that had both airings/race data and a storyboard for coding, and only includes ads that featured at least one candidate, positively or negatively, aired by a candidate or their campaign committee.

the screen every several seconds, as well as the full-text transcript that would be shown as closed-captioning. An example of this storyboard format can be seen in Appendix Figure 3.12.

First, as Table 3.6 shows, 41.1% of ad airings focus on personal content, either as their primary focus or mixed with policy content. While ads with a policy focus are the majority, this nevertheless shows the importance politicians place on advertising their personal background, broadly construed. We see the highest levels of personal focus in promotion ads (46.3%), with the lowest in attack ads (36.6%). Due to the nature of contrast and attack ads, many focus on policy disagreements between the candidates, rather than negative personal traits or attributes. We also see a much higher focus on personal advertisement during primaries, with 46.6% of the ads aired during primaries having a personal focus, compared to only 38.0% of ads in the general election. Interestingly, we see little difference in personal focus between the House and Senate, or between the two parties across all three elections.

Notably, however, the personal focus of advertisements appears to decline from 2008 to 2010, and again in 2012. Whether this is due to a time trend, or due the particular nature of presidential versus midterm elections, or some other particular reason related to the electoral climate, is unclear. To better understand the variation in personal advertisements across years, Table 3.7 displays the focus of the ads broken down by year and by the candidate party. This reveals a very interesting pattern – while Democrats had significantly more personal focus in their advertisements in 2010 and 2012 – Republicans had a much higher personal focus in 2008. Pooling across all three elections obfuscates this difference. Of course, while the causal origins of this difference are unclear, it is clear that the electoral context plays a role in the type of ads particular types of politicians may wish to air.

In addition to characteristics of entire election campaigns, we can look across the timing of the ad airings within campaigns as well. Because campaigns are not static – both as they shift from primary to general and as they edge closer to election day – we can also analyze how the personal focus of ads shifts over the course of a single campaign. Figure 3.3 shows the distribution of ad airings in 2008, 2010, and 2012, across the number of days before the November election day. The pattern is clear: The frenetic nature of the last few months of a campaign are when the vast amount of resources are directed at television advertising. Because of the known fleeting effects of advertising (e.g. Hill et al. 2013), campaigns air the large majority of ads immediately preceding an election. This is likely also the reason for the bump in ad airings roughly 200 days before the election, as this is when the vast majority of primary elections take place.[18]

If we look at the content of these ad airings, as shown in Figure 3.4, we see that the proportion of ads with personal content does vary across the course of the campaign, from roughly 20% over a year out, to just over 50% right as many primary elections are taking place. The proportion of personal ads does decrease slightly as the election draws near.

[18]Note that one could center this plot on days till primary election, and obtain a very similar image. However, due to the fact that primary election dates vary across states, displaying all election days on the same plot is nearly impossible.

		% Any Personal	% Policy	% Personal	% Mix
	Overall	41.1%	57.2%	13.0%	28.2%
	N (2008-2012)	(N=1,792,970)	(N=2,489,267)	(N=564,464)	(N=1,228,506)
Ad Type	Promotion	46.3%	51.2%	14.7%	31.6%
	Contrast	42.4%	56.5%	10.4%	32.0%
	Attack	36.6%	62.0%	12.8%	23.8%
Chamber	House	40.3%	58.3%	11.9%	28.4%
	Senate	41.9%	56.1%	13.9%	28.1%
Election*	Primary	46.6%	50.7%	13.4%	33.3%
	General	38.0%	60.5%	13.1%	24.8%
Year	2008	44.7%	53.7%	15.2%	29.5%
	2010	43.5%	55.1%	12.7%	30.8%
	2012	36.6%	61.4%	11.7%	24.9%
Party	Democrat	42.8%	55.5%	12.9%	29.9%
	Republican	39.6%	58.8%	12.8%	26.8%

Table 3.6: Personal content of all House & Senate ad airings, 2008-2012

NOTE: For the primary/general tabulation, only ads from 2008 and 2012 are used, as there was no readily available indicators of primary dates in 2010. Because there are 4,355,200 total ads in these tabulations, nearly every single difference achieves conventional levels of statistical significance. For this reason, I omit standard errors or confidence intervals. Note that rows may not sum to 100% due to rounding, and because ads that were deemed to have neither a personal nor policy focus (1.7% of all ads) are omitted.

		% Any Personal	% Policy	% Personal	% Mix
2008	Democrat	41.7%	56.7%	12.8%	28.9%
	Republican	48.3%	50.3%	18.0%	30.3%
2010	Democrat	47.2%	51.6%	14.2%	32.9%
	Republican	39.7%	58.9%	10.6%	29.1%
2012	Democrat	39.5%	58.3%	11.7%	27.8%
	Republican	34.5%	63.7%	11.7%	22.7%

Table 3.7: Personal content of all House & Senate ad airings, by party, 2008-2012

NOTE: Because there are 4,355,200 total ads in these tabulations, nearly every single difference achieves conventional levels of statistical significance. For this reason, I omit standard errors or confidence intervals. Note that rows may not sum to 100% due to rounding, and because ads that were deemed to have neither a personal nor policy focus (1.7% of all ads) are omitted.

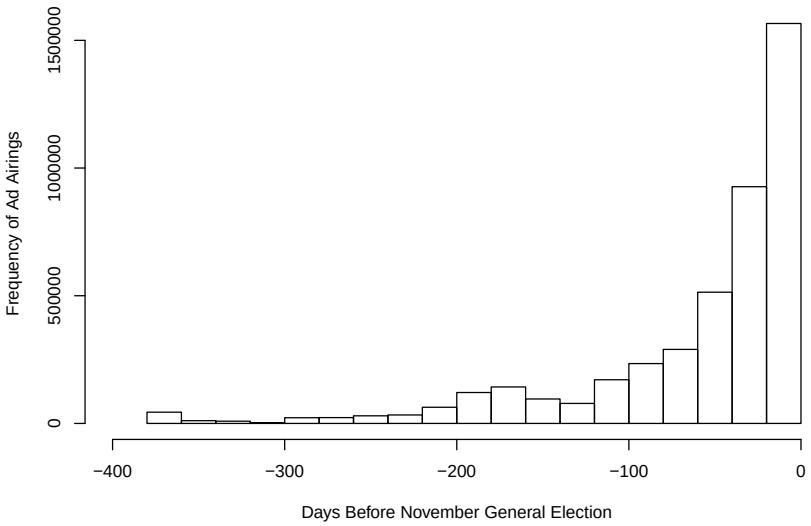


Figure 3.3: House & Senate ad airings by days before November election day, 2008-2012
NOTE: All ads aired more than 365 days before the November election day were recoded to 365 days out.

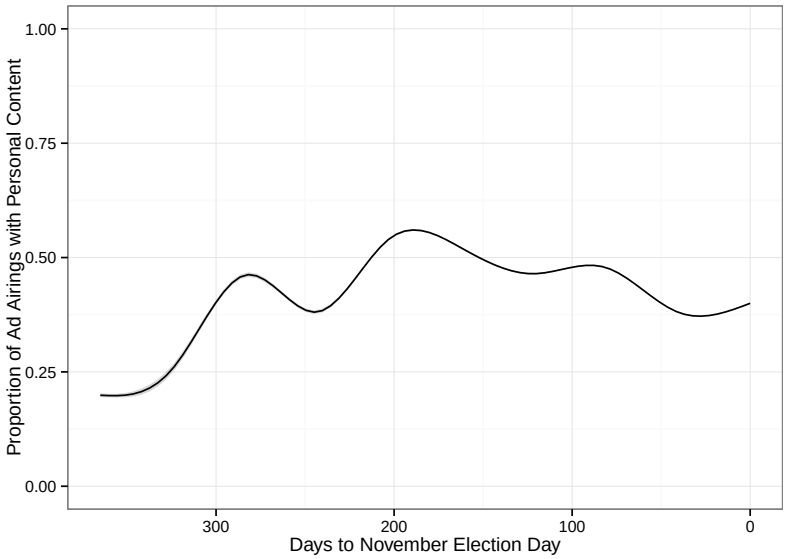


Figure 3.4: Proportion of House/Senate ad airings with personal content by days before November election day, 2008-2012
NOTE: All ads aired more than 365 days before the November election day were recoded to 365 days out. A standard LOESS smoother was used for the plot, and while 95% confidence intervals are shown, they are almost invisible due to the high quantity of ad airings per day.

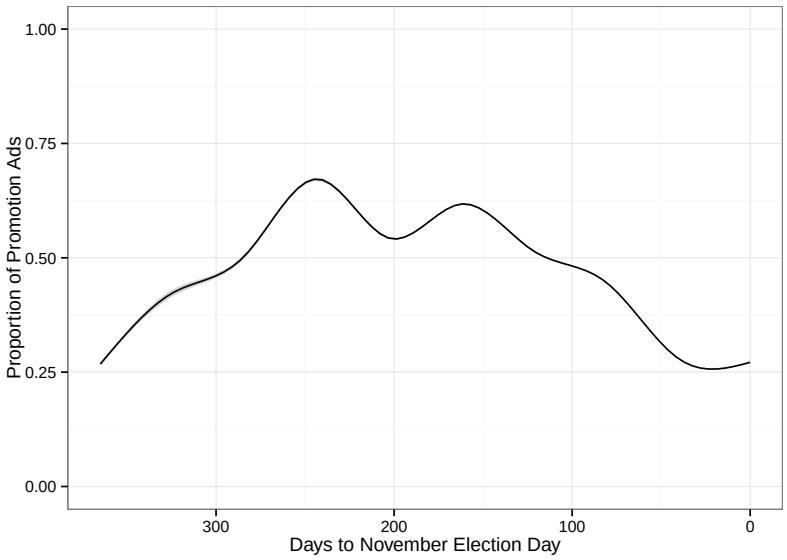


Figure 3.5: Proportion of promotion/positive House and Senate ad airings by days before November election day, 2008-2012

NOTE: All ads aired more than 365 days before the November election day were recoded to 365 days out. A standard LOESS smoother was used for the plot, and while 95% confidence intervals are shown, they are almost invisible due to the high quantity of ad airings per day.

This shifting focus on personal content is likely due, at least in part, to the positivity of ads being shown at a given point in time in a campaign. As Figure 3.5 shows, the proportion of promotion, or positive ads, varies quite a lot over the course of the campaign, with a large majority of positive ads airing around the times of the higher focus on personal content. Given the correlation between positive ads and personal ads and the negative focus in the final months of the campaign, it is relatively unexpected that we see fewer personally-focused ads.

While the evidence from 2008-2012 provides us a glimpse of the broader patterns of candidates' personal presentation, we can say very little about the types of personal content contained within these ads and the different types of personal appeals different candidates may make. For this reason, I now turn to a content analysis of all 2008 advertisements. As noted above, there are 1,995 unique ads from 361 candidates, aired a total of 654,721 times. To examine how not just what ads are produced by candidates, but also the emphasis they place on them, I analyze the data at both the ad level and at the airing level.[19]

Figure 3.6 shows the proportion of ads and ad airings, by the party of the candidate who aired the ad, for the 2008 campaign. For comparison, the first variable displayed in each plot is the pre-coded focus of the advertisement. All other variables were coded by research

[19]Note that most ads are aired only a small number of times, with the vast majority aired less than 1,000 times, and the vast majority of candidates airing under 1,000 total. The distribution of ad airings, by unique candidate, can be seen in Figure 3.13 in the Appendix.

assistants from the provided storyboards, and largely fall into three categories – occupational references, family references, and local references.[20] For both ads and ad airings, we find that Democratic candidates reference their occupation more, particularly their political or military experience. However, Republican candidates appear to also reference Democratic candidates' occupation negatively more often. For airings, we also find that Democratic candidates reference business or other private sector occupational experience than Republican candidates.

If we examine familial references by candidates of the two parties, we see remarkably similar patterns across visual and verbal presentation of their families. However, Republicans appear slightly more likely to create ads that feature their family (elders, children, or spouse), particularly visually. Democratic candidates appear more likely to verbally discuss their parents or grandparents, however. With respect to local references, we see that Democratic candidates are more likely to mention the state in which they are running, as well as visually feature local constituents in an advertisement.

Figure 3.7 shows the same data as Figure 3.6, but broken down by whether the candidate won or lost the general election.[21] Attributing any causality to these factors is problematic, as they simply show the bivariate relationship, but they describe the types of candidates who seem to win and lose. It appears the relationship between personal references and election outcomes, for both ads and airings, seems to be capturing general measures of candidate quality. That is, candidates with better resources and better backgrounds appear to be airing ads with personal references we might consider more effective. Specifically, we see that winning candidates are more likely to display their family, more likely to reference their occupation positively, and less likely to air ads that negatively reference their opponent's occupation. Losing candidates are less likely to create or air ads that reference local cities or towns, the state, or display constituents.

If we examine ads and ad airings by race (House or Senate), we see see many differences expected by the literature. Particularly, as shown in Figure 3.8, we see that candidates for the House are more likely to reference their occupation positively, more likely to display their family, and more likely to reference a local city or town than candidates for the Senate. Given the more local and personal nature expected of candidates for the House, this is unsurprising. However, Senate candidates appear more likely to display constituents in an advertisement.

Figure 3.9 displays these personal references by whether the airing occurred during the primary or general election campaign.[22] As we would expect from the literature, primary campaigns are more personal - more positive occupational references (although less negative occupational attacks), more verbal and visual presentation of all types of family, and more references to local cities and towns. However, primary ads are less likely to display constituents. While this divides the campaign dichotomously, we might also expect variation in personal presentation throughout the primary and general campaign. Figures 3.10 displays

[20]Education and religious references were also coded, however, extremely few ads or ad airings contain these explicitly. For this reason, they are not shown in the following figures.

[21]For this reason, ads aired by only primary candidates are excluded in this presentation.

[22]Ad-level relationships are not displayed, as many ads are aired in both the primary and general election.

positive occupational references and family presentation by days to the general election. In line with Figure 3.9, both types of personal references make up a higher proportion of ads during the primary portion of the campaign. However, it appears occupational references are more common early in the primary season, while familial appeals are more common both early and late in the primary.

	Republican	Democrat
1	business (31)	business (25)
2	state (29)	state (25)
3	businessman (26)	congressman (22)
4	senator (18)	veteran (18)
5	veteran (18)	senator (17)
6	small (17)	businessman (16)
7	congressman (16)	army (10)
8	air (13)	congress (9)
9	force (13)	governor (9)
10	senate (13)	prosecutor (9)
11	leader (12)	public (8)
12	doctor (8)	served (8)
13	owner (8)	small (8)
14	physician (8)	built (7)
15	president (8)	company (7)
16	served (8)	doctor (7)
17	governor (7)	legislator (7)
18	one (7)	owner (7)
19	congress (6)	attorney (6)
20	secretary (6)	committee (6)
21	teacher (6)	county (6)
22	years (6)	mayor (6)
23	community (5)	one (6)
24	country (5)	successful (6)
25	family (5)	worked (6)
26	house (5)	chairman (5)
27	jobs (5)	colonel (5)
28	legislature (5)	commissioner (5)
29	man (5)	companies (5)
30	officer (5)	energy (5)

Table 3.8: Most common words used in Republican and Democratic occupational references in television advertising, 2008

NOTE: Raw counts in parentheses. Only verbatim wordings of positive occupational-related personal phrases were captured. Of the total 1,995 ads, 477 contained occupational references.

Finally, while all of the above figures display coarse measures of occupational references, we might expect specific occupations to be more common among candidates of either party. While coding the ads, research assistants recorded verbatim any specific occupational phrase from the ad storyboards. If we tabulate word counts in these phrases for Republican and Democratic candidates, we see remarkably similar patterns, as shown in Table 3.8. Business, military, or prior political experience are most common, with several other common occupations among politicians (e.g. law-related, doctor) also commonly mentioned in both parties.

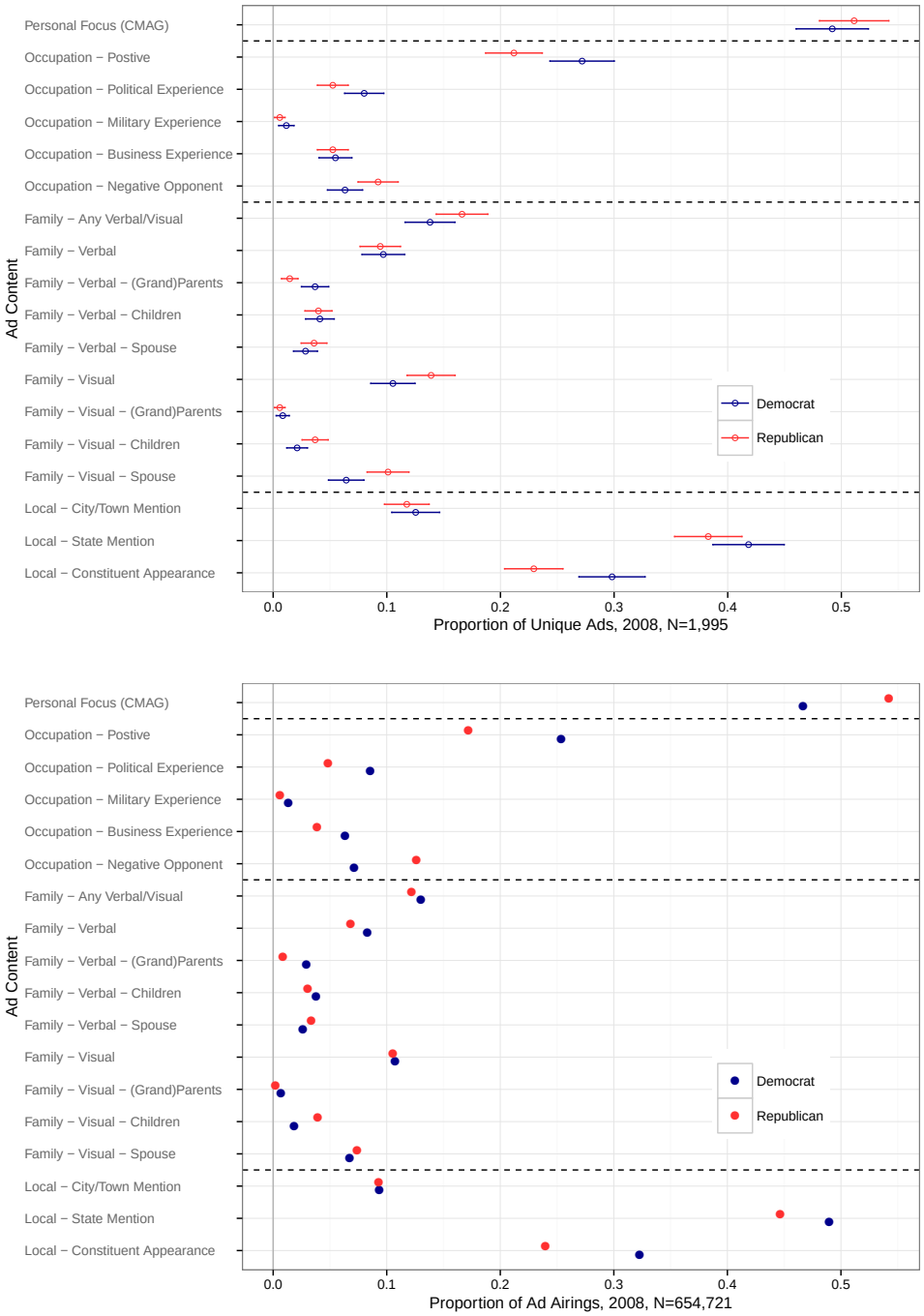


Figure 3.6: House & Senate biographical ad content, by party, 2008

NOTE: 95% confidence intervals shown. Confidence intervals not displayed for airings data, as the confidence intervals are smaller than the points themselves. "Occupation - Negative Opponent" indicates a negative occupational reference directed at the opposing candidate.

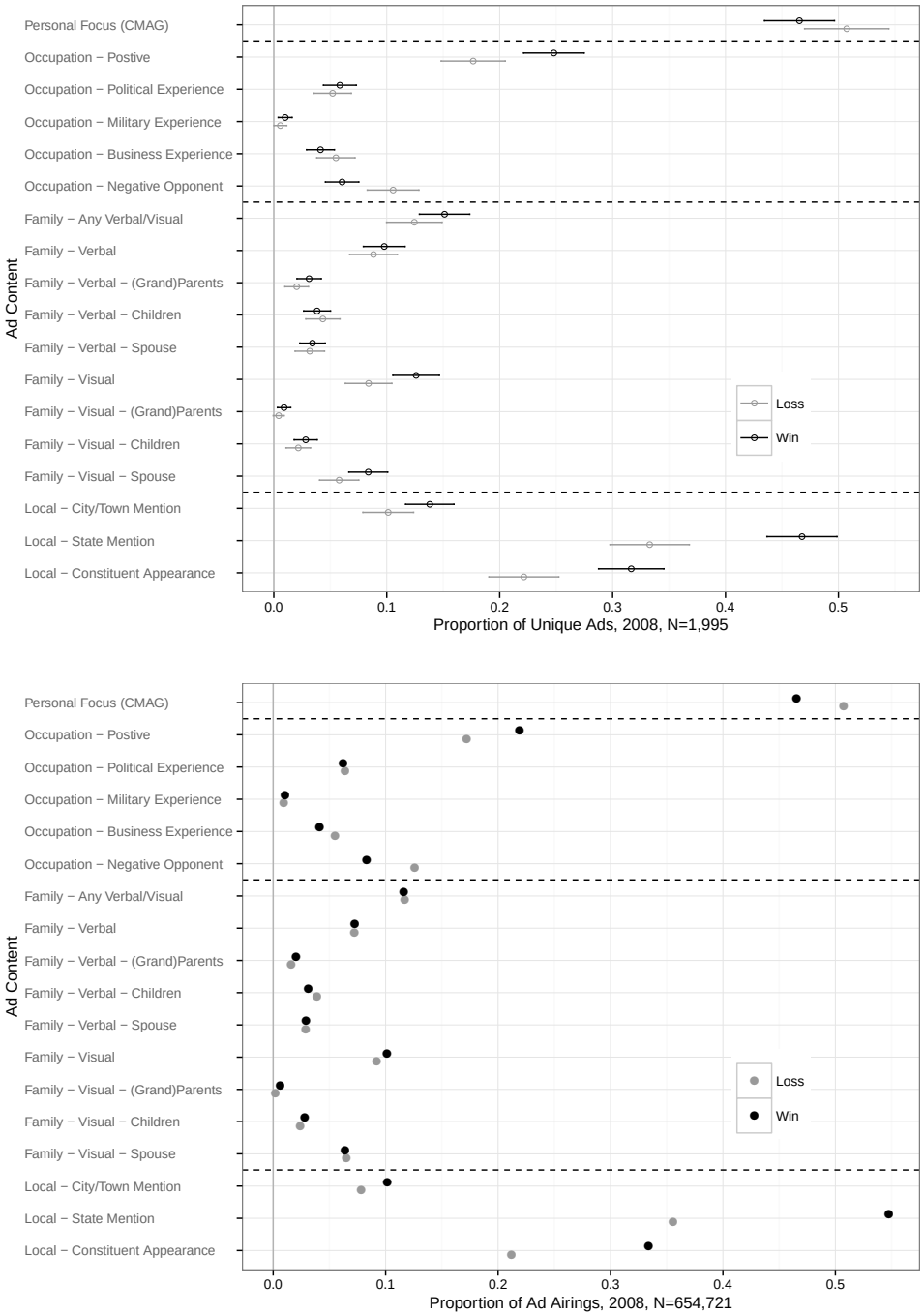


Figure 3.7: House & Senate biographical ad content, by electoral success, 2008

NOTE: 95% confidence intervals shown. Confidence intervals not displayed for airings data, as the confidence intervals are smaller than the points themselves. "Occupation - Negative Opponent" indicates a negative occupational reference directed at the opposing candidate.

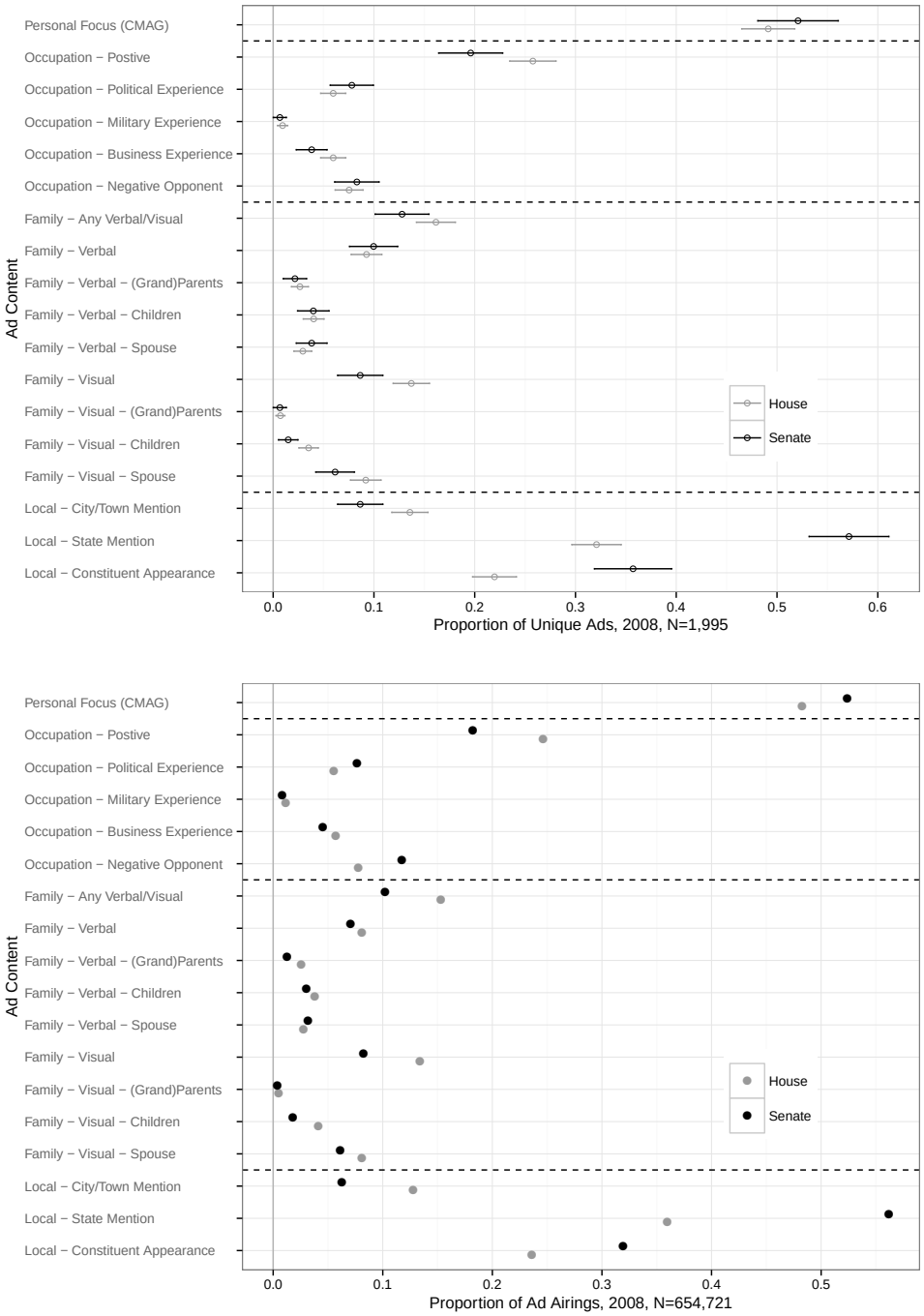


Figure 3.8: House & Senate biographical ad content, by chamber, 2008

NOTE: 95% confidence intervals shown. Confidence intervals not displayed for airings data, as the confidence intervals are smaller than the points themselves. "Occupation - Negative Opponent" indicates a negative occupational reference directed at the opposing candidate.

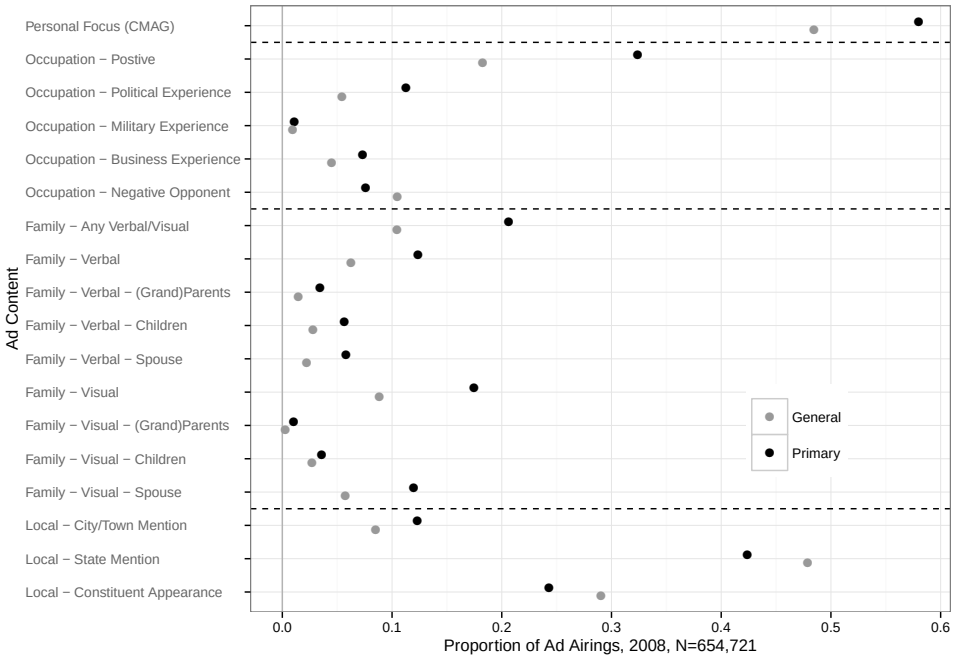


Figure 3.9: House & Senate biographical ad content, by primary/general airing, 2008
NOTE: Confidence intervals not displayed, as the confidence intervals are smaller than the points themselves. "Occupation - Negative Opponent" indicates a negative occupational reference directed at the opposing candidate. Ad-level calculations are not available, as many ads are aired at different points in the campaign.

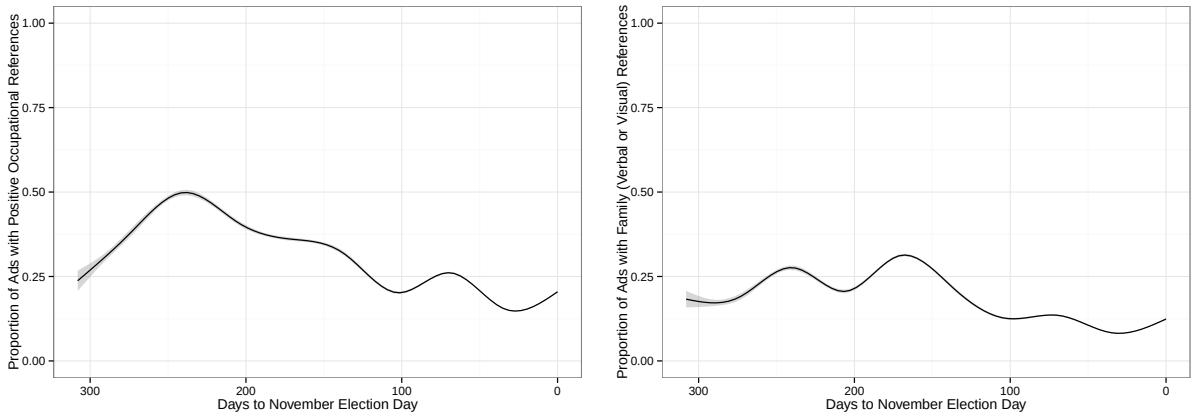


Figure 3.10: House & Senate ad airings with occupational or family references, by time, 2008
NOTE: All ads occuring in 2007 were recoded to January 1st, 2008. A standard LOESS smoother was used for the plot, and while 95% confidence intervals are shown, they are almost invisible due to the high quantity of ad airings per day.

3.4 Discussion

Despite the fact that candidates for elected office have been the focus of extensive study, few sources of systematic, large-scale, and quality data on their biographies exist. In the current study, I provide two new sources of data - a systematic dataset of biographical information for all Republican and Democratic general election candidates from 2008-2014 - as well as a content analysis of ads aired by all House and Senate candidates in 2008. These datasets (collected, cleaned, and coded by a team of research assistants) provide us with a first look at how candidates' rich biographies relate to partisanship, electoral success, and differences across chambers.

These new analyses contribute to a diverse set of literatures. First, literatures on candidate quality and candidate selection by parties have often been hampered by a lack of quality data on what it might mean to be a quality candidate, instead relying on overly-coarse measures such as merely an indicator of whether a candidate has held prior elected office. Second, the literature on legislative representation and descriptive representation has often only used information about *winning* candidates, limiting the inferences we can make about how the electoral process selects more or less representative candidates. Additionally, while the core focus of this literature has been on descriptive representation of core demographic attributes (e.g. race, gender), there has been only sparse work on how candidates' familial background, occupation, military service, local ties, and education might affect the quality of representation they provide to their constitutents, if elected, and whether they are even elected in the first place. Third, because we can examine what types of biographies Republican and Democratic candidates have separately, we can, for the first time, assess party "ownership" of biographical attributes of candidates and their implied traits. Finally, analysis of the advertising data allows us to assess, descriptively, how certain strategies of advertising are related to electoral wins and losses.[23]

This study provides empirical support for a number of widespread beliefs about candidates, and challenges the conventional wisdom about certain biographical associations. First, regarding candidates' biographical backgrounds and partisanship, I find far more female Democratic candidates than Republican, that Republican candidates are more likely to have children, be married, have a business background, have military experience, be involved in local civic organizations, and be Protestant and/or evangelical. I find that Democratic candidates are more likely than Republican candidates to have all educational degrees except for an MD, and work as an attorney or work in the public sector. I also find that many biographical attributes correlate with a successful campaign for election to the House or Senate, with candidates who are married, have children, have higher education, work as an attorney, or practice religion, all more likely to win election. Because of the highly structured nature of biographical data, we can use simple text-analysis procedures to help us gain further insight

[23]For very obvious reasons, campaign strategy is rife with endogeneity, as is very-well supported in this study's data by the distinct differences between the backgrounds and quality of winning and losing candidates, let alone additional issues of strategic funding and presentation.

into the types of professional, educational, religious, and civic organizational backgrounds these candidates have, as well.

With respect to candidate advertising, we see similar patterns in candidates' presentation of these biographical attributes. First, candidates devote a substantial amount of effort advertising their personal background, and the quantity of personal advertising varies from year to year and between parties. As many would predict, we see that primary elections have a heavier focus on personal attributes, as intra-party competition generates fewer policy differences. Additionally, personally-focused content is more common in promotion ads, given the propensity of candidates to shy away from overtly personal attacks. While the bulk of ads are aired in the final months of a campaign, we also see important variation in the types of ads aired throughout an election year.

The types of personal references in candidate advertising mirrors candidates' actual biographies relatively well in the aggregate. Although not displayed here, I have merged the 2008 advertising data with the 2008 biographical data. While I have all 2008 advertising that was aired, only 361 of the 893 House and Senate candidates aired advertising, severely shrinking the sample size. The type of candidate to not air television advertising also is quite different than those that do, creating generalizability concerns. Among those for whom the comparison is possible, we see few differences in the types of personal promotion strategies by the presence of background biographical attributes. Those candidates with children or familial backgrounds are no more likely to incorporate familial references in their advertising, and those with business backgrounds are no more likely to promote their occupation in advertising.

Republican candidates are more likely to advertise and display their families in ads, particularly their spouses and children. Republican candidates are less likely to reference their occupational background, while Democratic are more likely to reference their political experience. Winning candidates are more likely to make both occupational, familial, and local references in their advertising, and there are important asymmetries in personal presentation between House and Senate candidates. While there is still future work to do in both cleaning additional biographical content, as well as further analyses with campaign finance data and other covariates, this study provides empirical demonstrations of a number of commonly-held assumptions by campaigns and elections scholars. Additionally, while by no means definitive with respect to causality, it provides a wealth of descriptive data about who varying candidates for the US House and Senate are and what strategies of personal presentation they employ.

3.5 Chapter appendix

Figure 3.11: Sample Vote Smart candidate profile

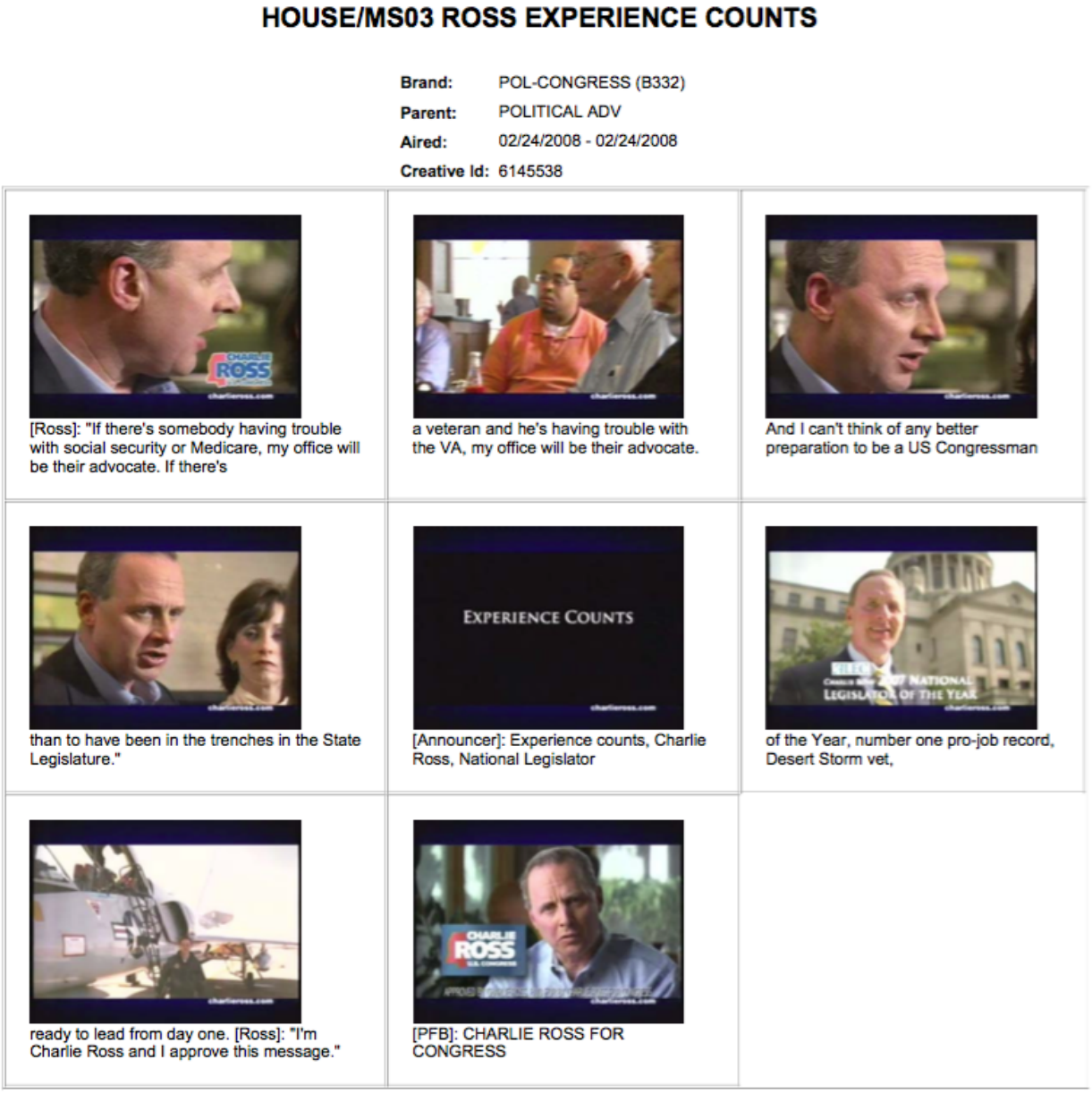


Figure 3.12: Sample CMAG/Wisconsin Ads Project storyboard, 2008

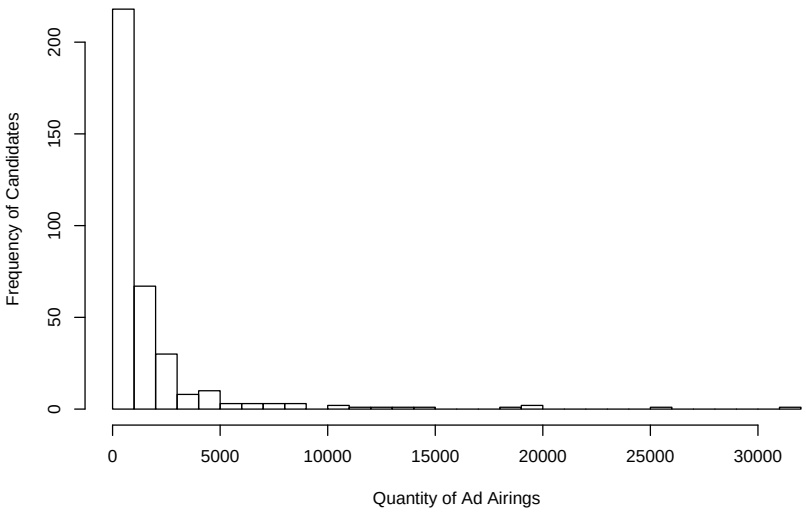


Figure 3.13: Ad airings by candidate, 2008
NOTE: Only the 361 candidates (of 891 total) who aired television ads are included.

congress (2987)	republican (650)	work (457)	help (344)
message (2401)	economy (647)	security (442)	spending (343)
approve (2389)	bush (641)	bill (430)	veterans (343)
democratic (1274)	now (636)	jim (430)	back (342)
tax (1225)	people (625)	dollars (427)	children (340)
committee (1199)	content (624)	know (427)	chris (340)
taxes (1160)	get (614)	working (425)	values (340)
washington (1070)	time (601)	mark (414)	plan (327)
can (985)	vote (595)	senator (413)	record (323)
jobs (982)	senate (586)	street (409)	companies (321)
campaign (955)	just (583)	even (392)	udall (320)
voted (877)	right (572)	times (387)	social (318)
congressional (794)	advertising (563)	family (381)	home (311)
change (786)	one (557)	wall (380)	iraq (311)
john (777)	like (536)	fight (378)	got (310)
new (775)	gas (535)	tom (367)	better (308)
cmt (774)	man (525)	pay (366)	american (307)
national (770)	america (521)	cngrsnl (363)	economic (302)
will (754)	don (521)	state (361)	want (302)
healthcare (744)	big (509)	class (350)	smith (299)
oil (741)	make (499)	money (350)	good (296)
need (739)	congressman (487)	keep (347)	george (295)
families (737)	steve (477)	middle (346)	mcconnell (294)
energy (666)	senatorial (462)	prices (346)	million (294)
responsible (660)	years (459)	fighting (344)	special (291)

Table 3.9: Common words in all House & Senate ads, 2008
NOTE: $N = 3260$. Raw counts in parentheses. Words can appear more than once in a single ad. Stopwords, numbers, and closed-caption-specific words removed.

Chapter 4

Biography in the minds of voters: Impact, importance, and memorability

The long literature on voters' evaluations of candidates has often used piecemeal experiments to assess how voters respond to different information about candidates. These experiments have largely overlooked a broad array of biographical attributes and have often failed to gauge the relative impact of information, using overly-powerful treatments that differ greatly from real-world campaigns. Using a modified conjoint design in two multi-wave experiments, I provide measures of the relative role of candidates' attributes over time, by their subjective importance and memorability to voters. I find that some personal attributes – such as education, political experience, occupation, scandal, and religion – are consequential for evaluations, alongside party and policy, for up to a week after information presentation. Additionally, I find voters are not well-calibrated to their own informational demands, with the true impact of information largely not matching the degree of importance stated by the voter. However, I find voters largely remember the valence of particular domains of information, particularly personally important ones, even if they do not retain the information itself.

4.1 The task of evaluating candidates

A central question for any democratic political system is how voters use information to choose their representatives. As a result, there is a correspondingly large literature examining all aspects of the process, from elite information messaging in campaigns (e.g. Druckman et al. 2004) and policy debates (e.g. Sellers 2009), to media transmission (e.g. Iyengar et al. 1982) to voter perception of information (e.g. Bartels 2002) and voter processing of information (e.g. Lau and Redlawsk 2006), to gauging information's impact (e.g. Hainmueller et al. 2014). However, several key factors have largely been ignored, resulting not only in gaps in

knowledge, but in problematic conclusions. First, few studies have gauged the *relative* role of a wide variety of candidate attributes vis-à-vis other information, including candidates' biographies. Second, no experiments have measured the *importance* of different information to individual voters, and third, no work have assessed variations in the *memorability* of that information.

Both observational and experimental studies have tried to assess the immediate impact of candidate information on voter behavior using a simple technique: Measure or manipulate a single attribute or a small set of information about a candidate or policy, and then assess opinion. Of course, we would not expect that the impact be uniform across respondents. Voters carry with them their own demographic, social, and political characteristics that cause their opinions to vary. Correspondingly, we should expect that the value they place on some attributes of candidates should vary. Social identities of respondents, both shared and unshared with other voters and politicians, can cause them to place importance on some attributes or policies and ignore others. When are certain types of information more impactful? Are voters more attune to the information about which they say they care? And do they then actually remember and use that information in their evaluations?

This current study uses two multi-wave experiments to assess the role played by a wide variety of politicians' personal and political attributes in candidate evaluation. By measuring the role of these attributes in an experiment, we can assess their relative impact, as well as their impact conditional on particularly salient information, such as party. Furthermore, this study assesses how the impact of these attributes on voters' evaluations is conditioned by the subjective importance of those attributes to voters. I measure both the importance respondents place across candidate attributes, and the importance they place on issues across policy areas.[1]

I find that many personal attributes – including education, occupation, religion, and the presence of a scandal – all impact evaluations of candidates, even alongside party and policy cues. Across attributes and across issues, I find little correspondence between importance and the impact of information, both at the individual and aggregate levels. This lack of correspondence does not bode well for democratic accountability; The most plausible explanation for this finding is that, while voters have a sense of the policy priorities they find important, they may not translate these priorities into judgments of actual policy positions.

This study makes several important contributions to the existing literature. First, it focuses on the oft-ignored array of personal information important in electoral campaigns. Second, it tests the impact of types of information on evaluations, allowing us to see the relative impact of a forest of information, rather than only see individual trees (i.e., solitary experimental treatments). Third, it provides evidence that voters' subjective importance of attributes are often completely unrelated to the information's actual effect.

In the next section, I detail how existing experimental designs, often with piecemeal and

[1]This measure, while susceptible to social desirability bias for some particular personal attributes (e.g. race, gender), provides a relatively clean gradient of importance for each voter across the wide range of information they may encounter in a campaign.

overly powerful treatments, can lead to incorrect conclusions about the impact of many types of information. Following this discussion, I describe an ideal research design that overcomes these issues – a modified multi-wave conjoint experiment – and present results from two experiments utilizing this design.

4.2 Design & measurement problems in the background literature

While there has been a significant lack of theoretical focus on biographical personal attributes, much scholarship has examined the role of party, policy, and economic performance in the candidate evaluation literature. Unfortunately, much of this work has often employed experimental designs with a very narrow focus of attributes and timeframe, which produces key limitations in the literature.

Primarily, narrow information presentation makes the treatments overly powerful, largely not resembling real campaign or media information presentation. This criticism is noted, but largely empirically unaddressed, in the construction of experimental designs. As McGraw (2011) describes in her summary of the literature, an important distinction arises in how experimental designs deal with the role of a candidate's political party, given its centrality to candidate evaluation. She states, "...in some instances, the presence of information about a candidate's partisan affiliation can serve to dampen, and even eliminate, the impact of other manipulated variables" (McGraw, 2011, p. 190). In addition to party, other politically-relevant information may be omitted from the stimuli presented to experimental respondents in attempts to maintain better control. Yet, this omission of information leads respondents to overweight the attributes that are presented.[2]

The design tradeoff between presenting a small or large set of information has been described as a tradeoff between *masking*, or having respondents rely heavily upon a small set of information, and *satisficing*, or having them use only a small set of a broad array of information and attributes presented (Hainmueller et al., 2015). Despite attention to the problem, quality experimental designs in this area have yet to settle on, or robustly measure, a particular ideal point between the two ends of this spectrum. While presenting a small set of attributes may make their role too powerful, presenting too much information can dilute their effects.

In this study, the experimental design is intended to minimize the problem of masking, treating satisficing as a more acceptable problem. While this may lead to some information being deemed less important than it may otherwise be, this provides a more conservative, and more externally valid, measurement of the actual impact of this information. It is relatively uncontroversial to argue that voters do not seek out and utilize every single piece of information available to them when deciding between candidates. Voters are regularly

[2]The omission of information, such as party, can also lead to respondents attempting to guess the partisan affiliation of the presented candidate, leading to conjectural bias (Theodoridis and Goggin, 2016).

presented with a wide variety of information and candidate attributes from electoral campaigns. Yet, they tend to rely only on a smaller set of attributes, often discussed as cues, to guide them – pieces of information such as party, incumbent status, personal information, and policy stances.[3]

To systematize the type of candidate attributes and information to which voters might be exposed, three different observational data sources were examined, previously discussed in Chapters 2 and 3. First, Vote Smart candidate biographies from 2008-2014 were used to motivate the inclusion of standard biographical information such as occupation, education, and family. Next, 2008-2012 television advertising from the Wisconsin Ads Project and the Wesleyan Media Project were used to examine how candidates portray themselves through television advertising. Finally, a sample of 61 US House races in 2012 was drawn, and stratified on competitiveness, seniority of incumbent (or open seat), extremity of incumbent, and the presence or absence of a scandal. All available communications for candidates in these races were archived and closely analyzed to determine the most common set of information presented by candidates.[4] The classes of biographical attributes chosen for the experiments were education, occupation, military service, religion, family, hometown/locality, gender, race, scandal, sports, appearance, and political experience. In addition to these biographical characteristics, policy positions and political party affiliation were included.[5] The broad array of information allows us to gauge the relative impact of different attributes. This provides a hard test for the impact of single pieces of information; yet, as in real campaigns, information is often presented to voters in bundles, not as a single piece at a time.

The narrow focus of many previous experimental designs also typically leaves us unable to examine the *relative* magnitude of effects on candidate evaluation, nor examine their interactions. With the exception of conjoint-based experimental designs examining candidate evaluation, studies cannot easily compare the magnitude of impact of a wide set of factors across policy, party, personal, and performance domains (Hainmueller et al., 2014, 2015).

A final issue with existing experimental tests of information on candidate evaluation is their *timing*. With very few exceptions, most experimental work on candidate evaluation asks for the summary evaluation of the candidate minutes, or even just seconds, after the presentation of information about a candidate.[6] From an efficiency perspective, this com-

[3]These cues act as stereotypes as well in many cases, allowing respondents to go beyond the information at hand in the cue and infer other pieces of information about the politician. For recent work on the impact of party stereotypes and associations, see, for example, Goggin and Theodoridis (2016) or Goggin et al. (2016). This person perception process is not novel to politics – as Asch (1946, p. 284) describes, "There is an attempt to form an impression of the entire person. The subject can see the person only as a unit; he cannot form an impression of one-half or of one-quarter of the person. This is the case even when the factual basis is meager; the impression then strives to become complete, reaching out toward other compatible qualities."

[4]All material from campaign websites, incumbents' house.gov websites, Facebook, Twitter, and YouTube was collected.

[5]This list is not intended to be exhaustive nor mutually exclusive, but to represent the most common presented families of characteristics. Importantly, some attributes, such as social class, may manifest themselves in more than one category.

[6]For notable exceptions, see Mitchell (2012) and Mitchell (2014).

pressed timeline helps minimize the attenuation that forgetting can produce. However, it leads to estimates of powerful effects, when voters in real campaigns may quickly discard some attributes while holding onto others more strongly. By delaying the evaluation for up to a week, we can assess the persistence of the impact of a variety of candidate attributes.

4.3 Addressing the problems: Empirical design and data

An experimental design is well suited to answering questions regarding the relationships between importance, memory, and evaluations. Tight control of information presentation and timing are crucial if we wish to answer the questions laid out in the previous section. To carefully present a broad array of information to respondents, I used a vignette-style experimental design and presented a single candidate to respondents.

This design, due to the large number of factorially-manipulated experimental conditions, resembles that of a conjoint experimental design (Hainmueller et al., 2014). However, it departs from a typical conjoint design in three distinct ways.[7] First, it presents the information about the candidate in a more realistic vignette form. Traditional conjoint experimental designs typically display the attributes of a choice in an abstract tabular format for consistency and easy comparison, making the implied comparisons explicit. Second, this design delays the assessments of the evaluation/choice over time, as detailed in the next section. Finally, it uses a single choice presentation, with all respondents only responding to a single candidate. These modifications to a traditional conjoint experimental design are done for several reasons. The narrative format and time delay before the dependent variables address the concerns laid out in the previous section. Because of the time delay before the dependent variables, the experiment only presents a single candidate to avoid any misattribution of details or conflation of candidate information between multiple target candidates.[8]

As Hainmueller et al. (2014) detail, the virtue of a conjoint experimental design is that once a few simple assumptions are met, the causal quantities of interest (Average Marginal Component Effects, AMCE) are easily calculable.[9] By design, the necessary assumptions

[7]One could argue these three deviations, particularly the third, are enough to warrant calling this experimental design something besides conjoint analysis. Nevertheless, its intellectual origins and analysis structure are rooted in a conjoint design, so I use this terminology.

[8]However, because each respondent only views one candidate profile in this modified design, there is a corresponding loss of statistical power compared to a more traditional conjoint analysis. This power loss is unavoidable, but the sample sizes for both experiments presented in this paper are still sufficiently large to uncover even modest effect sizes.

[9]Furthermore, in this modified design, only four of the five assumptions detailed in Hainmueller et al. (2014), 1) stability & no carryover effects, 2) that the randomization of all profile attributes is in fact random, 4) the treatment components are conditionally independent, and 5) completely independent randomization, are needed to calculate AMCEs. As detailed below, assumption 5 is actually not met in Experiment 2, although an AMCE can still be easily calculated by building in the conditional randomization into the analysis.

are met. A virtue of this experimental design, then, is that the statistical analysis of results is extremely simple and can be done with an ordinary least squares regression with every level of each factor indicated by a dummy variable, and one level of each factor omitted.

Experimental results in this paper come from two separate two-wave experiments, modified from a typical conjoint design, as detailed above. The two experiments were extremely similar in experimental design, though used a variety of different levels of experimental factors for generalizability.[10] The survey procedure was identical for both experiments, with the only differences lying in the vignette content and small variations in question wording. In the first survey wave, respondents answered several batteries of attitudinal and importance items, followed by a demographic questionnaire. Next, they were presented with six screens of information, each containing roughly 50-100 words about the candidate, followed by a single, one-item overall evaluation of the candidate.[11]

Respondents were randomly assigned to receive the second wave survey anywhere from 1-7 days later. This wave assessed their evaluations and memories. The second survey wave first asked for a summary evaluation, perceived personality traits, and ideological placement. I assess the memorability of information in three distinct, and more extensive, ways than previous literature. To assess declarative recall, respondents were asked to fill in a short (30 character) text box that followed "[Candidate Name] is..." with any pieces of information they could recall. To gauge memories of positive/negative valence, respondents were asked how positive or negative they remember feeling about each of the broad classes of information detailed earlier.[12] Respondents then completed a multiple-choice and true-false battery that asked about information contained in the vignette, both experimentally manipulated information and information that had been held constant. No new information was presented in the second wave - only the candidate's name and photo were shown.[13] These memory batteries allow us to assess the relative levels of memory not only across information, but across measures.

The first experiment manipulated thirteen dichotomous variables, both biographical attributes and policy stances, between-subjects in a fully-factorial design: party, gay marriage position, tax policy position, education policy position, facial competence/appearance, gender, political experience, education, occupation, religion, family, local roots, and presence of a scandal.[14] Respondents saw either a high status or a low status level for each particular

[10] A perennial criticism of any vignette-style experiment is one of external validity, i.e. that the given results are due to the exact levels of information presented.

[11] To avoid anchoring, the overall evaluation in the first wave was a 11-point slider, while the evaluation in the second wave was a 101-point slider. Both were rescaled to 0-1 for analysis.

[12] This could be thought of as a domain-specific on-line tally, as respondents are recalling the valence, but not necessarily the underlying information.

[13] So that we could assess memory for gender, race, and appearance, respondents were asked these memory items first, before the photo was shown prior to the other items. The memory questions for both experiments can be seen in the Chapter appendix. Experiment 1 largely used multiple choice items, but for reasons discussed later, Experiment 2 uses more optimal true/false questions.

[14] It would be ideal to have a variety of realizations of information within each of these factors. However, for power and simplicity of analysis, two levels within each variable were used. The second experiment adds

attribute, or for policy stances, a liberal or a conservative position.

The second experiment manipulated eleven dichotomous variables between subjects, as well as two variables with three levels (education, scandal), and one variable with four levels (occupation). The dichotomous manipulated attributes included: party, tax policy position, gun policy position, environmental policy position, gender, facial appearance, political experience, religion, family, military experience, and favorite sport. As before, all dichotomous manipulated variables had a high or low status level, or a liberal or conservative position for policy. For the three variables with more than two levels, analyses included dummy variables for each level with one category omitted, which are highlighted in the analyses.[15] The experimental levels for all these variables, as well as the vignette content, are displayed in the Chapter appendix.

In Experiment 1, a total of 819 respondents completed the first wave of the experiment, and 564 responded to the second wave, resulting in a successful recontact rate of 68.9%.[16] In Experiment 2, a total of 798 respondents completed the first wave of the experiment, and 563 responded to the second wave, resulting in a successful recontact rate of 70.6%.[17] Although automated emails recontacting respondents for the second wave were generated 1-7 days after the first wave, respondents did not necessarily respond immediately. Response times to the follow-up survey varied between 1-9 days of the initial survey, and were relatively uniform across time.[18]

As much previous work has noted, samples drawn from Amazon's Mechanical Turk are younger, better-educated, more liberal, and more Democratic than the US population at large, yet are more broadly representative than many convenience samples. (Berinsky et al., 2012; Buhrmester et al., 2011) Given that many of the crucial arguments of this article rest on the comparison between effects, any arguments about the validity of these comparisons would have to rest on Mechanical Turk workers processing and using information differentially from typical voters, a claim that is relatively unsupported.

In Wave 1 of the first experiment, respondents spent an average of 81.3 total seconds (median = 68.2) reading the information presented on six different screens. In the first wave of the second experiment, respondents spent an average of 89.0 seconds (median = 68.1) reading the information, also presented on six different screens. This time of information consumption nicely mirrors the length of time of a typical TV advertisement or the time it takes to read a short newspaper article.

slightly more conditions. However, additional levels of each factor reduce statistical power quite severely.

[15]Notably, two levels of the education*occupation pairings were trimmed due to implausibility (AA degree with physician and Harvard degree with construction manager). For this reason, all analyses control for all levels to avoid confounding.

[16]Respondents were recruited via Amazon's Mechanical Turk in summer 2014. Respondents were paid $0.50 for the first wave, and $0.20 for the second wave.

[17]Respondents were recruited via Amazon's Mechanical Turk in summer 2015. Respondents were paid $0.50 for the first wave, and $0.25 for the second wave.

[18]Attrition was slightly higher for recontact days five and six, as this fell on a Saturday and Sunday after the initial Monday survey. In Experiment 2, attrition was slightly higher for recontact days three and four, as these fell on a Saturday and Sunday after the initial Wednesday survey.

Of the respondents that completed both waves in Experiment 1, 61.8% were male, with an average age of 30.9 (SD = 10.4), and 51.4% have received a bachelor's or higher degree. For Experiment 2, 54.1% were male, with an average age of 34.1 (SD = 11.1), and 56.9% have received a bachelor's or higher degree. Politically, 63.0% of participants in the first experiment were Democrats, 16.2% were independents, and 20.8% were Republicans. In the second experiment, 62.9% were Democrats, 14.0% were independents, and 22.9% were Republicans.

4.4 Experimental results

In the following section, I assess the variety of dependent variables in turn, first assessing each independently, then linking them together. Given its central importance to the literature, candidate evaluations are discussed first, followed by subjective importance of information to voters, followed by their interrelationship. Next, I discuss memory recall, then memory accuracy, and finally memory positivity (i.e., domain-specific online tallies). Finally, I discuss linkages between memory and evaluations.

Evaluations

Of course, the primary focus of the literature on candidate evaluation is that of the evaluation itself. A core concern is how varying information or its presentation can change the way in which a candidate is perceived. The over-time experimental design allows us to measure not just the effects of the varying information on overall evaluations, but also allows us to assess these effects by wave, time, and their relative magnitude.[19] This study presents a *hard* test for information's impact – by presenting a broad array of information, some may be masked by the impact of other information if it is deemed less important.

Figures 4.1 and 4.2 present the overall effects of the information conditions by survey wave. Because all variables are scaled 0-1, the change in evaluation can be interpreted as a change in the proportion of the scale. For example, in Figure 4.1, the effect of the respondent having the same gay marriage policy position as the candidate in Wave 1 equates to a 20% more positive evaluation of the candidate. Two important patterns become immediately apparent. First, the most impactful information in both experiments are the policy position treatments. The magnitude of some policy effects, notably gay marriage and tax policy in Experiment 1, and tax policy and gun control policy in Experiment 2, are larger than any other effects in the experiments, including party label. A second notable trend of is the attenuation of the effects between Wave 1 of the survey and Wave 2. However, a few

[19]This experimental design also allows us to assess respondents' memory for all this information in both declarative ways as well as more basic global and domain-specific online tallies. While omitted here, this is the focus of another paper.

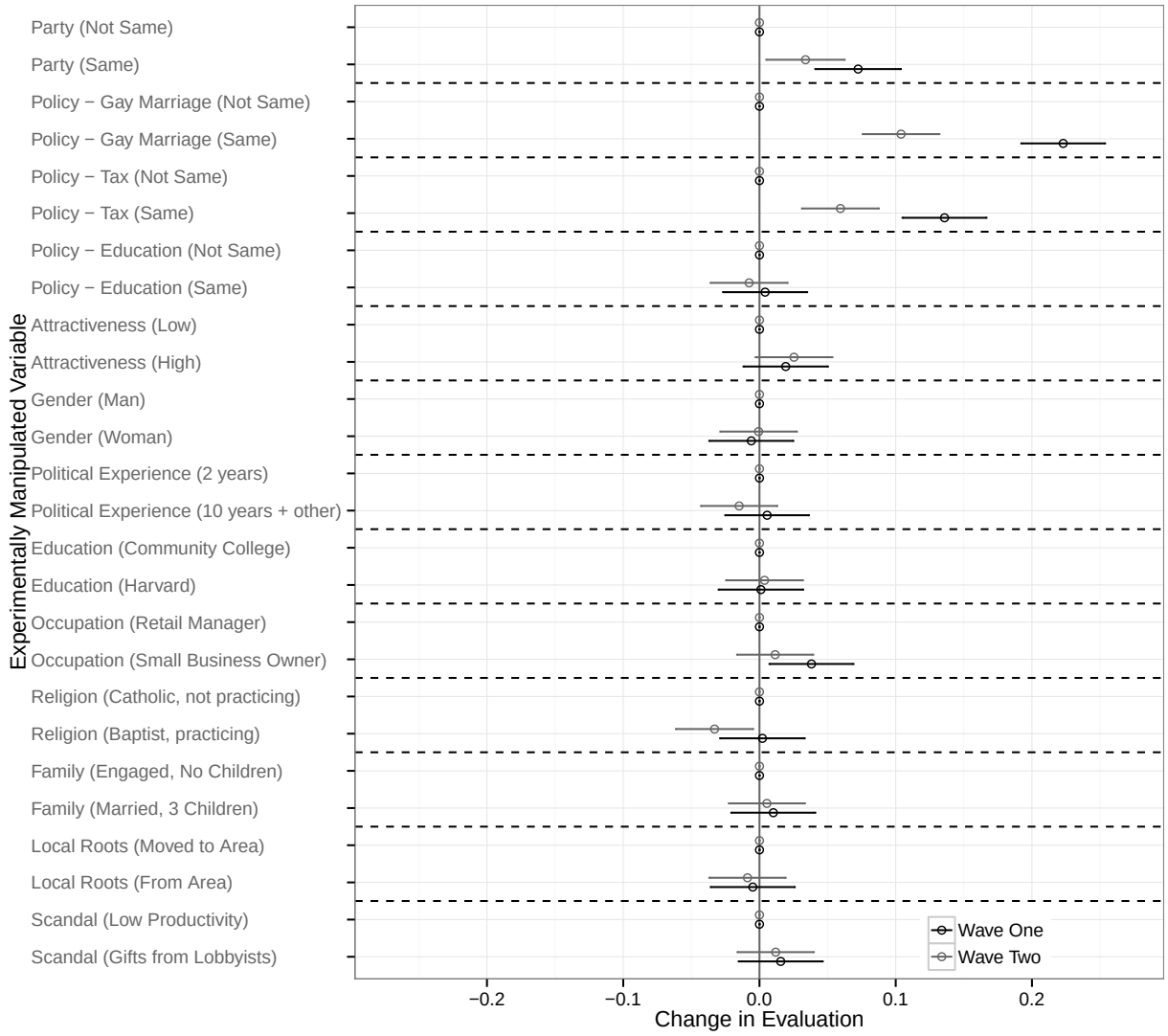


Figure 4.1: Experiment 1: Effects of information on candidate evaluation, by wave

Effect estimates are from two separate OLS regressions with Wave 2 and Wave 1 evaluations on experimental manipulations, shown in Table 4.12 in the Chapter appendix. All variables are coded 0-1, and 95% confidence intervals are shown.

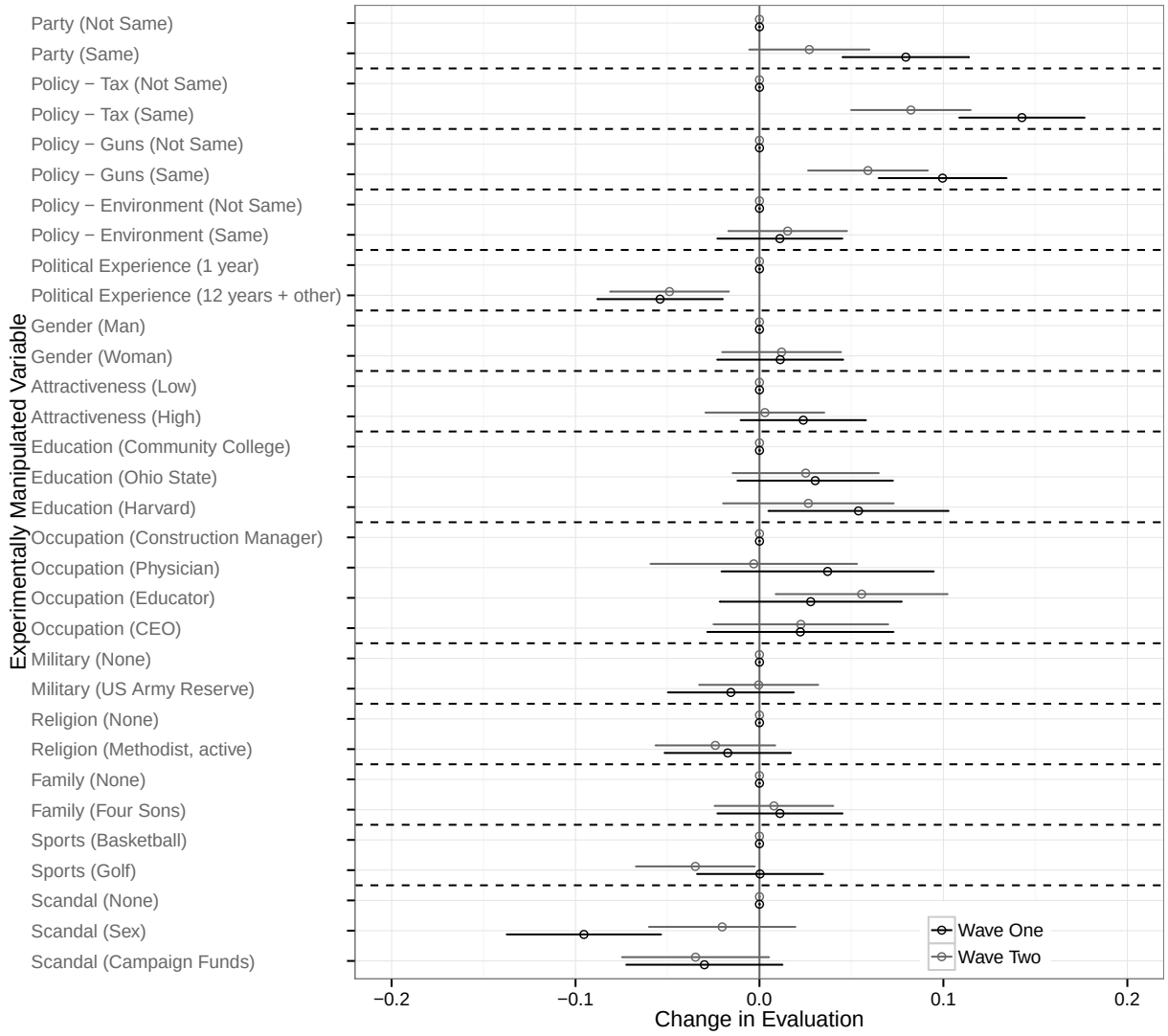


Figure 4.2: Experiment 2: Effects of information on candidate evaluation, by wave

Effect estimates are from two separate OLS regressions with Wave 2 and Wave 1 evaluations on experimental manipulations, shown in Table 4.14 in the Chapter appendix. All variables are coded 0-1, and 95% confidence intervals are shown.

effects seem to grow stronger with the passage of time – notably, the religious affiliation in Experiment 1 and the candidate's sports background in Experiment 2.[20]

Multiple other pieces of information are also impactful, even when controlling for the large effects of policy and party. In Experiment 1, the candidate's background as a small business owner leads to significantly more positive evaluations. In Experiment 2, a sex scandal has a significantly negative impact in Wave 1, but is attenuated by Wave 2. Also in Experiment 2, political experience is viewed as a negative characteristic in both experiments, while having a Harvard degree and being an educator are viewed as net positives.

While Figures 4.1 and 4.2 present the overall experimental results without controlling for any individual-level covariates, Figures 4.3 and 4.4 present the same results broken down by the partisan identification of respondents.[21] This analysis is also critical, as particular information may have a partisan valence to it.[22]

In these figures, we can see important asymmetries of the effects on evaluations by partisanship of the respondents, particularly with non-policy or non-party information. In Experiment 1, we see independent respondents respond significantly more negatively to political experience, and more positively to local roots. Republican respondents respond positively to a candidate with family background, and Democratic respondents respond negatively to local candidates. In Experiment 2, we find independent respondents responding positively to higher education, negatively to a candidate's background as a CEO, positively to military background, and negatively towards a religious affiliation. Both Republicans and Democrats respond negatively to political experience, but positively towards candidates with a background as an educator. Democratic respondents respond positively to more attractive candidates, while Republicans respond more negatively. While both Republicans and Democrats respond negatively to a sexual scandal, only Democrats have a statistically significant negative reaction to the fiscal scandal.

Besides the establishment of these effects, we also see that a number not only persist over time, but actually become stronger. Despite this experiment serving as a hard test for a variety of information in the presence of policy and party information, particular personal information can still serve as a powerful positive or negative cue for evaluations. While the magnitude of policy and party information is always stronger (with only the exception of scandal information), personal information does have an impact as well.

[20] The differences between these coefficients are statistically significant in both cases, $p < .05$.

[21] Tables 4.13 and 4.15 in the Chapter appendix display these regression results in tabular format.

[22] While we explicitly manipulate the partisan affiliation of the candidate in the vignette, other information may still signal a strength of partisanship or a partisan stereotype. See, for example, Theodoridis and Goggin (2016), Goggin et al. (2016), or Goggin and Theodoridis (2016). Unfortunately, due to the sample size of these experiments, these analyses lack strong statistical power for many of these effects.

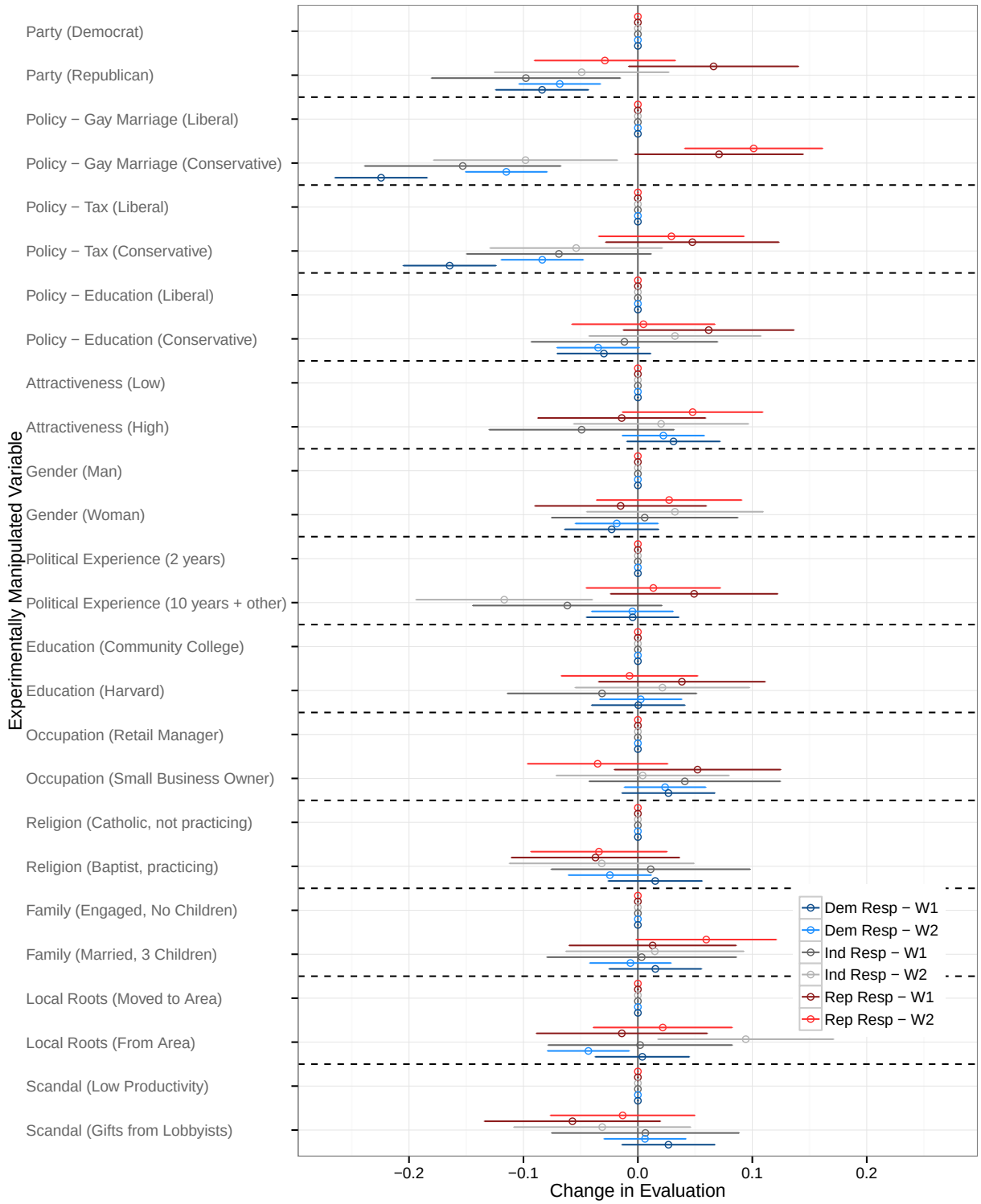


Figure 4.3: Experiment 1: Effects of information on candidate evaluation, by respondent party and wave

Effect estimates are from six separate OLS regressions with Wave 2 and Wave 1 evaluations on all experimental manipulations, shown in Table 4.13 in the Chapter appendix. All variables are coded 0-1, and 95% confidence intervals are shown.

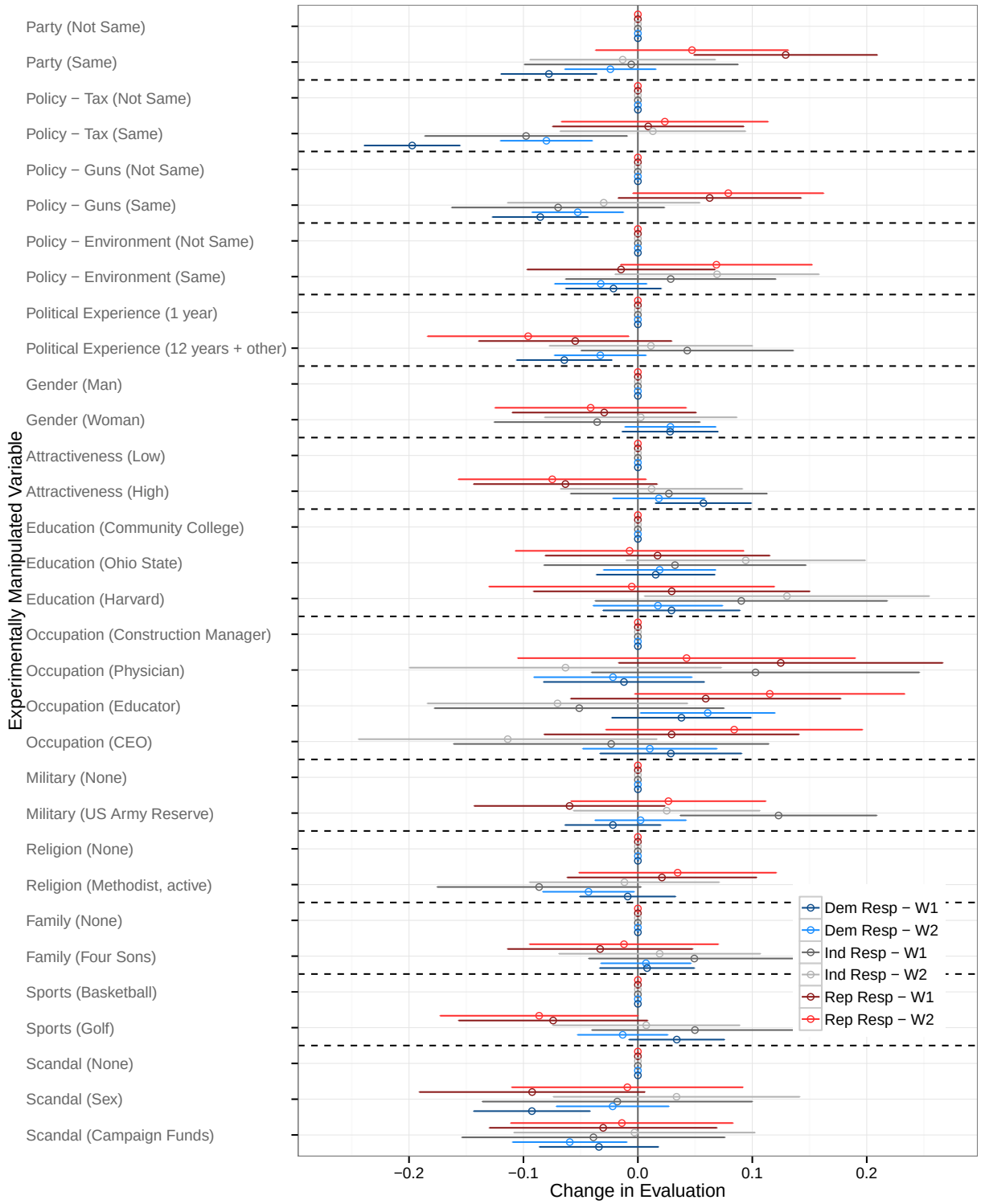


Figure 4.4: Experiment 2: Effects of information on candidate evaluation, by respondent party and wave

Effect estimates are from six separate OLS regressions with Wave 2 and Wave 1 evaluations on all experimental manipulations, shown in Table 4.15 in the Chapter appendix. All variables are coded 0-1, and 95% confidence intervals are shown.

Importance

Although we have established these baseline experimental results, we still do not know what *should* matter in respondents' evaluations. Of course, this standard may vary based on a respondents' own preferences. Figures 4.5 and 4.6 display the rated importance of various types of information, as well as particular policy areas, respectively.[23] We can see that respondents rate a number of pieces of personal information as less important than the middle of the scale, yet rate all policy areas as more important than the center of the scale.

These patterns of importance are relatively unsurprising – respondents rate policy and party information as very important, while information typically deemed not socially desirable to use (e.g. race, gender) are rated quite low. However, not all personal information is rated as unimportant. Both education and occupation are rated higher than average across all the listed attributes. Within the realm of policy domains, we see a gradient of importance, with many salient issues rated as more highly important. The experimentally-manipulated policy areas are some of the lowest and highest in terms of respondents' subjective importance. By design, these issues were picked for the experiment because of their variation in aggregate importance to respondents.

Despite the obvious social desirability biases at work with respect to personal information, especially race and gender, there is good evidence that these ratings of importance reflect true considerations of importance. Tables 4.16 and 4.17 in the Chapter appendix display the correlations of these importance metrics with measures of political sophistication. Notably, we see a strong correlation between policy and party information and political sophistication, and a negative relationship between sophistication and many personal information attributes.

[23]These results come from the respondents to Experiment 1 and Experiment 2, which were drawn from Amazon's Mechanical Turk. These descriptive patterns of importance largely replicate on more representative national samples. See Figure 4.24 in the Chapter appendix for extremely similar results from Cooperative Congressional Election Study (CCES) 2012 respondents.

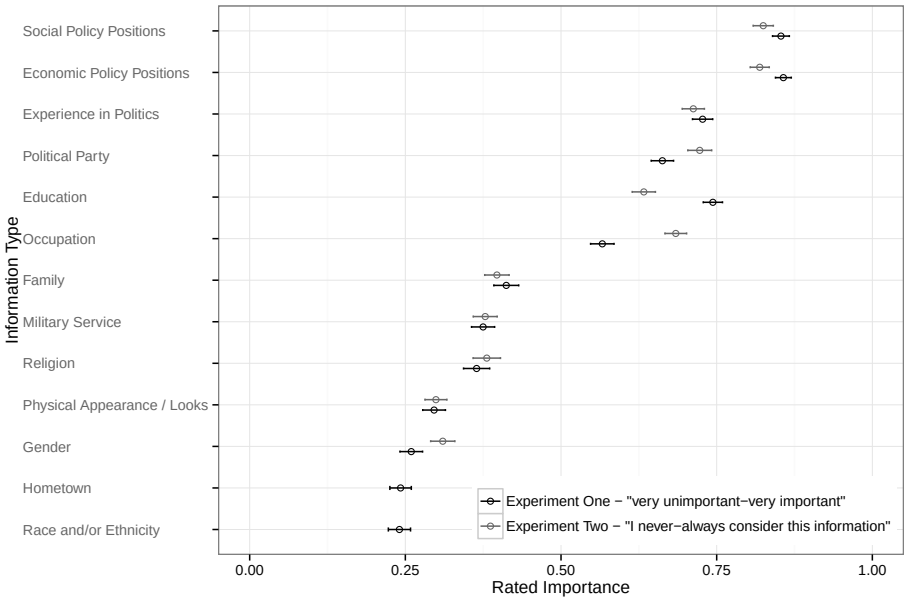


Figure 4.5: Importance of information type, by experiment

NOTE: Importance assessed on a 5-point Likert scale. This scale is rescaled to 0-1 here, and 95% confidence intervals are shown. Hometown and Race/Ethnicity were included in Experiment 1 only.

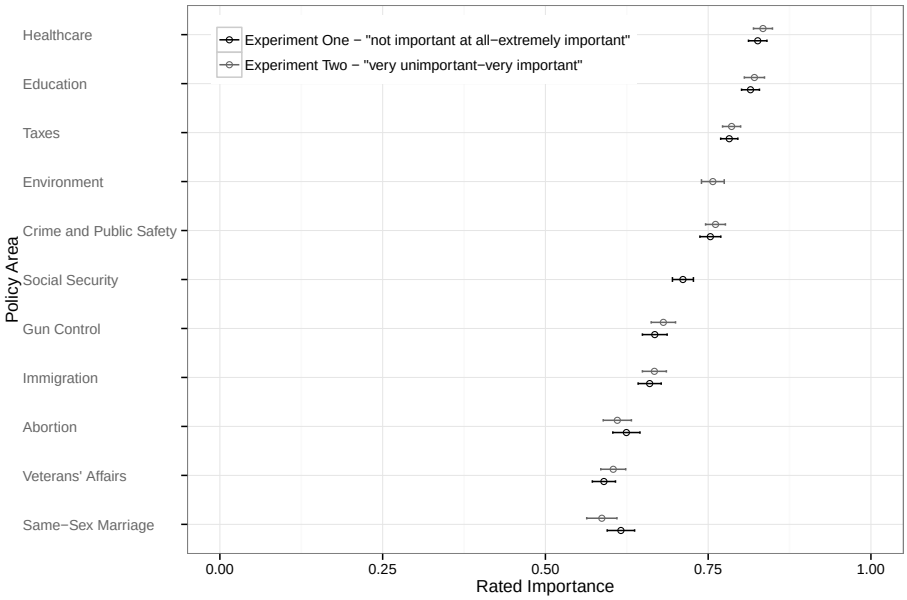


Figure 4.6: Importance of policy area, by experiment

NOTE: Importance assessed on a 5-point Likert scale. This scale is rescaled to 0-1 here, and 95% confidence intervals are shown. The Environment was included in Experiment 2 only, and Social Security was included in Experiment 1 only.

Does importance condition informations' impact?

Having established that candidate attributes impact evaluations of candidates and vary in importance to respondents, how do the two relate? Ideally, we should expect respondents' evaluations to be impacted by the information they deem important, while not impacted by the information that they deem as unimportant. This calibration to importance would be a strong sign that respondents are holding candidates accountable to their own standards.

However, when we examine the association between importance and the impact of the informational treatments, we see scant evidence of a positive relationship. To start, the aggregate importance ratings bear little correspondence to the aggregate impact of the information. Figures 4.7 and Figures 4.8 display the correspondence in both Experiment 1 and 2. These figures show the regression coefficient of information's impact and its overall rated importance, with 95% confidence intervals displayed for both measures.[24]

From the aggregate relationships, we can see that the policy and party information are both the most important and most impactful. However, across the rest of the attributes, we see little correspondence to impact. Education and political experience are rated as highly important in Experiment 1, yet have no aggregate impact on evaluations. Conversely, religion, which is rated as relatively unimportant, does have a significant impact. In Experiment 2, we see somewhat more of an aggregate correspondence – particularly education and occupation information is impactful as well as important.

If we examine the impact of policy information by rated policy importance, we see a striking lack of relationship. Figures 4.9 and 4.10 show these aggregate relationships. While some policies may be rated as important (education or the environment), they have far less impact than policies rated as less important.

Of course, these aggregate results may mask individual respondents being attentive to their own importance and conditioning the impact based on their own standards. Tables 4.1 and 4.2 display results from OLS regressions with the Wave 1 and Wave 2 evaluations regressed on 1) the informational treatments, 2) that information's rated importance, and 3) the interaction between the two. If respondents are, in fact, conditioning their response to the informational treatment based on the importance, we should see a significant interaction. In both experiments and in both waves, we only see six positive interaction effects: positive effects for gay marriage in both Wave 1 and Wave 2 of Experiment 1, and on tax policy in Wave 1 of Experiment 1. We see negative interaction effects for education (indicating that if a respondent said they valued education and the candidate had a higher educational level, they rated the candidate worse), as well as negative interactions for political experience and gun control policy in Experiment 2. While there is evidence that respondents who find gay marriage and tax policy more important are responding more strongly to that information, there is no evidence of a widespread relationship between importance and impact. Put simply, there is little evidence that individual respondents are impacted by the informational

[24]To assess individuals' calibration to their own importance, we need to assess this relationship at the individual-level, as well. This is presented following the aggregate analysis.

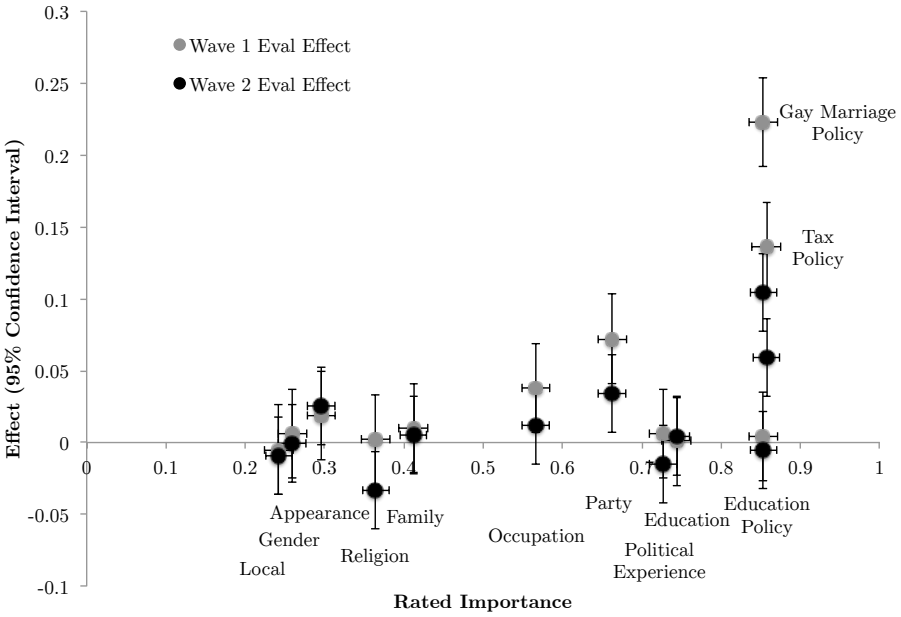


Figure 4.7: Experiment 1: Effects by aggregate importance to respondents
Effect estimates are from two separate OLS regressions with Wave 2 and Wave 1 evaluations on experimental manipulations, shown in Table 4.12. All variables are coded 0-1.

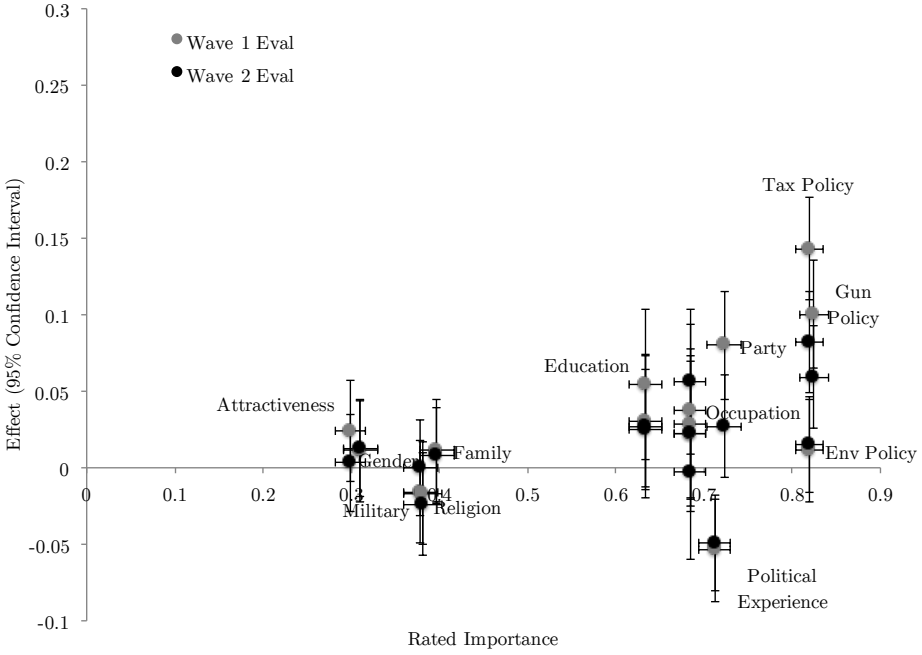


Figure 4.8: Experiment 2: Effects by aggregate importance to respondents
Effect estimates are from two separate OLS regressions with Wave 2 and Wave 1 evaluations on experimental manipulations, shown in Table 4.14. All variables are coded 0-1.

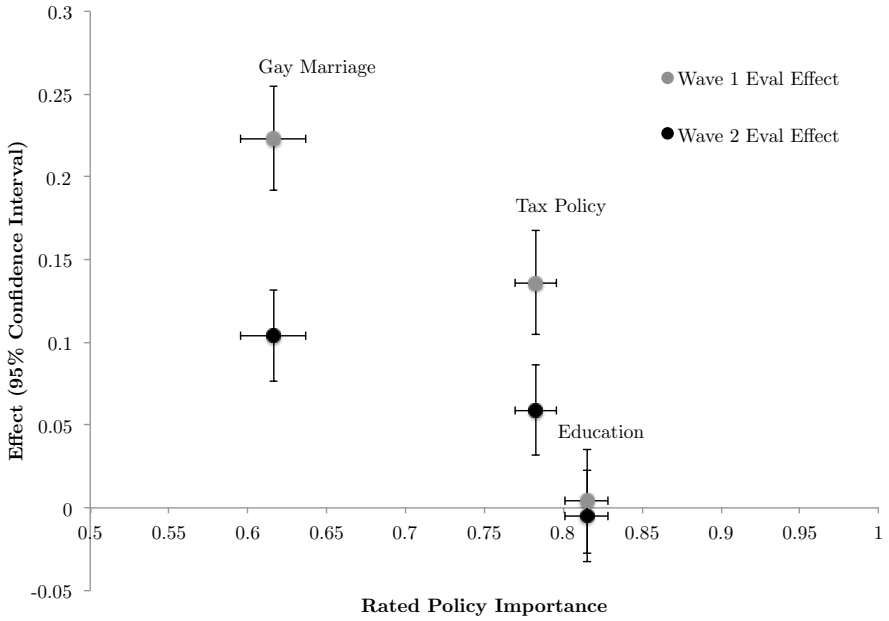


Figure 4.9: Experiment 1: Policy effects by aggregate importance to respondents

Effect estimates are from two separate OLS regressions with Wave 2 and Wave 1 evaluations on all experimental manipulations, shown in Table 4.12, with policy sorted by importance within policy (not across all informational attributes). All variables are coded 0-1.

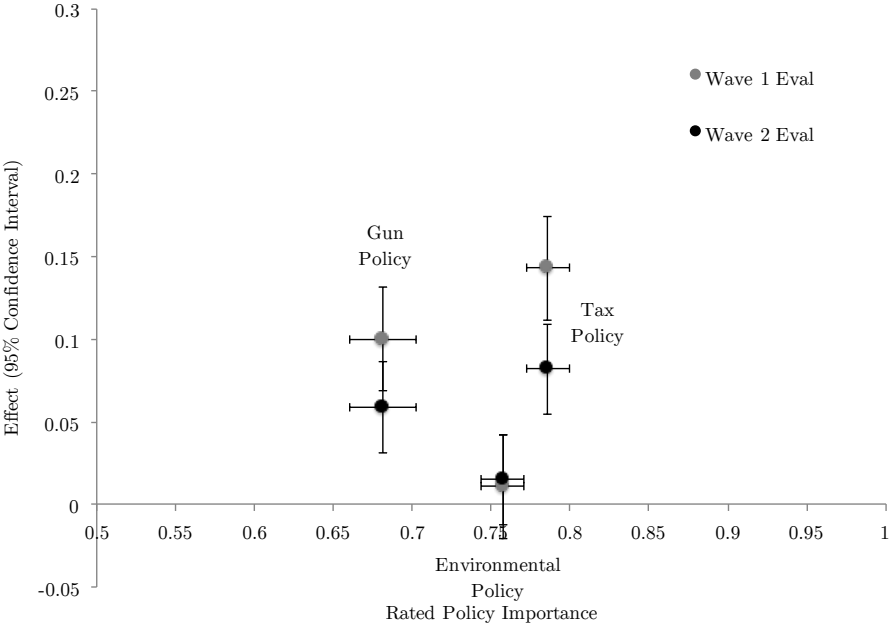


Figure 4.10: Experiment 2: Policy effects by aggregate importance to respondents

Effect estimates are from two separate OLS regressions with Wave 2 and Wave 1 evaluations on all experimental manipulations, shown in Table 4.14, with policy sorted by importance within policy (not across all informational attributes). All variables are coded 0-1.

	Wave 1		Wave 2	
	Coefficient	SE	Coefficient	SE
Party	0.071	(0.046)	0.035	(0.045)
Importance	−0.053	(0.039)	−0.016	(0.037)
Interaction	−0.002	(0.063)	0.006	(0.061)
Gay Marriage	0.067∗	(0.035)	0.046	(0.033)
Importance	−0.186∗∗∗	(0.038)	−0.087 ∗ ∗	(0.036)
Interaction	0.261∗∗∗	(0.051)	0.100 ∗ ∗	(0.048)
Tax Policy	0.000	(0.065)	0.059	(0.062)
Importance	−0.018	(0.061)	0.061	(0.058)
Interaction	0.181 ∗ ∗	(0.081)	0.009	(0.077)
Education Pol.	−0.054	(0.065)	−0.056	(0.062)
Importance	−0.001	(0.061)	−0.037	(0.058)
Interaction	0.081	(0.077)	0.073	(0.074)
Political Exp.	0.046	(0.050)	0.002	(0.048)
Importance	0.111 ∗ ∗	(0.047)	0.058	(0.044)
Interaction	−0.057	(0.065)	−0.027	(0.062)
Education	0.040	(0.055)	0.103∗	(0.053)
Importance	0.007	(0.055)	0.136 ∗ ∗	(0.053)
Interaction	−0.047	(0.071)	−0.140 ∗ ∗	(0.069)
Occupation	0.037	(0.036)	0.024	(0.034)
Importance	−0.036	(0.043)	0.015	(0.040)
Interaction	−0.011	(0.057)	−0.021	(0.054)
Appearance	−0.006	(0.023)	0.033	(0.022)
Importance	−0.024	(0.047)	0.052	(0.046)
Interaction	0.072	(0.059)	−0.015	(0.057)
Gender	−0.012	(0.022)	0.007	(0.020)
Importance	0.065	(0.046)	0.004	(0.047)
Interaction	0.013	(0.059)	−0.051	(0.058)
Religion	−0.002	(0.024)	−0.037	(0.023)
Importance	−0.020	(0.040)	−0.024	(0.037)
Interaction	0.016	(0.051)	0.025	(0.049)
Family	0.046∗	(0.027)	0.000	(0.025)
Importance	0.062	(0.043)	−0.058	(0.043)
Interaction	−0.097∗	(0.054)	0.015	(0.052)
Local	0.013	(0.022)	−0.030	(0.020)
Importance	0.064	(0.051)	0.062	(0.048)
Interaction	−0.061	(0.063)	0.096	(0.060)
Constant	0.378	(0.086)	0.350	(0.082)
Adj. R^2	0.331		0.171	
N	781		538	
SEE	0.212		0.164	

$* * ** = p < .001, * * * = p < .01, ** = p < .05, * = p < .10.$

Table 4.1: Experiment 1: Information & importance effects on evaluations by wave

NOTE: Party and the three policy variables coded as '1' if shared with respondent, '0' otherwise. All other variables coded as noted in the Chapter appendix. Both models are OLS. Standard errors shown in parentheses. Importance and Evaluation are rescaled 0-1, and the interaction is $information * importance$.

treatments relative to their ratings of how important the information is to them in their decisions.

	Wave 1		Wave 2	
	Coefficient	SE	Coefficient	SE
Party	0.063	(0.051)	−0.015	(0.052)
Importance	−0.089 ∗ ∗	(0.043)	−0.079∗	(0.044)
Interaction	0.023	(0.066)	0.055	(0.066)
Tax Policy	0.123 ∗ ∗	(0.058)	0.054	(0.059)
Importance	−0.009	(0.048)	0.042	(0.048)
Interaction	0.024	(0.067)	0.028	(0.068)
Gun Policy	0.166∗∗∗	(0.054)	0.102∗	(0.055)
Importance	−0.082 ∗ ∗	(0.034)	−0.023	(0.034)
Interaction	−0.105∗	(0.062)	−0.055	(0.062)
Environ. Policy	0.060	(0.057)	−0.013	(0.060)
Importance	0.073 ∗ ∗	(0.037)	0.064∗	(0.037)
Interaction	−0.063	(0.066)	0.025	(0.069)
Political Exp.	0.037	(0.052)	−0.026	(0.050)
Importance	0.120 ∗ ∗	(0.055)	0.062	(0.053)
Interaction	−0.123∗	(0.069)	−0.035	(0.066)
Gender	−0.015	(0.026)	0.005	(0.025)
Importance	−0.028	(0.047)	−0.001	(0.047)
Interaction	0.073	(0.063)	0.022	(0.061)
Attractiveness	0.003	(0.027)	−0.014	(0.027)
Importance	0.057	(0.053)	−0.007	(0.053)
Interaction	0.088	(0.069)	0.076	(0.070)
Education (Ohio St.)	0.067	(0.054)	0.002	(0.051)
Education (Harvard)	0.058	(0.059)	0.058	(0.056)
Importance	0.122 ∗ ∗	(0.062)	0.053	(0.058)
Interaction (Ohio St.)	−0.076	(0.078)	0.018	(0.074)
Interaction (Harvard)	−0.040	(0.086)	−0.067	(0.082)
Occup (Physician)	−0.016	(0.081)	−0.069	(0.087)
Occup (Educator)	0.007	(0.074)	0.046	(0.074)
Occup (CEO)	−0.043	(0.073)	0.036	(0.071)
Importance	−0.098	(0.081)	−0.053	(0.082)
Interaction (Physician)	0.119	(0.109)	0.110	(0.115)
Interaction (Educator)	0.056	(0.101)	0.026	(0.101)
Interaction (CEO)	0.128	(0.101)	−0.013	(0.098)
Military	0.012	(0.030)	−0.020	(0.029)
Importance	0.074	(0.049)	−0.018	(0.049)
Interaction	−0.047	(0.063)	0.052	(0.062)
Religion	−0.041	(0.027)	−0.024	(0.026)
Importance	−0.064	(0.040)	−0.047	(0.040)
Interaction	0.071	(0.055)	0.014	(0.054)
Family	−0.013	(0.030)	−0.006	(0.028)
Importance	−0.082	(0.050)	0.021	(0.050)
Interaction	0.074	(0.062)	0.040	(0.061)
Constant	0.324	(0.088)	0.410	(0.086)
Adj. R^2	0.167		0.072	
N	799		563	
SEE	0.242		0.194	

$* * ** = p < .001, * * * = p < .01, ** = p < .05, * = p < .10.$

Table 4.2: Experiment 2: Information & importance effects on evaluations by wave

NOTE: Party and the three policy variables coded as '1' if shared with respondent, '0' otherwise. All other variables coded as noted in the Chapter appendix. Omitted levels are construction manager (occupation), community college (education), and no scandal. Both models are OLS. Standard errors shown in parentheses. Importance and Evaluation are rescaled 0-1, and the interaction is $information * importance$.

Memory open-ended recall

Before either memory accuracy or memory positivity were assessed, respondents were given five blank text boxes to fill in anything they could recall about the candidate.[25] Of the respondents completing the second wave of the survey, 94.8% in Experiment 1 and 95.9% in Experiment 2 offered at least one piece of information they recalled, with 42.7% recalling five separate pieces of information in Experiment 1, and 39.3% in Experiment 2. All open-ended responses were coded into one of 23 categories (21 categories for experiment two due to slightly different vignette content), largely corresponding to the manipulated information conditions, as well as a number of other common categories of information. The proportion of respondents recalling information in these categories in Experiment 1 is shown in Figure 4.11, and Figure 4.12 for Experiment 2.

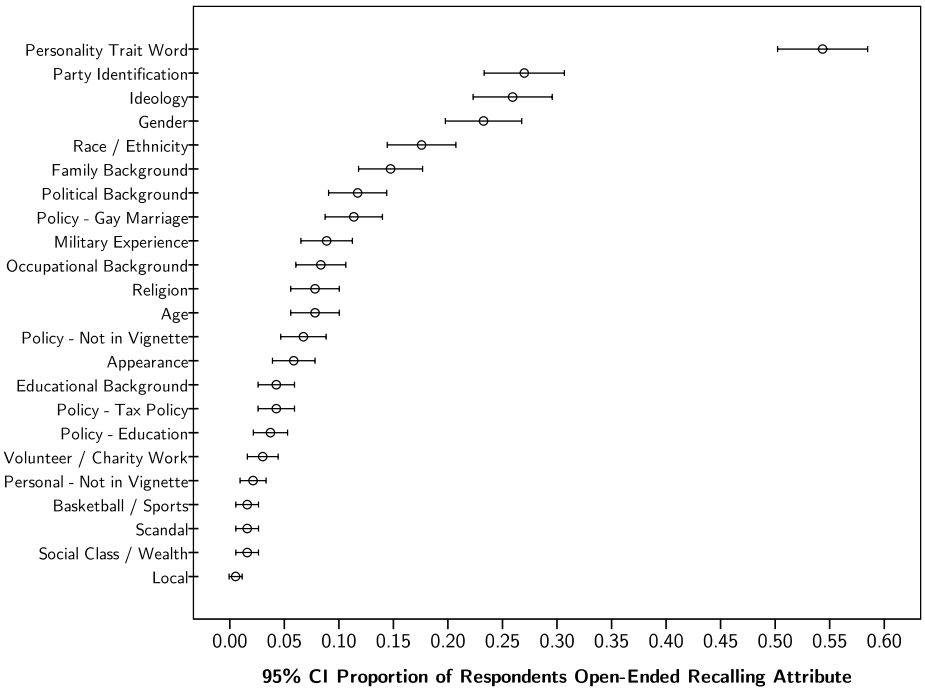


Figure 4.11: Experiment 1: Open-ended recall of vignette information

Several important patterns in recall are worth noting. First, the most frequently recalled information, by a large margin, were a variety of personality trait words, including many of the politically-relevant traits discussed in the trait literature such as compassion, leadership, integrity, competence, and warmth. This is unsurprising, given the known reliance

[25] At this point in the second-wave survey, respondents had only been shown the name and photograph of the candidate. No other information was provided in the second wave. This does, however, mean that race/gender recall could have simply been gleaned from the photograph, and descriptions of the candidates' looks or appearance may have been triggered by the photograph appearing several screens before.

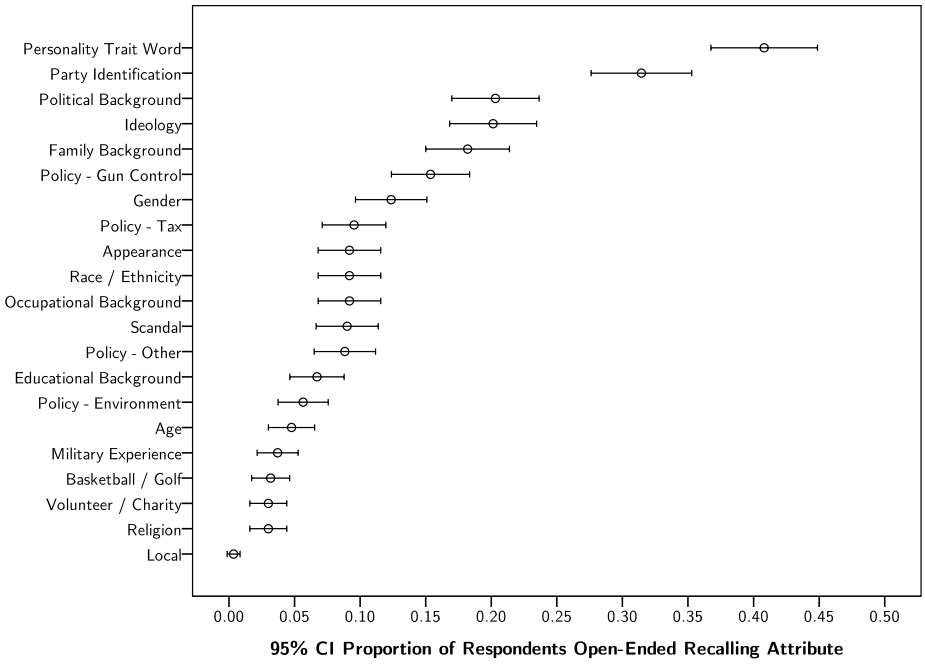


Figure 4.12: Experiment 2: Open-ended recall of vignette information

of person perception and person memory on central personality traits.[26] Many respondents also recalled the partisan affiliation of the candidate, the inferred ideology of the candidate, gender, race/ethnicity, family background, political background, the candidate's gay marriage policy stance or gun control stance. These results suggest several important patterns. Ideology and party are central to the perceptions of politicians, although personality trait words still dominate recall.[27] Factual personal information is recalled at varying rates, with more central biographical attributes (e.g. family, occupation) appearing at higher frequencies than smaller details. False memories do exist at a nonzero rate - the categories "policy - not in vignette" and "personal - not in vignette" represent memories of either policy domains/stances or personal information that the candidate did not present in the provided information. Finally, these very similar patterns exist across both experiments, suggesting that, while different information was used in the two experiments, the same general patterns across categories of information exist, even if the content itself is varied.

[26] An alternative and plausible explanation for some of this prevalence is that respondents who remembered very little wrote in generic trait words to give the appearance they actually remembered more than they did.

[27] See, for instance, Uleman and Saribay (2012) for a summary of the psychology literature on the centrality of traits in the formation of initial impressions of other persons, and Anderson and Sedikides (1991) for a discussion of competing models of person perception, representation, and memory.

Memory accuracy

Memory accuracy was assessed in the second survey using a multiple-choice battery about information contained in the vignette. Due to differences in the memory accuracy questionnaire between experiments, I discuss the results from each experiment in turn. Overall, we can see memory accuracy fade as time passes between survey waves. In Experiment 1, across all information items, we see a slow decay from just over 60% to just below 50% as time increases over a week after initial presentation.[28]

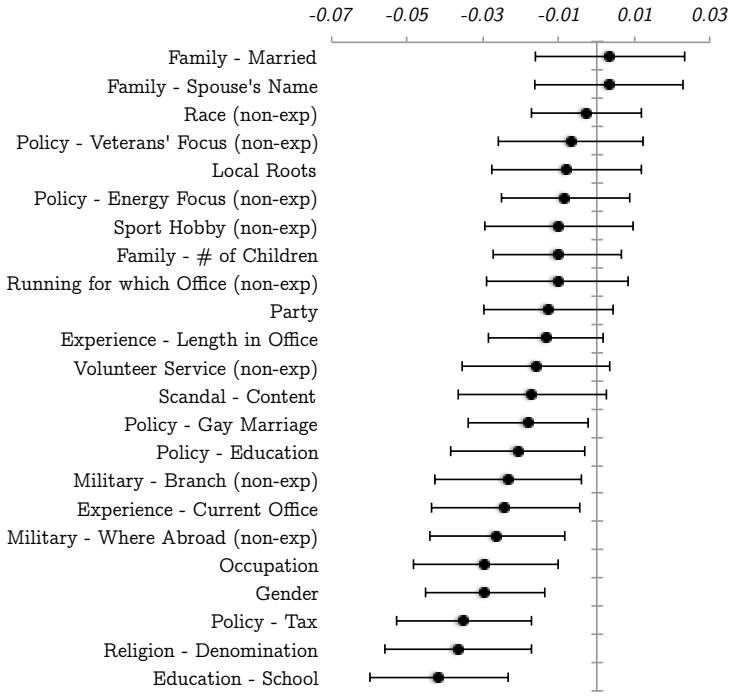


Figure 4.13: Experiment 1: Memory decay of information over time

NOTE: Estimates are coefficients from bivariate OLS regressions of memory accuracy on time between waves in days. Therefore, an estimate of -0.05 indicates that as one moves the length of the survey (1-9 days), one would expect memory to decrease about 40%.

Before examining the results across items, it is worth noting issues regarding comparability of accuracy across information items. Because accuracy questions may not be equally hard due to varying difficulties of guessing and variation in response options, comparing aggregate levels of memory would conflate question difficulty with the difficulty of remembering that information.[29] However, we can leverage over-time variation in memory to allow us to compare the memorability of varying items. Because we do not expect the problems

[28]Shown in Figure 4.25 in the Chapter appendix for Experiment 1 and Figure 4.26 for Experiment 2. These figures are not corrected for guessing. Corrected for guessing, the data move from just below 40% to around 30%. Despite the guessing correction's conservative nature, it still demonstrates a large proportion of respondents are remembering many items.

[29]A standard correction for guessing is quite severe, as it uniformly assumes that all respondents who

noted above to be time-varying, we can examine the change in memory over time to assess the memorability of the array of information.[30] We can see the varying decay of information across time in Figure 4.13.[31] Notably, policy positions appear to fade in memory quite strongly, as do personal characteristics such as education, religion, and occupation. However, other personal information, such as family, appears to fade less quickly.

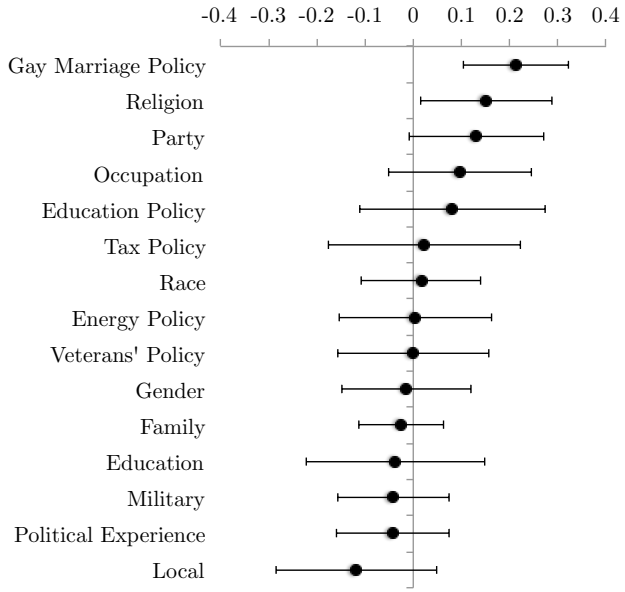


Figure 4.14: Experiment 1: Effects of importance on memory accuracy
NOTE: Estimates are from bivariate OLS regressions of memory accuracy on rated importance by respondents.

Second, we can assess the relationship between a respondent's rated importance and memory accuracy. To quantify the impact of importance on memorability across all information, an OLS regression[32] reveals a slight positive effect of 0.039 ($p = .036$), indicating

answered correctly were guessing, and therefore multiplies this level by $1/n$, where n is equal to the number of response options. This is also not a proper assumption, as respondents likely used base rates regarding politicians' attributes to guess strategically. For instance, when the candidate is male, 92.9% of respondents answered the gender question correctly, while only 62.9% did so when the candidate was female.

[30]The only concerns with examining these slopes and not the aggregate levels is their sensitivity to floor and ceiling effects, as well as the model choice used to estimate the memory decay. Thankfully, we can examine the data and try alternative models to allay both these concerns.

[31]If one is concerned about the choice of a linear decay model, Figure 4.27 shows this decay by memory item with a separate LOESS for each item. Of particular note are not just the rates at which the memories fade, but their initial and final levels, as well. It is also important to note the relative levels of memory across information items manipulated, shown in Table 4.18 in the Chapter appendix. Importantly, not all the information within each information class is remembered equally well. Particularly, we see that party, tax policy, and gay marriage policy are all remembered better when shared with the respondent's own party or policy stance. However the education policy position is remembered better if it is non-shared.

[32]Regressing uncorrected for guessing memory on importance (both coded 0-1), with fixed effects for information type.

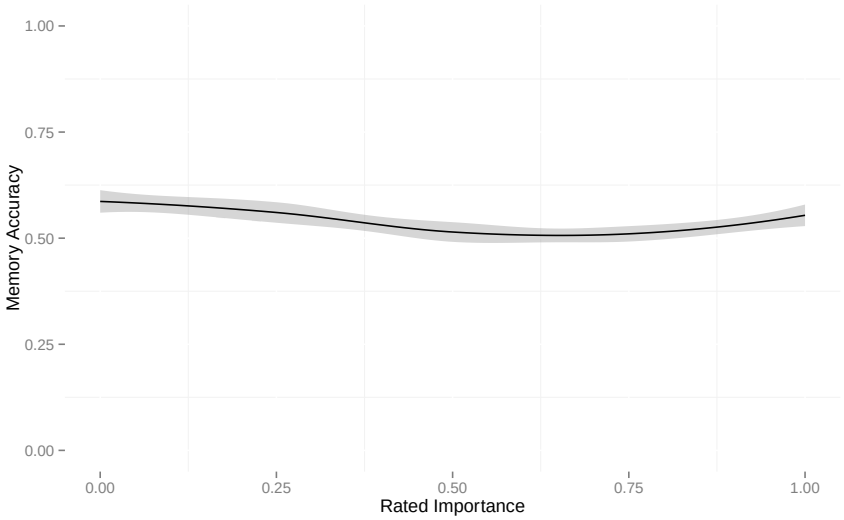


Figure 4.15: Experiment 1: LOESS of memory accuracy by rated importance
NOTE: Uncorrected for guessing, 95% confidence interval shown.

a 3.9% increase in memory as a piece of information moves from very unimportant to a respondent to very important. This significant, although substantively weak, relationship is extremely variable by the type of information, with only two types of information (religion, gay marriage policy) having a significantly positive relationship, as shown in Figure 4.14. The relationship across all information items can be seen in Figure 4.15.[33]

The relationships shown in Figure 4.14 do not vary systematically by policy or personal types. There is no relationship between memory and importance for policy information, nor is there an overall relationship between memory and importance for personal information.[34]

Because of the difficulties in comparing questions with differing response options and the guessing corrections involved, Experiment 2 used all true/false or two-response option questions. While this does not ensure comparability, it minimizes the "researcher degrees of freedom" in picking plausible incorrect alternatives to the questions and makes a conservative guessing correction uniform across all items. Because of this, assessing memory accuracy is far simpler. Figure 4.16 displays the raw percent correct for all memory items, as well as by information domain. Before the objective assessment of memory accuracy, respondents were asked explicitly to rate "about how much do you think you remember about [candidate name]?" The objective results largely correspond to this explicitly asked question - only 0.9% of respondents suggested they remembered "just about everything," 8.8% indicated they remembered "most things," 23.9% said "a decent number of things," 37.5% said "a few things," and finally, 29.0% declared they remembered "almost nothing."

[33]Figure 4.29 in the Chapter appendix shows this relationship with a LOESS for each of the individual memory items.

[34]As demonstrated by the results shown here with across-attribute importance. Using the within-policy importance reveals a similar lack of a relationship.

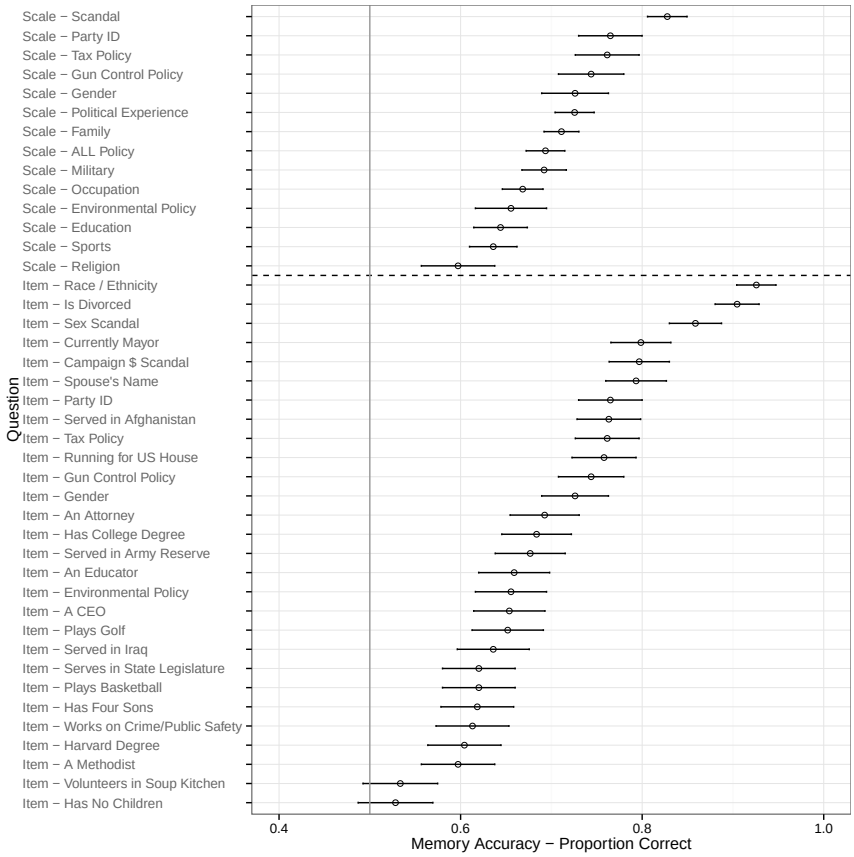


Figure 4.16: Experiment 2: Memory accuracy by information type

NOTE: 95% confidence intervals shown. The vertical line at 0.5 denotes the proportion expected to be correct by guessing, as all memory accuracy questions in Experiment 2 had two response options.

Similar to Experiment 1, many of the personal information categories, as well as core political categories such as party identification are the most remembered. Notably, even up to nine days after receiving the information, many respondents continue to accurately remember this information.[35] As with Experiment 1, there appears to be no correspondence between memory accuracy and the rated importance of particular information by respondents. Figure 4.17 shows the overall relationship between subjective rated importance of particular information domains, and the memory accuracy within that domain.[36] While memory accuracy rates suggest that there are interesting patterns in memory across time, information categories, and the manipulated information, there appears to be no relationship between the importance respondents place on a type of information and their probability of accurately remembering that information.

[35]Figure 4.28 displays LOESS plots of all individual memory type scales by day after the first wave survey.

[36]Figure 4.30 in the Chapter appendix shows LOESS plots within information domains. These plots relatively clearly show a lack of relationship, even within particular information domains.

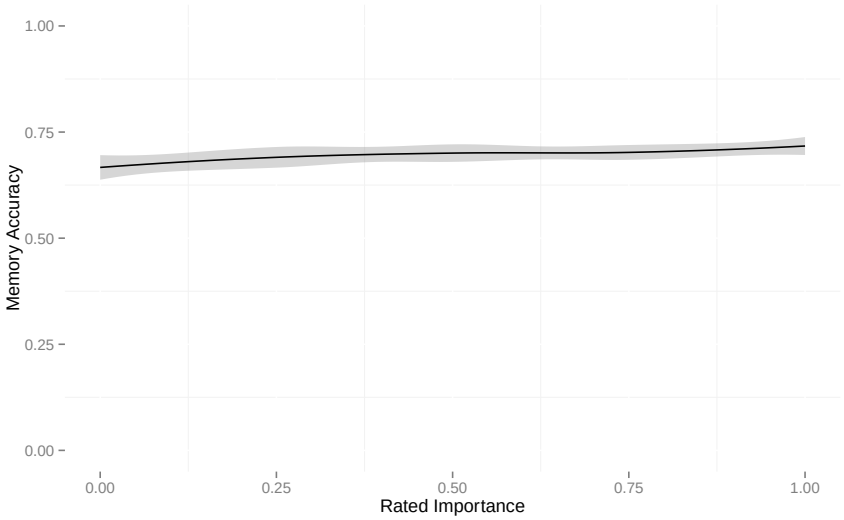


Figure 4.17: Experiment 2: LOESS of memory accuracy by rated importance
NOTE: 95% confidence intervals shown.

Memory positivity

Even if respondents do not perfectly factually remember an item, they may remember that they liked or disliked something about that candidate in that domain. To test this, the positivity or negativity of memories in each of the information domains was measured in the second wave survey. Because respondents could remember a positive or negative valence in a domain, the scale was folded at the midpoint. To assess this overall relationship, an OLS regression of positivity on importance reveals an effect of 0.100 ($p < .001$), indicating that as an item moves from very unimportant to important, its remembered positivity rating becomes about 20% of the scale length more positive or negative.[37]

We can see this effect broken down by type of information in Figures 4.18 and 4.20.[38] Unlike memory accuracy, it appears that respondents remember more positive or more negative things in the information domains about which they care. Figures 4.33 and 4.34 in the Chapter appendix shows this relationship broken down by the individual items with separate LOESS plots. The relationship appears strongly positive for many personal items, yet very little relationship exists for policy items.

One might be concerned that this memory positivity does not actually represent true assessments of the information presented in the vignette. If we regress memory positivity (unfolded, to allow for more positive or negative memories) on the information manipulations, we can see that the information, while not always accurately remembered, does affect memory

[37]This result comes from Experiment 1 data, regressing folded positivity memory (0-.5) on importance (0-1), with fixed effects for information type.

[38]Figures 4.31 and 4.32 in the Chapter appendix shows this overall relationship across items with rated importance.

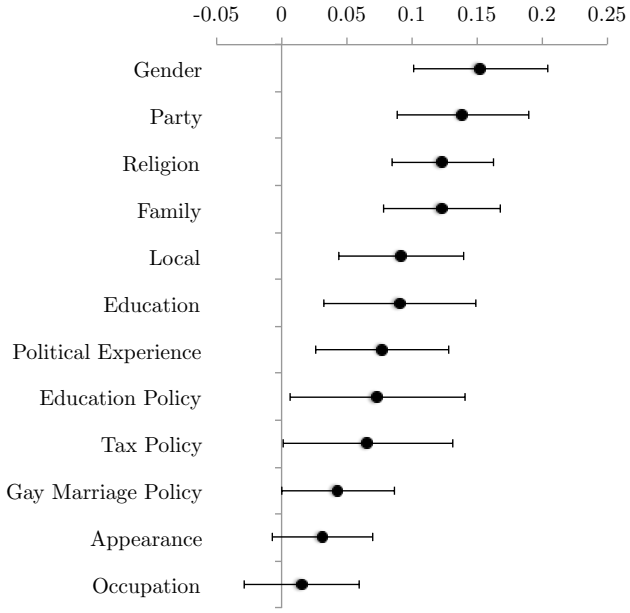


Figure 4.18: Experiment 1: Effects of importance on memory positivity (folded)
NOTE: Estimates are coefficients from bivariate OLS regressions of memory positivity (folded) on rated importance by respondents.

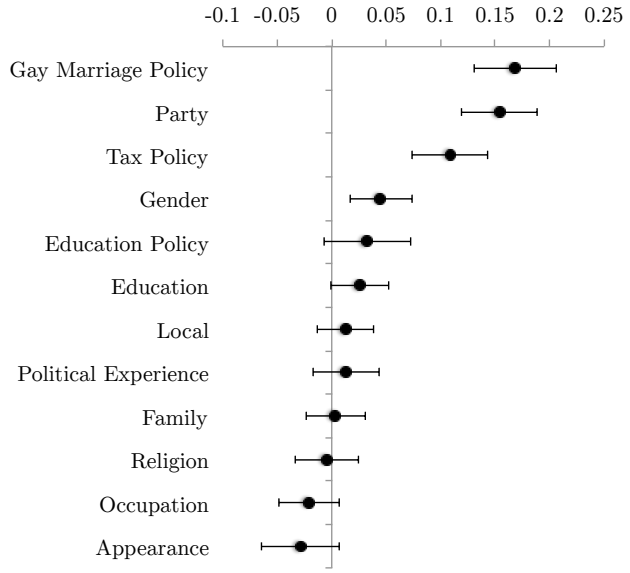


Figure 4.19: Experiment 1: Effects of treatment on memory positivity (unfolded)
NOTE: Estimates are coefficients from bivariate OLS regressions of memory positivity on rated importance by respondents.

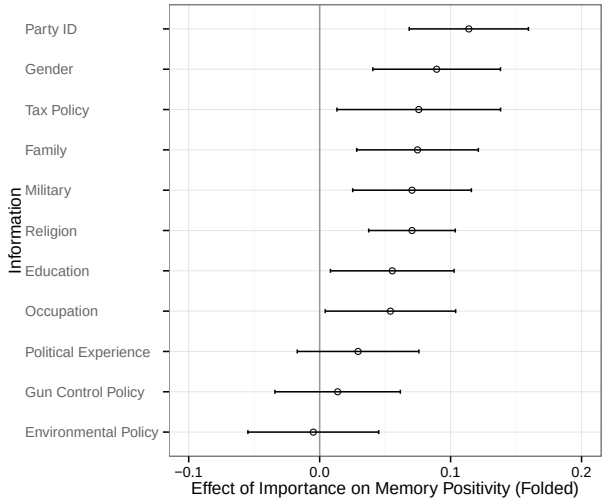


Figure 4.20: Experiment 2: Effects of importance on memory positivity (folded)
NOTE: Estimates are coefficients from bivariate OLS regressions of memory positivity (folded) on rated importance by respondents.

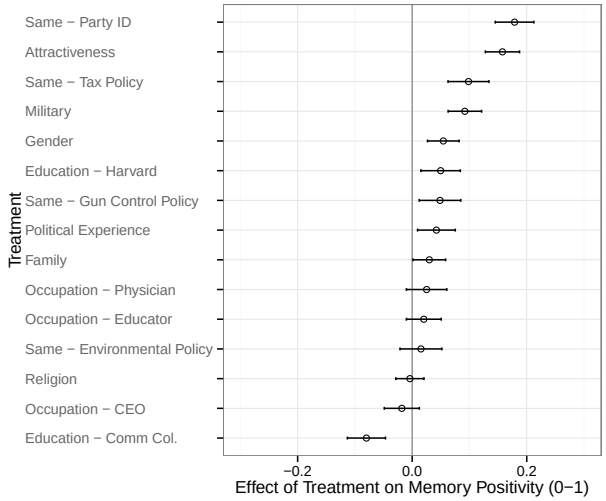


Figure 4.21: Experiment 2: Effects of treatment on memory positivity (unfolded)
NOTE: Estimates are coefficients from bivariate OLS regressions of memory positivity on rated importance by respondents.

positivity in the domains in which it is manipulated. As Figures 4.19 and 4.21 show, the informational changes affected the positivity of memories in several cases, particularly gay marriage and tax policies, party, and gender. Figure 4.19 in the Chapter appendix shows these results with interactions for importance. When we examine the relationship between the experimental manipulations and memory positivity for those that place a high importance on that piece of information, we can see that these effects are even more pronounced in several other information types, including military service and education. Specifically, importance moderates the relationship between the information and memory positivity for several pieces of personal information, as well as party and gay marriage policy.

Linking memory and evaluations

Two questions that dominate the information-processing literature are how memory relates to evaluations and whether memory of the information mediates its impact. In order to test this, we can see Wave 2 evaluations regressed on the experimental treatments and memory accuracy interacted with the treatment in Tables 4.3 and 4.4 for Experiments 1 and 2, respectively. Notably, the effect of party and gay marriage policy appear to be completely contingent upon an accurate memory of that policy position in Experiment 1, and in Experiment 2, the effects of tax policy, party, a low level of education, and scandal appear to be contingent upon accurate memory.

A second test of these important questions involves controlling for the positivity of the memory alongside the experimental manipulation itself. If the manipulation is significant, it indicates that the positivity in that domain does not capture the entire effect of the treatment. If the positivity is significant, it indicates that the domain specific memory drives the overall impact of the treatment on the evaluation. We can see the results of this test in Tables 4.5 and 4.6. Importantly, in most every case where there is a main effect in the original analysis, we find that the coefficient on memory positivity for that information dominates any effect through the treatment itself. That is, the effects are conditional on remembering the valence of that information domain. These results suggest that there is not an overall summary evaluation made, and information is discarded. Rather, the valences in these specific information domains are extraordinarily impactful on the overall evaluation.

	Model 1		Model 2	
	Coefficient	**SE**	**Coefficient**	**SE**
Gender	−0.001	0.014	−0.013	0.043
Memory interaction			0.017	0.046
Political Experience	−0.015	0.014	0.012	0.021
Memory interaction			−0.073	0.046
Education	0.004	0.014	0.006	0.018
Memory interaction			−0.03	0.031
Occupation	0.012	0.014	0.016	0.019
Memory interaction			0.004	0.031
Religion	−0.033 ∗ ∗	0.014	−0.062∗∗∗	0.021
Memory interaction			0.075 ∗ ∗	0.031
Family	0.006	0.014	0.006	0.030
Memory interaction			0.002	0.055
Local	−0.009	0.014	−0.011	0.021
Memory interaction			−0.025	0.030
Party	0.033 ∗ ∗	0.015	−0.070 ∗ ∗	0.031
Memory interaction			0.142∗∗∗	0.036
Gay Marriage Policy	0.104∗∗∗	0.014	0.029	0.033
Memory interaction			0.100∗∗∗	0.037
Tax Policy	0.059∗∗∗	0.014	0.034	0.027
Memory interaction			0.040	0.033
Education Policy	−0.007	0.014	−0.054∗	0.028
Memory interaction			0.065∗	0.032
Constant	0.471∗∗∗	0.024	.587∗∗∗	0.058
Adj. R^2	0.124		0.189	

Table 4.3: Experiment 1: Wave 2 evaluations regressed on experimental manipulations and memory accuracy

NOTE: Party and policy variables are coded as 1 = match, 0 = no match with respondent party and policy preferences. All other variables, including evaluation, are coded as 0-1 as noted in the Chapter appendix. Main effects of memory accuracy are included in the model, but omitted here for space.

$p < .10 = *, p < .05 = **, p < .01 * **$

	Model 1		Model 2	
	Coefficient	**SE**	**Coefficient**	**SE**
Gender	0.012	0.016	−0.004	0.033
-Mem accuracy			−0.03	0.030
-Interaction			0.008	0.039
Policy Tax (Same)	0.082***	0.017	−0.031	0.034
-Mem accuracy			−0.082***	0.027
-Interaction			0.147***	0.039
Policy Environment (Same)	0.015	0.016	−0.023	0.029
-Mem accuracy			−0.04*	0.024
-Interaction			0.064*	0.035
Policy Gun Control (Same)	0.059***	0.017	0.013	0.033
-Mem accuracy			−0.03	0.026
-Interaction			0.052	0.038
Party (Same)	0.027	0.017	−0.092***	0.035
-Mem accuracy			−0.053 **	0.026
-Interaction			0.153***	0.040
Political Experience	−0.049***	0.016	−0.054	0.050
-Mem accuracy			−0.006	0.045
-Interaction			0.02	0.064
Education Community College	−0.025	0.020	−0.108***	0.041
-Mem accuracy			−0.109 **	0.045
-Interaction			0.117 **	0.059
Education Harvard	0.001	0.021	−0.029	0.054
-Mem accuracy				
-Interaction			0.048	0.066
Occupation Physician	−0.003	0.029	0.004	0.077
-Mem accuracy			−0.005	0.075
-Interaction			−0.025	0.108
Occupation Educator	0.056 **	0.024	0.058	0.067
-Mem accuracy				
-Interaction			−0.03	0.091
Occupation CEO	0.022	0.024	0.031	0.064
-Mem accuracy				
-Interaction			−0.035	0.093
Military Service	0.000	0.016	−0.011	0.045
-Mem accuracy			−0.021	0.043
-Interaction			0.012	0.060
Religion	−0.024	0.017	−0.032	0.026
-Mem accuracy			−0.006	0.024
-Interaction			0.019	0.034
Family	0.008	0.016	0.014	0.059
-Mem accuracy			−0.02	0.051
-Interaction			−0.009	0.078
Sports (Golf)	−0.035 **	0.016	0.011	0.037
-Mem accuracy			0.026	0.036
-Interaction			−0.064	0.052
Scandal (Sex)	−0.020	0.020	0.109	0.071
-Mem accuracy			0.128 **	0.061
-Interaction			−0.157 **	0.079
Scandal (Campaign Funds)	−0.035*	0.020	0.063	0.071
-Mem accuracy				
-Interaction			−0.121	0.080
Constant	0.498***	0.036	0.676***	0.105
Adj. R^2	0.086		0.142	

Table 4.4: Experiment 2: Wave 2 evaluations regressed on experimental manipulations and memory accuracy

NOTE: Party and policy variables are coded as 1 = match, 0 = no match with respondent party and policy preferences. All other variables, including evaluation, are coded as 0-1 as noted in the Chapter appendix.
$p < .10 = *, p < .05 = **, p < .01 * **$

	Coefficient	SE
Appearance	0.021∗	0.012
Mem positivity	0.057∗	0.030
Gender	0.004	0.012
Mem positivity	−0.043	0.039
Political Experience	−0.019	0.012
Mem positivity	0.005	0.040
Education	−0.001	0.012
Mem positivity	0.031	0.046
Occupation	0.010	0.012
Mem positivity	0.009	0.045
Religion	−0.010	0.013
Mem positivity	0.104∗∗∗	0.039
Family	0.001	0.012
Mem positivity	0.005	0.046
Local	−0.025 ∗ ∗	0.012
Mem positivity	0.100 ∗ ∗	0.047
Party	0.010	0.013
Mem positivity	0.070 ∗ ∗	0.034
Gay Marriage Policy	0.045∗∗∗	0.013
Mem positivity	0.234∗∗∗	0.033
Tax Policy	0.026 ∗ ∗	0.013
Mem positivity	0.148∗∗∗	0.039
Education Policy	−0.005	0.012
Mem positivity	0.234∗∗∗	0.033
Constant	0.107∗∗∗	0.041
Adj. R^2	0.413	

Table 4.5: Experiment 1: Wave 2 evaluations regressed on experimental manipulations and memory positivity

NOTE: Party and policy variables are coded as 1 = match, 0 = no match with respondent party and policy preferences. All other variables, including evaluation, are coded as 0-1 as noted in the Chapter appendix. $p < .10 = *, p < .05 = **, p < .01 * **$.

	Coefficient	**SE**
Attractiveness	$-0.038**$	0.015
Memory positivity	$0.164***$	0.038
Gender	0.023	0.014
Memory positivity	0.025	0.043
Policy - Tax (Same)	$0.028**$	0.014
Policy - Environment (Same)	0.005	0.013
Memory positivity	$0.192***$	0.043
Policy - Gun Control (Same)	$0.035**$	0.014
Memory positivity	$0.244***$	0.042
Party (Same)	-0.019	0.015
Memory positivity	$0.153***$	0.038
Political Experience	$-0.037***$	0.014
Memory positivity	0.011	0.039
Education - Comm College	0.007	0.017
Education - Harvard	0.008	0.017
Memory positivity	0.054	0.043
Occupation - Physician	-0.017	0.024
Occupation - Educator	0.016	0.020
Occupation - CEO	0.009	0.020
Memory positivity	0.028	0.054
Military Service	0.004	0.014
Memory positivity	-0.054	0.041
Religion	-0.010	0.014
Memory positivity	-0.030	0.05
Family	0.003	0.014
Memory positivity	0.048	0.047
Constant	0.062	0.047
Adj. R2	0.398	

Table 4.6: Experiment 2: Wave 2 evaluations regressed on experimental manipulations and memory positivity

NOTE: Party and policy variables are coded as 1 = match, 0 = no match with respondent party and policy preferences. All other variables, including evaluation, are coded as 0-1 as noted in the Chapter appendix. $p < .10 = *, p < .05 = **, p < .01 * **$.

4.5 Discussion

While studies have examined the role an individual piece of information can play in evaluations of candidates, extremely few have varied a wide variety of information. These studies have lost sight of the overall candidate for individual pieces of (often exclusively policy) information. They use powerful treatments as well as relatively unrealistic designs and presentation of stimuli, that together result in overly-powerful effects. Moreover, few studies have assessed memory or lagged the evaluation more than a short amount of time after information presentation.

No studies have held voters accountable to their own standard – the importance they place on a variety of candidate attributes. This chapter, therefore, helps shed light on the types of information that voters value, pay attention to, remember, as well as use in their evaluations of political candidates. Most work on information in candidate evaluation to-date has focused primarily on policy information, ignoring the broad array of biographical attributes that are presented nearly as often in campaigns and the media.

Existing literature has long conflated importance and impact. By considering information important when it impacts voters' decisions, we overlook information that may be important to voters but not impact their decisions, or worse, believe voters irrationally make decisions based on information that they actually deem important. Crucially, information can be important and not influence vote choice because it varies very little in the real world. For example, respondents may value education, but typically select from amongst a group of highly-educated candidates. Even with relatively extreme variation in Experiment 1, education affects overall evaluations very little, despite its importance to voters. However, in Experiment 2, when the variation is larger, we see voters respond.

By assessing the value, or importance, a voter places on having a certain type of information about a candidate when making their decision, we can assess whether voters are living up to their own standards in their decision-making process. The results from these two experiments cast doubt on several aspects of voter competence: There is a striking lack of relationship between the value a respondent places on having a certain type of information and his ability to accurately remember it or for it to impact his evaluations.

While the correspondence between importance and imapct in the aggregate across types of information appears somewhat positive, there is no positive aggregate relationship across policy domains, nor a positive relationship when policy is excluded. Furthermore, when we analyze data at the level of the individual, we see no clear relationship between importance and impact. Several factors could produce this lack of correspondence. First, while measurement error resulting from social desirability may be problematic for some types of information, it cannot explain the lack of correspondence in nearly every informational domain. Second, voters may have accurate introspection for the importance of policy priorities, but may not accurately translate these priorities to evaluations of the actual candidate policy positions.

There is important variation across information in memory. Particularly, some personal information, such as family characteristics, are highly memorable, while other personal char-

acteristics, such as occupation and education, are less memorable. Additionally, policy and party information appear to fade relatively quickly in memory. Despite this, respondents are able to accurately remember whether they feel more positive or negative about information, even if they cannot accurately recall the content of that information. This finding adds important nuance to the literature on on-line processing. That is, rather than integrate all information into a simple person-level running tally, voters retain some domain knowledge of the information and can update their positivity within certain domains of information. Prior studies of information processing have been hindered by their almost-singular focus on policy positions and policy information, which obscures the multiple dimensions in which voters perceive politicians.

Beyond information's importance and memorability, this study also provides relative estimates of the effects of a wide variety of information types. By presenting this information in a realistic format, delaying evaluations, and providing a broad array of candidate attributes, we see significant, yet conservative, estimates of many of these attributes' impact, even in the presence of other powerful cues. Additionally, by showing that many of these effects persist for up to a week after information presentation, this study lessens concerns that these effects may be fleeting. Notably, while policy and party information are dominant, attributes such as religion, education, political experience, scandal, and occupation can all be impactful for evaluations. By providing a hard test for this information in a more complete and realistic informational environment, we can see that this oft-overlooked information deserves more broad examination in the candidate evaluation literature. As political candidates have known for a long time, selling oneself as a person can be the linchpin to a successful campaign.

4.6 Chapter appendix

Experiment 1

Vignette text

NOTE: A photo of the candidate is displayed on all screens to the right of the text. Photos can be seen in the next Appendix section.

Screen 1:
On the next pages, you will be presented with some information about a candidate for political office named (cand_name).
(cand_first_name) is running for Congress as a (pid_text).
Meet (cand_name)!

Screen 2:
(cand_name) is a (pid_text) running for a seat in the United States House this year. (gender_HESHE) has served (exp_text1) years in (gender_hisher) State Legislature. (exp_text2)
(cand_first_name)'s time in the State Legislature has been marked by several major bipartisan accomplishments, although some critics have accused (gender_himher) of (scan_text).

Screen 3:
In addition to serving in (gender_hisher) State's Legislature, (cand_first_name) (occ_text).
(gender_HESHE) graduated from (ed_text), and (loc_text).
(cand_first_name) is also a member of the United States Navy Reserve, having served a brief tour abroad in East Asia.

Screen 4:
(cand_first_name) is a strong proponent of a fair fiscal policy. (gender_HESHE) argues (tax_pos_text)
With regard to same-sex marriage, (gender_heshe) thinks (gay_pos_text)

Screen 5:
(cand_first_name) (fam_text). In (gender_hisher) spare time, (gender_heshe) volunteers at a soup kitchen near (gender_hisher) home. (gender_HESHE) is (rel_text).
(cand_first_name) is an avid basketball player and fan, having played in high school and briefly in college.

Screen 6: (cand_first_name) also thinks that quality education is an important issue. (gender_HESHE) has argued (ed_pos_text)
(cand_first_name) also has worked on a number of other issues, including Veterans' Affairs, as well as Energy Policy.
As a (pid_text), (cand_name) hopes to bring a new voice to (gender_hisher) constituency in Congress.

Manipulated text and photos

Manipulated personal text is shown in Table 4.8, and manipulated political text is shown in Table 4.7. In this study, the candidate's name was Pat Harrison, constant across all photos and genders. Policy positions in Table 4.7 were subtly adapted from Ahler and Broockman (2016).

Candidate photos are shown below in Figure 4.22. Candidates with lower rated facial competence are candidates A and C. The facial competence rating gap (scaled 0-1 for all pairs of candidates) for the male candidates was .851, and the gap was also .851 for the female candidates, indicating a wide gap in perceived

competence. Facial competence rating data was obtained from Todorov et al. (2005). Despite the possible perceived ethnic variation in candidates, there was scant evidence in memory measures that respondents perceived ethnic differences among the candidates.

(a) Low Male (b) High Male (c) Low Female (d) High Female

Figure 4.22: Candidate photos in Experiment 1

	Coded as treatment = 0	**Coded as treatment = 1**
Party	Democrat	Republican
Tax Policy	that we should increase federal income taxes on those making over $250,000 per year to 1990s rates - 5% above current rates - and use the savings to lower taxes and provide more services to those making less while also paying down the national debt.	that we should decrease all individuals income tax rates, especially high earners who pay the most in taxes now, doing so by decreasing government services.
Gay Marriage Policy	that same-sex couples should be allowed to marry each other and adopt children. Also, the government should require corporations to offer the same benefits to partners of gay and lesbian employees as they do to straight employees' partners.	that same-sex marriage should not be legal, although the government should not regulate homosexual conduct or ban gays and lesbians from adopting children.
Education Policy	that private schools should be legal and retain tax exempt status, but government should play no active role in funding private education.	that the government should create a voucher program in all school districts, paying private school tuition for families so that they always have the choice to send their children to private schools.

Table 4.7: Experiment 1: Experimental manipulations, political information

	Coded as treatment = 0	**Coded as treatment = 1**
Gender	Male	Female
Attractiveness		Rating Advantage +.85 (on 0-1 scale)
Education	Oakton Community College	Harvard University
Occupation	has worked as a retail manager for a local branch of a small business for 12 years	has owned and managed (his/her) own local small business for 12 years, which has been extremely successful and expanded around the state
Religion	Catholic, although (his/her) schedule rarely permits (him/her) to attend mass	Baptist, attending church twice a week
Family	is recently engaged to (his/her) future (husband/wife), (spouse name)	is married to (his/her) (husband/wife), (spouse name), and is the proud (mother/father) of three young boys
Locality	is originally from a few states away, having moved to the area about 15 years ago	is originally from a small town located in the district (he/she) hopes to represent in Congress
Scandal	not being productive enough while in the Legislature	accepting inappropriate gifts from lobbyists. (cand_first_name) has vigorously denied these allegations
Political Experience	Two years in state legislature	Ten years in state legislature; Before that, (he/she) was elected at age 27 to a seat on (his/her) City Council.

Table 4.8: Experiment 1: Experimental manipulations, personal information

Experiment 2

Vignette text

NOTE: A photo of the candidate is displayed on all screens to the right of the text. Photos can be seen in the next Appendix section.

Screen 1:

On the next several pages, you will be presented with some information about a candidate for political office named (cand_name).

(cand_first_name) is running for Congress as a (pid_text).

Meet (cand_name)!

Screen 2:

(cand_name) is a (pid_text) running for a seat in the United States House this year. (exp_text).

(cand_first_name)'s time in the State Legislature has been marked by hard work (exp_text2). (scandal_text)

Screen 3:
In addition to serving in (gender_hisher) State's Legislature, (cand_first_name) (occupation_text).
(education_text)
(military_text)

Screen 4:
(cand_first_name) is a strong proponent of a fair fiscal policy. (gender_HESHE) argues (tax_pos_text)
(cand_first_name) also cares deeply about gun control. (gender_heshe) thinks (gun_pos_text).

Screen 5:
(fam_text). In (gender_hisher) spare time, (gender_heshe) volunteers at a childrens' after-school sports program. (rel_text).
(sports_text).

Screen 6: (cand_first_name) also thinks that energy and environmental policy is an important issue. (gender_HESHE) has argued (env_pos_text)
(cand_first_name) also has worked on a number of other issues, including Crime and Public Safety, as well as Education Policy.
As a (pid_text), (cand_name) hopes to bring a new voice to (gender_hisher) constituency in Congress.

Manipulated text and photos

In this study, the candidate's name was Patricia or Patrick Clarke, constant across all photos. Policy positions in Table 4.9 were subtly adapted from Ahler and Broockman (2016). Manipulated personal text is shown in Tables 4.10 and 4.11, and manipulated political text is shown in Table 4.9.

Candidate photos are shown below in Figure 4.23. Candidates with less rated facial attractiveness are candidates A and C. These photographs were in the 5% and 95% percentile in terms of rated attractiveness of all Oregon State Legislative Candidates from 2004-2014. Data courtesy of Lenz et al.

(a) Low Male (b) High Male (c) Low Female (d) High Female

Figure 4.23: Candidate photos in Experiment 2

	Coded as treatment = 0	**Coded as treatment = 1**
Party	Democrat	Republican
Tax Policy	that we should increase federal income taxes on those making over $250,000 per year to 1990s rates - 5% above current rates - and use the savings to lower taxes and provide more services to those making less while also paying down the national debt.	that we should decrease all individuals income tax rates, especially high earners who pay the most in taxes now, doing so by decreasing government services.
Gun Control Policy	that assault weapons with high-capacity magazines should be banned in addition to fully automatic weapons, and those wishing to buy other kinds of guns should have to pass a background check and complete a gun safety course.	that fully automatic weapons like high-powered machine guns should be illegal for civilians to purchase, but all other firearms should be free to be bought and sold without restrictions. No background checks or licenses should be required.
Environmental Policy	that the government should require all corporations that use harmful substances to apply for permits to use them, and only allow their use when regulators determine that the economic benefits exceed the potential costs.	that the government should only regulate or tax pollutants that are known to cause substantial harm to people alive today or in the future.

Table 4.9: Experiment 2: Experimental manipulations, political information

	Coded as treatment = 0	**Coded as treatment = 1**
Gender	Male	Female
Attractiveness	5% percentile	95% percentile
Religion		(name) is a Methodist, attending church twice a week, and is active in the church's leadership.
Family		(name) is married to his/her husband/wife, Charles/Christine, and is the proud father/mother of four young boys.
Military		(name) is also a member of the United States Army Reserve, having served a brief tour abroad in Iraq.
Sports	(name) is an avid basketball player and fan, having played in high school and briefly in college	(name) is an avid golfer, having played in high school and briefly in college
Political Experience	He/she has served for only a year in the state legislature, having won a recent special election for his/her seat. (text_2) = and bipartisanship.	He/she has served for 12 years in the state legislature. (name) has worked his/her way up to lead important committees, and is a well-respected member of his/her party's leadership. (text_2) = and several major bipartisan policy accomplishments.

Table 4.10: Experiment 2: Experimental manipulations, personal information

	Coded as treatment = 0	**Coded as treatment = 1**
Education (Ohio State)	He/she holds an Associate's degree from Columbus State Community College OR He/she graduated with honors from Harvard University	He/she graduated with honors from Ohio State University
Education (Harvard)	He/she holds an Associate's degree from Columbus State Community College OR He/she graduated with honors from Ohio State University	He/she graduated with honors from Harvard University
Occupation (Physician)	is a local construction business manager OR dem/rep occupation treatments	is a physician in a local hospital
Occupation (Educator)	is a local construction business manager OR rep occupation treatment OR physician	is a local education administrator, having previously served as a high school teacher.
Occupation (CEO)	is a local construction business manager OR dem occupation treatment OR physician	is the CEO of a prominent statewide business, having risen up the ranks over the past decade.
Sex scandal		(name) has recently been accused of improper sexual relations with a staffer while in office, although the investigation is still ongoing.
Financial scandal		(name) has recently been accused of improper use of campaign funds for personal expenses, although the investigation is still ongoing.

NOTE: There are 3 levels of education treatment, here dummied out with the omitted category being Ohio State University. There are 4 levels of occupation here, with the omitted category being a local construction manager, with the other three dummied out according to their labels above. There are 3 levels of scandal treatment, with the omitted category being no scandal.

Table 4.11: Experiment 2: Experimental manipulations, non-dichotomous personal information

Memory Questions: Experiment One

NOTE: Response options shown in brackets.

1. What was [cand_name]'s Party affiliation? [Democrat, Republican]
2. Which of the previous elected offices has [cand_name] held? [State Legislator, US Congressperson, Lieutenant Governor, School Board Member]
3. What was [cand_name]'s occupation? [small business owner, farmer, attorney / lawyer, teacher, retail manager]
4. In what branch of the military was [cand_name]? [Air Force, Navy, Army, No Military Service]
5. What fiscal policy did [cand_name] propose? [Liberal Policy, Conservative Policy; See Table 4.7]
6. What education policy did [cand_name] propose? [Liberal Policy, Conservative Policy; See Table 4.7]
7. What same-sex marriage policy did [cand_name] propose? [Liberal Policy, Conservative Policy; See Table 4.7]
8. Which of the following areas has [cand_name] worked on but did not take a position? [Social Security, Economy, Transportation, Veterans' Affairs, Foreign Policy, Education, Immigration, Energy, Health Care]
9. Which college did [cand_name] attend? [Harvard University, Columbus Community College, University of Georgia, UC Berkeley, Oakton Community College, They did not attend college]
10. While in the military where did [cand_name] serve abroad? [East Asia, Middle East, Africa, South America, Europe]
11. What religion is [cand_name]? [Baptist, Catholic, Jewish, Episcopal, Presbyterian]
12. Is [cand_name] married? [Yes, No]
13. How many children does [cand_name] have? [0-4]
14. Are [cand_name]'s children boys or girls? [They do not have any children, All boys, All girls]
15. Where is [cand_name] originally from? [A neighboring state, The district in which they are running for Congress, Elsewhere in the state in which they are running]
16. What is [cand_name]'s partner's name? [Keith, Katy, Carla, Chris]
17. How long has [cand_name] been in their current elected position? [2, 4, 6, 8, 10, 12 years]

Memory Questions: Experiment Two

NOTE: All questions (except the race of the candidate) had two response options, shown in brackets.

1. What gender was [cand_name]? [male, female]
2. What race/ethnicity best describes [cand_name]? [White, Black, Hispanic, Asian/Pacific Islander]
3. Was [cand_name] a Democrat or Republican?
4. With respect to the environment, which did [cand_name] propose? [verbatim from vignette]
5. With respect to taxes, which did [cand_name] propose? [verbatim from vignette]
6. With respect to gun control, which did [cand_name] propose? [verbatim from vignette]

7. True/False: [cand_name] is currently a Mayor
8. True/False: [cand_name] is an attorney
9. True/False: [cand_name] is running for the US House
10. True/False: [cand_name] served in the Army Reserve
11. True/False: [cand_name] is an avid golfer
12. True/False: [cand_name] has served for over a decade in the State Legislature
13. True/False: [cand_name] graduated from Harvard University
14. True/False: [cand_name] is the CEO of a business
15. True/False: [cand_name] is a local educator
16. True/False: [cand_name] is a Methodist
17. True/False: [cand_name] has four sons
18. True/False: [cand_name] is divorced
19. True/False: [cand_name] has been accused of misuse of campaign funds
20. True/False: [cand_name] works on issues related to Crime and Public Safety
21. True/False: [cand_name] has a bachelor's degree
22. True/False: [cand_name] has been accused of inappropriate relations with a staffer
23. True/False: [cand_name] served in Iraq
24. True/False: [cand_name] volunteers at a soup kitchen
25. True/False: [cand_name]'s partner's name is Chris
26. True/False: [cand_name] served in Afghanistan
27. True/False: [cand_name] has no children
28. True/False: [cand_name] is a basketball fan

Additional tables and figures

	Wave 1	Wave 2
Party	0.072****	0.034 **
	(0.016)	(0.015)
Gay Marriage	0.223****	0.104****
	(0.016)	(0.014)
Tax Policy	0.136****	0.059****
	(0.016)	(0.014)
Education Pol.	0.004	−0.008
	(0.016)	(0.014)
Political Exp.	0.006	−0.015
	(0.016)	(0.014)
Education	0.001	0.004
	(0.016)	(0.014)
Occupation	0.038 **	0.012
	(0.016)	(0.014)
Appearance	0.019	0.025*
	(0.016)	(0.014)
Gender	−0.006	−0.001
	(0.016)	(0.014)
Religion	0.002	−0.033 **
	(0.016)	(0.014)
Family	0.010	0.005
	(0.016)	(0.014)
Local	−0.005	−0.009
	(0.016)	(0.014)
Scandal	0.016	0.012
	(0.016)	(0.014)
Constant	0.318	0.464
	(0.029)	(0.025)
Adj. R^2	0.279	0.123
N	798	564
SEE	0.221	0.168

Table 4.12: Experiment 1: Effects of information on candidate evaluation, by wave
NOTE: $** ** = p < .001, * ** = p < .01, ** = p < .05, * = p < .10$. Party and the three policy variables coded as '1' if shared with respondent, '0' otherwise. All other variables coded as noted in the Appendix. Both models are OLS. Standard errors shown in parentheses. Evaluation is rescaled 0-1.

	Democratic Resp.		Independent Resp.		Republican Resp.	
	Wave 1	Wave 2	Wave 1	Wave 2	Wave 1	Wave 2
Party	−0.084****	−0.068****	−0.098 * *	−0.049	0.066*	−0.029
	(0.021)	(0.018)	(0.042)	(0.039)	(0.038)	(0.031)
Gay Marriage	−0.224****	−0.115****	−0.153***	−0.098 * *	0.071*	0.101***
	(0.021)	(0.018)	(0.044)	(0.041)	(0.037)	(0.031)
Tax Policy	−0.164****	−0.084****	−0.069*	−0.054	0.048	0.029
	(0.021)	(0.018)	(0.041)	(0.038)	(0.039)	(0.032)
Education Pol.	−0.030	−0.035*	−0.012	0.032	0.062	0.005
	(0.021)	(0.018)	(0.042)	(0.038)	(0.038)	(0.032)
Political Exp.	−0.005	−0.005	−0.062	−0.117***	0.049	0.014
	(0.021)	(0.018)	(0.042)	(0.039)	(0.037)	(0.030)
Education	0.000	0.003	−0.031	0.021	0.038	−0.007
	(0.021)	(0.018)	(0.042)	(0.039)	(0.037)	(0.030)
Occupation	0.027	0.024	0.041	0.004	0.052	−0.035
	(0.021)	(0.018)	(0.043)	(0.039)	(0.037)	(0.031)
Appearance	0.031	0.022	−0.049	0.020	−0.014	0.048
	(0.021)	(0.018)	(0.041)	(0.039)	(0.037)	(0.031)
Gender	−0.023	−0.018	0.006	0.032	−0.015	0.027
	(0.021)	(0.018)	(0.042)	(0.039)	(0.038)	(0.032)
Religion	0.015	−0.024	0.011	−0.032	−0.037	−0.034
	(0.021)	(0.018)	(0.044)	(0.041)	(0.037)	(0.030)
Family	0.015	−0.007	0.003	0.015	0.013	0.06*
	(0.021)	(0.018)	(0.042)	(0.040)	(0.037)	(0.031)
Local	0.004	−0.043 * *	0.002	0.094 * *	−0.014	0.022
	(0.021)	(0.018)	(0.041)	(0.039)	(0.038)	(0.031)
Scandal	0.027	0.006	0.007	−0.031	−0.057	−0.013
	(0.021)	(0.018)	(0.042)	(0.039)	(0.039)	(0.032)
Constant	0.767	0.722	0.792	0.638	0.464	0.488
	(0.039)	(0.033)	(0.076)	(0.066)	(0.071)	(0.057)
Adj. R^2	0.306	0.206	0.089	0.169	0.045	0.058
N	494	345	134	88	167	115
SEE	0.226	0.165	0.230	0.170	0.233	0.157

Table 4.13: Experiment 1: Effects of information on candidate evaluation, by respondent party and wave

NOTE: $* * ** = p < .001, * * * = p < .01, ** = p < .05, * = p < .10$. Party and the three policy variables coded as '1' if conservative/Republican, '0' if liberal/Democratic. All models are OLS. Standard errors shown below coefficients. Evaluation is rescaled 0-1.

	Wave 1	Wave 2
Party	0.080****	0.027
	(0.018)	(0.017)
Tax Policy	0.143****	0.082****
	(0.017)	(0.017)
Gun Policy	0.100****	0.059****
	(0.018)	(0.017)
Environ. Policy	0.011	0.015
	(0.017)	(0.016)
Political Exp.	−0.054***	−0.049***
	(0.017)	(0.016)
Gender	0.011	0.012
	(0.017)	(0.016)
Attractiveness	0.024	0.003
	(0.017)	(0.016)
Education (Ohio St.)	0.030	0.025
	(0.022)	(0.020)
Education (Harvard)	0.054 **	0.027
	(0.025)	(0.024)
Occup (Physician)	0.037	−0.003
	(0.029)	(0.029)
Occup (Educator)	0.028	0.056 **
	(0.025)	(0.024)
Occup (CEO)	0.022	0.022
	(0.026)	(0.024)
Military	−0.016	0.000
	(0.017)	(0.016)
Religion	−0.017	−0.024
	(0.017)	(0.017)
Family	0.011	0.008
	(0.017)	(0.016)
Sports (Golf)	0.000	−0.035 **
	(0.017)	(0.016)
Scandal (Sex)	−0.095****	−0.020
	(0.021)	(0.020)
Scandal (Money)	−0.030	−0.035*
	(0.022)	(0.020)
Constant	0.377	0.473
	(0.037)	(0.035)
Adj. R^2	0.156	0.086
N	799	563
SEE	0.243	0.193

Table 4.14: Experiment 2: Effects of information on candidate evaluation, by wave
NOTE: $** ** = p < .001, *** = p < .01, ** = p < .05, * = p < .10$. Party and the three policy variables coded as '1' if shared with respondent, '0' otherwise. All other variables coded as noted in the Appendix. Omitted levels are construction manager (occupation), community college (education), and no scandal. Both models are OLS. Standard errors shown in parentheses. Evaluation is rescaled 0-1.

	Democratic Resp.		Independent Resp.		Republican Resp.	
	Wave 1	Wave 2	Wave 1	Wave 2	Wave 1	Wave 2
Party	−0.078****	−0.024	−0.006	−0.013	0.129***	0.047
	(0.021)	(0.020)	(0.048)	(0.041)	(0.041)	(0.043)
Tax Policy	−0.197****	−0.080****	−0.098 * *	0.013	0.009	0.024
	(0.021)	(0.020)	(0.045)	(0.041)	(0.043)	(0.046)
Gun Policy	−0.085****	−0.053***	−0.070	−0.030	0.063	0.079*
	(0.021)	(0.020)	(0.047)	(0.043)	(0.041)	(0.043)
Environ. Policy	−0.021	−0.032	0.029	0.069	−0.015	0.069
	(0.021)	(0.021)	(0.047)	(0.045)	(0.042)	(0.043)
Political Exp.	−0.064***	−0.033	0.043	0.011	−0.055	−0.096 * *
	(0.021)	(0.020)	(0.047)	(0.045)	(0.043)	(0.045)
Gender	0.028	0.028	−0.036	0.003	−0.029	−0.041
	(0.021)	(0.020)	(0.046)	(0.043)	(0.041)	(0.043)
Attractiveness	0.057***	0.018	0.027	0.012	−0.063	−0.075*
	(0.021)	(0.020)	(0.044)	(0.041)	(0.041)	(0.042)
Education (Ohio St.)	0.016	0.019	0.032	0.094*	0.017	−0.007
	(0.026)	(0.025)	(0.058)	(0.053)	(0.050)	(0.051)
Education (Harvard)	0.029	0.018	0.090	0.130 * *	0.030	−0.005
	(0.031)	(0.029)	(0.065)	(0.063)	(0.062)	(0.064)
Occup (Physician)	−0.012	−0.022	0.103	−0.063	0.125*	0.043
	(0.036)	(0.035)	(0.073)	(0.070)	(0.072)	(0.075)
Occup (Educator)	0.038	0.061 * *	−0.051	−0.070	0.059	0.115*
	(0.031)	(0.030)	(0.065)	(0.058)	(0.060)	(0.060)
Occup (CEO)	0.029	0.010	−0.023	−0.114*	0.029	0.084
	(0.032)	(0.030)	(0.070)	(0.067)	(0.057)	(0.057)
Military	−0.022	0.002	0.123***	0.025	−0.060	0.027
	(0.021)	(0.020)	(0.044)	(0.042)	(0.043)	(0.043)
Religion	−0.009	−0.043 * *	−0.086*	−0.012	0.021	0.035
	(0.021)	(0.020)	(0.045)	(0.042)	(0.042)	(0.044)
Family	0.008	0.007	0.049	0.019	−0.033	−0.012
	(0.021)	(0.020)	(0.047)	(0.045)	(0.041)	(0.042)
Sports (Golf)	0.034	−0.013	0.050	0.007	−0.074*	−0.086*
	(0.021)	(0.020)	(0.046)	(0.042)	(0.042)	(0.044)
Scandal (Sex)	−0.093****	−0.022	−0.018	0.034	−0.092*	−0.009
	(0.026)	(0.025)	(0.060)	(0.055)	(0.050)	(0.052)
Scandal (Money)	−0.034	−0.060 * *	−0.039	−0.003	−0.030	−0.014
	(0.027)	(0.025)	(0.059)	(0.054)	(0.051)	(0.050)
Constant	0.714	0.648	0.491	0.472	0.529	0.492
	(0.047)	(0.045)	(0.099)	(0.093)	(0.093)	(0.092)
Adj. R^2	0.218	0.090	0.159	−0.033	0.065	0.074
N	502	354	120	79	176	129
SEE	0.234	0.186	0.232	0.168	0.263	0.228

Table 4.15: Experiment 2: Effects of information on candidate evaluation, by respondent party and wave

NOTE: $* * ** = p < .001, * * * = p < .01, ** = p < .05, * = p < .10$. Party and the three policy variables coded as '1' if conservative/Republican, '0' if liberal/Democratic. Omitted levels are construction manager (occupation), community college (education), and no scandal. All models are OLS. Standard errors shown below coefficients. Evaluation is rescaled 0-1.

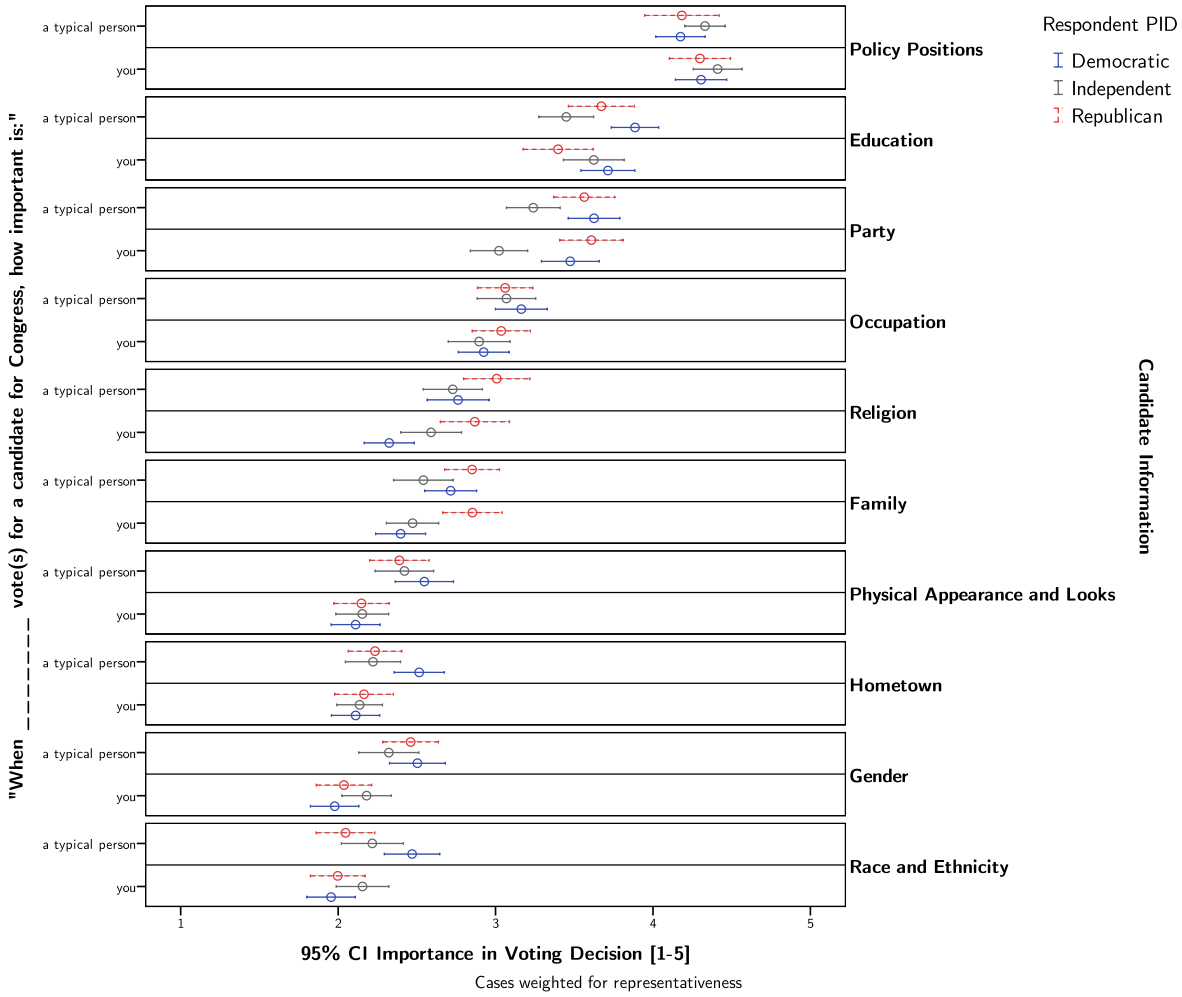


Figure 4.24: Importance of information by respondent party and wording manipulation

Source: CCES 2012, UCB Module. N=1000. Sample weighted for representativeness. 1-5 importance scale was labeled 1 = "very unimportant," 2 = "unimportant," 3 = "neither important nor unimportant," 4 = "important," 5 = "very important." Partisan "leaners" were included with party.

	Experiment 1			
	Pol. Know	Pol. Int.	Education	Higher Ed.
Hometown	$-0.109**$	-0.036	-0.027	-0.018
Gender	$-0.153**$	$-0.070*$	0.015	-0.020
Race and/or Ethnicity	$-0.132**$	-0.039	0.011	-0.003
Religion	$-0.111**$	-0.021	-0.043	-0.059
Education	-0.042	0.010	0.018	-0.004
Familiy	$-0.142**$	-0.046	-0.021	-0.033
Occupation	-0.030	-0.009	0.060	0.026
Physical Appearance / Looks	$-0.139**$	$-0.069*$	0.047	0.048
Political Party	0.068	$0.118**$	$0.126**$	$0.106**$
Economic Policy Positions	$0.198**$	$0.221**$	0.068	0.060
Social Policy Positions	$0.206**$	$0.174**$	$0.123**$	$0.110**$
Military Service	$-0.070*$	0.059	0.018	-0.018
Experience in Politics	-0.049	$-0.096**$	-0.028	-0.039

	Experiment 2			
	Pol. Know	Pol. Int.	Education	Higher Ed.
Hometown				
Gender	-0.067	0.055	$-0.071*$	-0.021
Race and/or Ethnicity				
Religion	-0.028	0.038	-0.030	-0.008
Education	$-0.098**$	0.056	$-0.085*$	0.004
Familiy	$-0.149**$	-0.045	-0.053	-0.055
Occupation	0.014	$0.138**$	-0.067	-0.025
Physical Appearance / Looks	$-0.129**$	$-0.076*$	$-0.094**$	-0.039
Political Party	$0.178**$	$0.192**$	-0.051	0.016
Economic Policy Positions	$0.278**$	$0.314**$	$-0.084*$	0.030
Social Policy Positions	$0.309**$	$0.279**$	$-0.096**$	0.037
Military Service	$-0.136**$	0.047	0.028	-0.008
Experience in Politics	-0.015	$0.076*$	$-0.070*$	-0.007

Table 4.16: Information importance correlations with political sophistication measures
$** = p < .01, * = p < .05$. All variables coded 0-1. Political knowledge is a 5-item scale. Political interest uses standard ANES wording. Education is a 6 category measure. Higher education dichotomizes education to those with bachelor's degrees or higher and those without.

	Experiment 1			
	Pol. Know	Pol. Int.	Education	Higher Ed.
Taxes	0.067	0.181 ∗ ∗	0.028	0.009
Same-Sex Marriage	−0.003	−0.007	0.011	0.002
Education	0.006	−0.023	0.046	0.042
Veterans' Affairs	−0.005	0.135 ∗ ∗	−0.040	−0.069∗
Environment	0.054	0.154 ∗ ∗	0.036	0.036
Social Security	0.020	0.148 ∗ ∗	−0.029	−0.042
Abortion	−0.021	0.024	−0.047	−0.050
Gun Control	−0.004	0.078∗	−0.002	−0.002
Immigration	0.053	0.156 ∗ ∗	−0.002	−0.039
Healthcare	0.050	0.101 ∗ ∗	0.056	0.073∗
Crime & Public Safety				

	Experiment 2			
	Pol. Know	Pol. Int.	Education	Higher Ed.
Taxes	0.085∗	0.108 ∗ ∗	0.034	0.047
Same-Sex Marriage	0.011	0.055	0.052	0.010
Education	−0.033	−0.018	0.003	0.040
Veterans' Affairs	0.006	0.157 ∗ ∗	0.063	−0.056
Environment	0.018	0.100 ∗ ∗	0.027	0.003
Social Security				
Abortion	−0.014	0.055	0.006	−0.012
Gun Control	0.086∗	0.129 ∗ ∗	0.001	0.022
Immigration	−0.011	0.137 ∗ ∗	0.018	0.027
Healthcare	0.063	0.157 ∗ ∗	0.019	−0.020
Crime & Public Safety	−0.087∗	−0.057	0.097 ∗ ∗	0.026

Table 4.17: Policy area importance correlations with political sophistication measures
$** = p < .01, * = p < .05$. All variables coded 0-1. Political Knowledge is a 5-item scale. Political Interest uses standard ANES wording. Education is a 6 category measure. Higher education dichotomizes education to those with bachelor's degrees or higher and those without.

	Treatment = 0	**Treatment = 1**	**Difference p-value**
Locality	0.354	0.623	$< .001$
Gender	0.929	0.629	$< .001$
Religion	0.651	0.327	$< .001$
Education	0.267	0.403	$< .001$
Family	0.345	0.549	$< .001$
Occupation	0.266	0.513	$< .001$
Political Experience	0.375	0.281	$< .001$
	Not Same	**Same**	**Difference p-value**
Political Party	0.703	0.794	0.015
Tax Policy	0.624	0.749	0.001
Gay Marriage Policy	0.709	0.848	$< .001$
Education Policy	0.734	0.656	0.043

Table 4.18: Experiment 1: Memory accuracy by treatment condition
NOTE: Treatment levels correspond to text in Appendix. For the political memory items, respondents were coded as having the same policy position or party as the treatment. Memory proportions are not corrected for guessing.

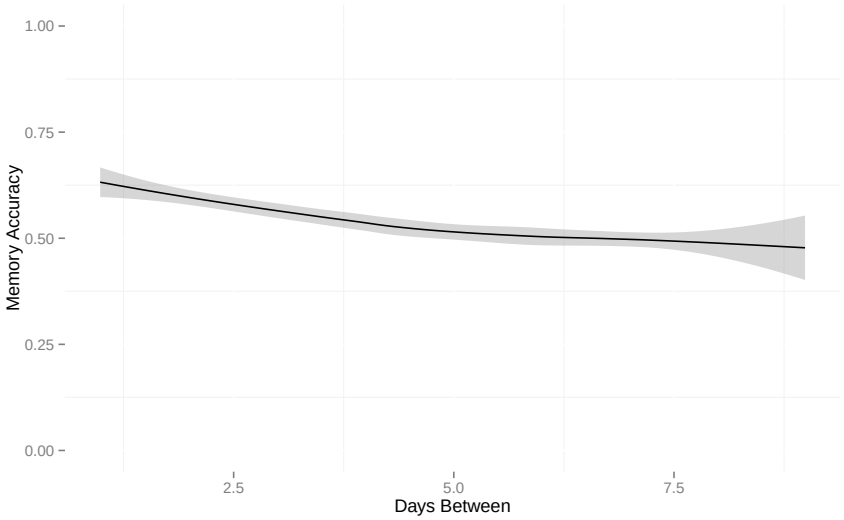


Figure 4.25: Experiment 1: LOESS of memory accuracy by time, 95% confidence interval

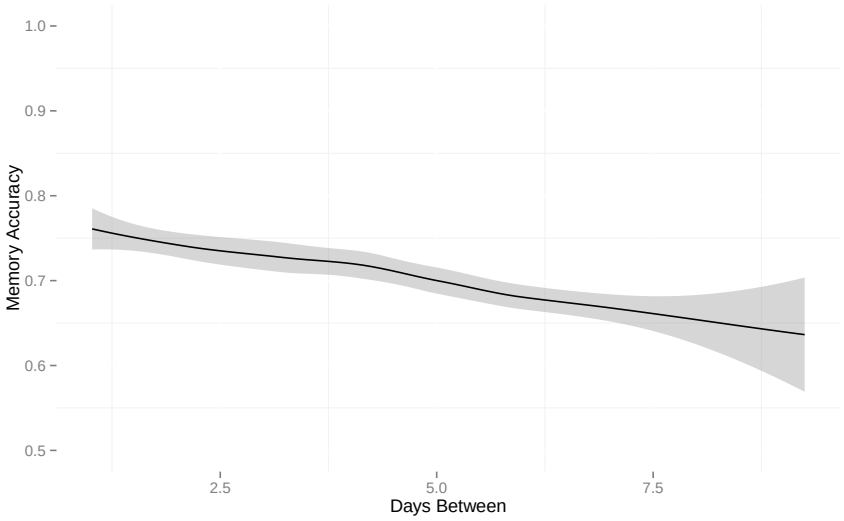
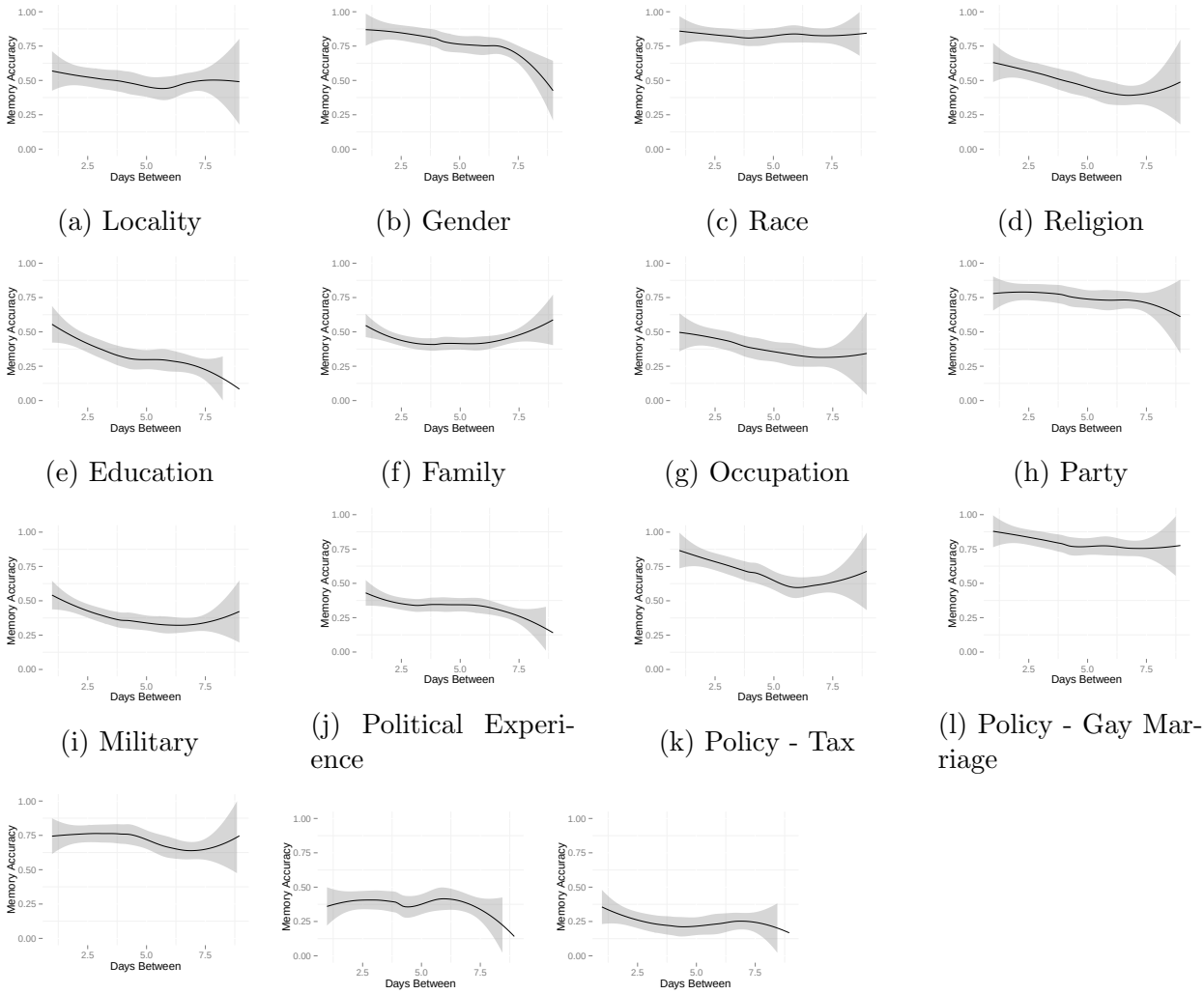


Figure 4.26: Experiment 2: LOESS of memory accuracy by time, 95% confidence interval



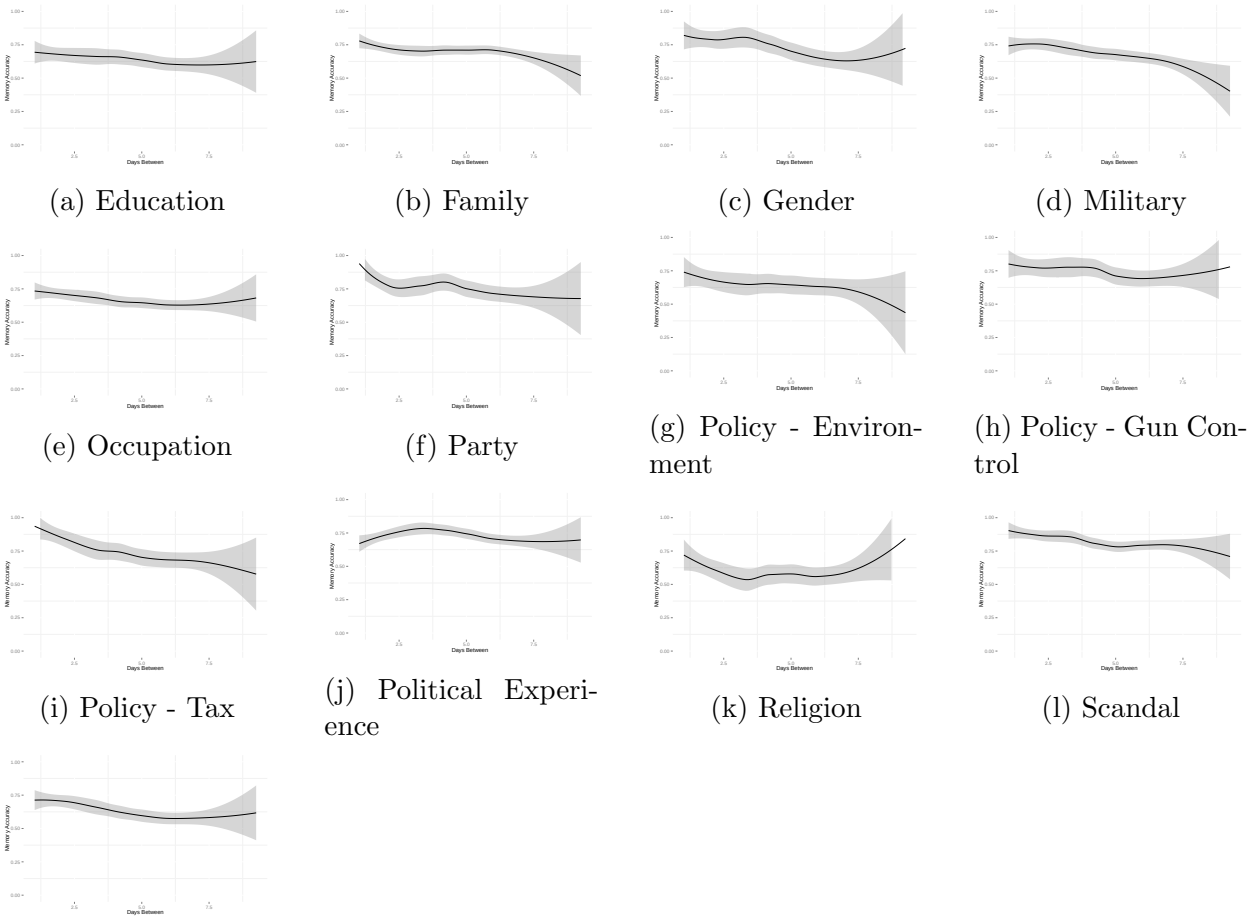
(a) Locality (b) Gender (c) Race (d) Religion

(e) Education (f) Family (g) Occupation (h) Party

(i) Military (j) Political Experience (k) Policy - Tax (l) Policy - Gay Marriage

(m) Policy - Education (n) Policy - Veterans (o) Policy - Energy

Figure 4.27: Experiment 1: Memory accuracy decay by individual information items, 95% confidence interval



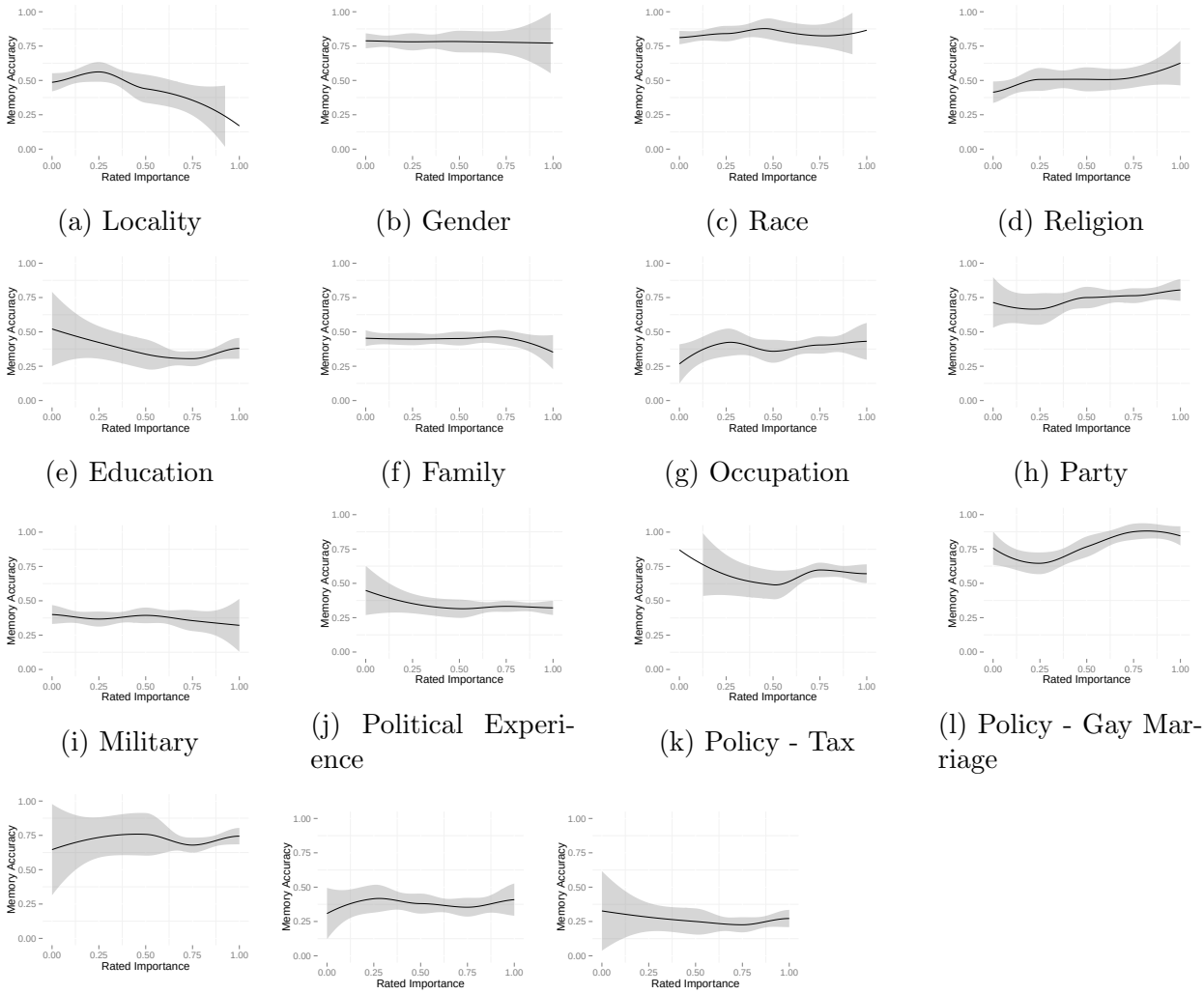
(a) Education (b) Family (c) Gender (d) Military

(e) Occupation (f) Party (g) Policy - Environment (h) Policy - Gun Control

(i) Policy - Tax (j) Political Experience (k) Religion (l) Scandal

(m) Sports

Figure 4.28: Experiment 2: Memory accuracy decay by individual information domains, 95% confidence interval



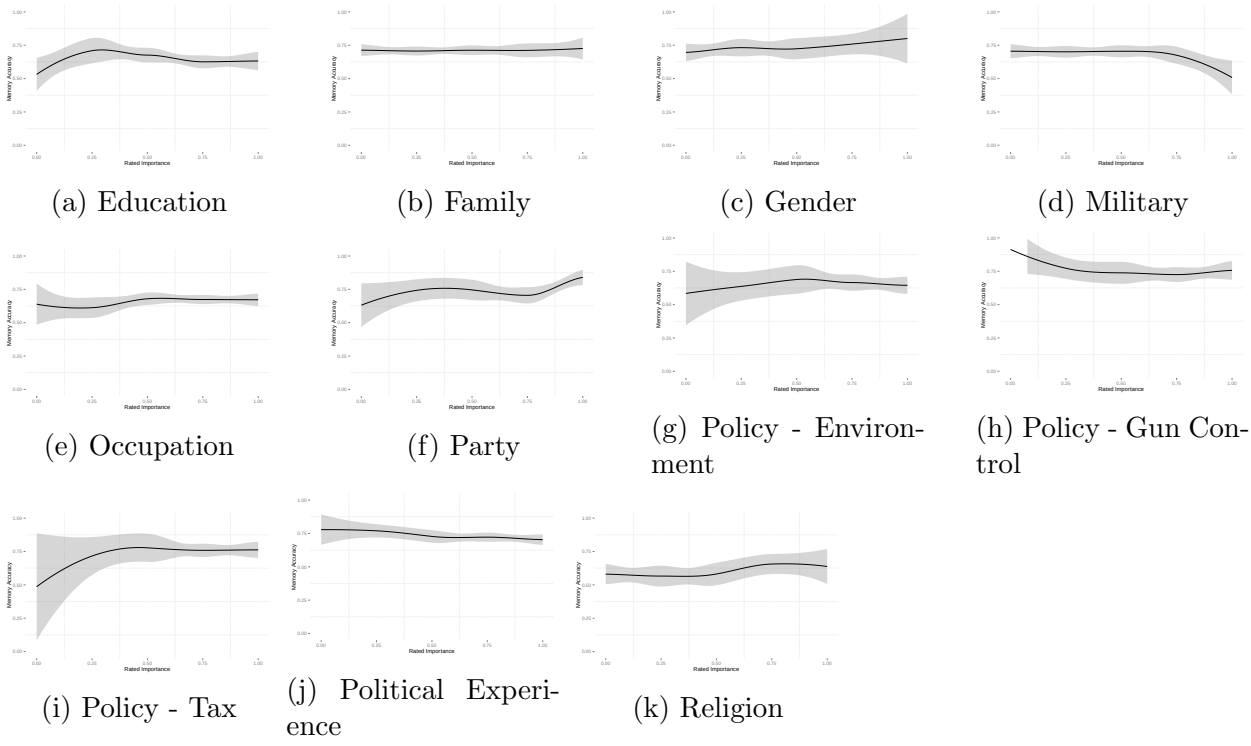
(a) Locality (b) Gender (c) Race (d) Religion

(e) Education (f) Family (g) Occupation (h) Party

(i) Military (j) Political Experience (k) Policy - Tax (l) Policy - Gay Marriage

(m) Policy - Education (n) Policy - Veterans (o) Policy - Energy

Figure 4.29: Experiment 1: Memory by importance for individual information items, 95% confidence interval



(a) Education (b) Family (c) Gender (d) Military

(e) Occupation (f) Party (g) Policy - Environment (h) Policy - Gun Control

(i) Policy - Tax (j) Political Experience (k) Religion

Figure 4.30: Experiment 2: Memory by importance for individual information domains, 95% confidence interval

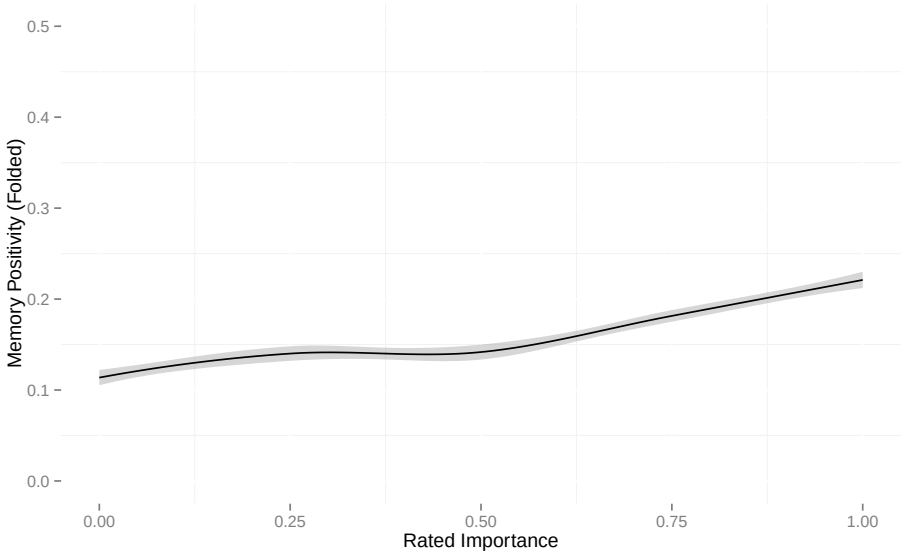


Figure 4.31: Experiment 1: LOESS of folded memory positivity by rated importance, 95% confidence interval

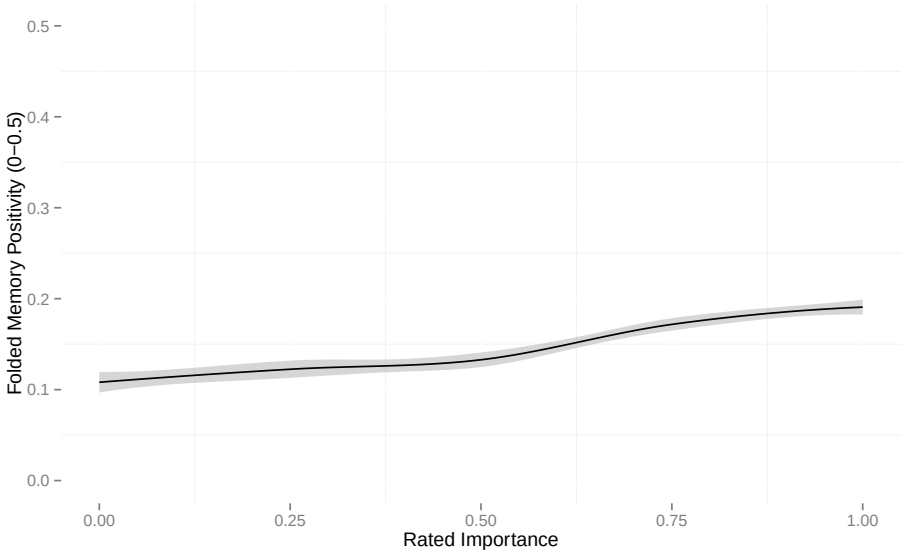
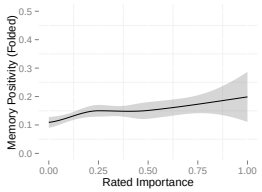
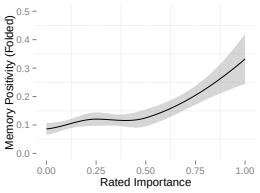


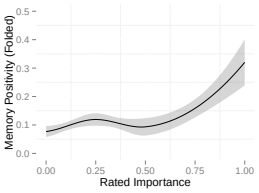
Figure 4.32: Experiment 2: LOESS of folded memory positivity by rated importance, 95% confidence interval



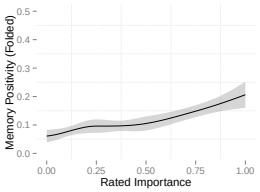
(a) Locality



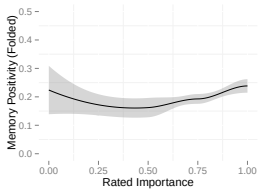
(b) Gender



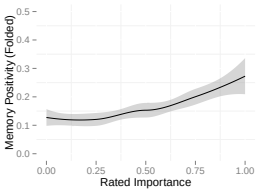
(c) Race



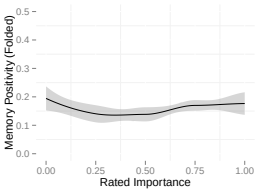
(d) Religion



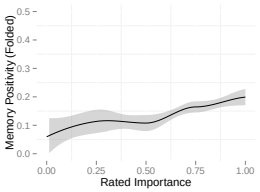
(e) Education



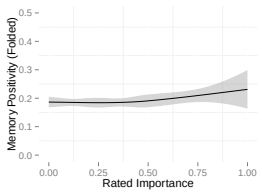
(f) Family



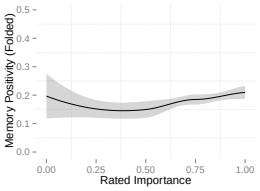
(g) Occupation



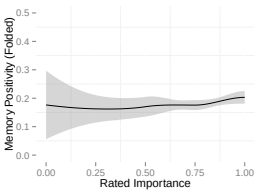
(h) Party



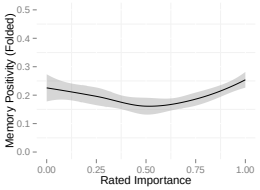
(i) Appearance



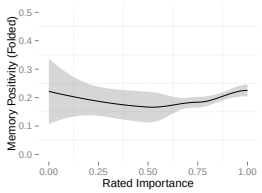
(j) Political Experience



(k) Tax Policy

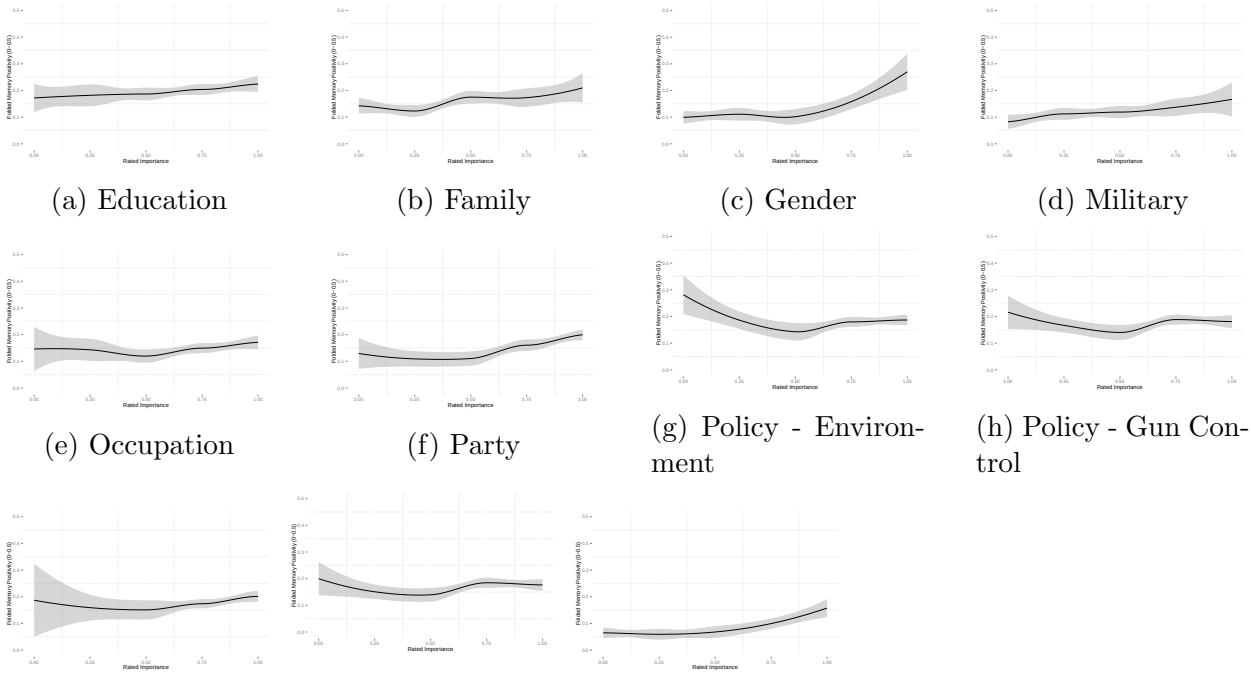


(l) Gay Marriage Policy



(m) Education Policy

Figure 4.33: Experiment 1: Memory positivity (folded) by individual information items, 95% confidence interval



(a) Education (b) Family (c) Gender (d) Military

(e) Occupation (f) Party (g) Policy - Environment (h) Policy - Gun Control

(i) Policy - Tax (j) Political Experience (k) Religion

Figure 4.34: Experiment 2: Memory positivity (folded) by individual information items, 95% confidence interval

	Coefficient	SE	p-value
Local	0.012	0.018	0.524
-Importance	0.064	0.038	0.090*
-Interaction	0.024	0.052	0.651
Gender	0.061	0.020	0.002**
-Importance	0.146	0.040	< .001***
-Interaction	−0.058	0.055	0.300
Religion	−0.041	0.023	0.075*
-Importance	0.054	0.036	0.133
-Interaction	0.102	0.048	0.035
Education	0.137	0.050	0.007***
-Importance	0.176	0.048	< .001***
-Interaction	−0.146	0.065	0.024**
Family	−0.038	0.024	0.110
-Importance	0.074	0.034	0.029**
-Interaction	0.106	0.048	0.028**
Occupation	−0.051	0.033	0.118
-Importance	−0.018	0.036	0.615
-Interaction	0.056	0.052	0.279
Apperance	−0.034	0.028	0.219
-Importance	0.012	0.051	0.815
-Interaction	0.006	0.070	0.931
Party	0.004	0.051	0.931
-Importance	−0.155	0.041	< .001***
-Interaction	0.237	0.070	0.001***
Political Experience	0.005	0.051	0.923
-Importance	0.065	0.045	0.149
-Interaction	0.007	0.066	0.912
Tax Policy	0.016	0.075	0.833
-Importance	0.028	0.070	0.691
-Interaction	0.122	0.094	0.192
Gay Marriage Policy	0.035	0.043	0.409
-Importance	−0.132	0.046	0.004***
-Interaction	0.233	0.063	< .001***
Education Policy	0.073	0.088	0.408
-Importance	0.098	0.078	0.214
-Interaction	−0.046	0.105	0.661

Table 4.19: Experiment 1: OLS regressions of memory positivity on manipulations and importance

NOTE: All variables coded 0-1. Intercepts omitted for space. $p < .10 = *, p < .05 = **, p < .01 = ***$.

Chapter 5

Biography in the minds of voters: Presentation order and timing

Despite enormous real-world variation in the order, valence, and content of information that electoral campaigns present, as shown in Chapter 3, we know little about their interactive role in candidate evaluation. This chapter presents results from two multi-wave experiments that varied the positivity of information, its order, and its personal or policy content, and assessed its memorability and impact on evaluations over several days. Consistent with observational evidence, more recent information is not only more memorable, but more impactful in candidate evaluation. However, these effects on memory and evaluations are asymmetric by the positivity of the information, with negative information more impactful when it is recent, even though negative information fades more quickly in memory. Additionally, recency effects are stronger for negative personal information than for negative policy information.

5.1 Variation in candidate information exposure

While the political world unfolds over time, surprisingly little work has focused on how information at different points in time can affect how voters perceive the political landscape of electoral campaigns. Furthermore, the manner and time in which information is presented to voters is anything but random—campaigns and political debates are carefully crafted, strategic enterprises designed to promote one's cause. A long line of work with diverse empirical strategies (e.g. Fenno 1978; Druckman et al. 2004; Arbour 2007) has made it clear that those who work in politics and political consulting understand the importance of timing and message in influencing voters' evaluations. Yet, most of what we know about the effectiveness of message content and timing comes from a variety of extrapolated and stylized facts, with few rigorous empirical demonstrations.

From the literatures on campaign advertising effects, candidate evaluation, and information processing, we know a number of factors should condition the effectiveness of information

in campaign messages over time. This chapter provides evidence from two multi-wave experiments designed to demonstrate the impact of information's 1) *order*, 2) *positivity*, and 3) *content* (i.e. personal or policy) on both memory and candidate evaluation. In the next section, I highlight what we know about each of these factors from related literatures, noting critical omissions in our understanding of their effects. Next, due to massive strategic selection in observational data, I discuss the need for careful design-based inference, followed by an outline of the two multi-wave experimental designs. Finally, I demonstrate the powerful effects of each of these three factors (order, positivity, and content) on summary evaluations of candidates, as well as the memorability of the varying information, noting important implications for campaign strategy and democratic accountability.

While quite a lot of scholarship throughout the social sciences has focused on how variation in information's *order*, *positivity*, and *content* affects its role in memory and evaluative tasks, little political science work has systematically evaluated the role of these three factors, particularly their interactive role, in political decision-making.

Timing & ordering

Inquiry across social science disciplines has sought to highlight the cognitive biases that people hold with respect to time in order to explain various empirical regularities. While much of the basic psychological work in this area was devoted to how timing and ordering relate to memory of different stimuli, more recent work has examined not only how timing can affect memory, but also evaluations of targets in a number of more complex domains (Jersild, 1929; Mayo and Crockett, 1964; Crano, 1977; Hogarth and Einhorn, 1992).

Together, basic and applied research come to a relatively unassailable fact: Retrospective thinking in a wide variety of domains over time is not simply additive with equal weight placed on all information (e.g., see Healy and Lenz (2014) for a recent example with respect to varying economic conditions). As I demonstrate in the remainder of this section, however, more recent information is often found to be most important, yet sometimes the first information is most important, often varying by characteristics of the information or individual differences of the respondent.

A broad focus of this research has been to highlight a large number of factors that moderate the relationship between time and outcome and explain divergent results—whether it is cognitive elaboration, the nature of the decision task, or characteristics of the information presentation. This work, mostly focused on the nature of the evaluation task, provides an interesting benchmark for considering the motivation and attention voters pay to political stimuli. As Tetlock (1983) found, when respondents are expected to be accountable for the information they consume, primacy and recency effects mostly disappear. Other work, such as Crano (1977), Forgas (2011), and Zauberman et al. (2006), has mostly focused on a variety of moderators of primacy and recency effects.

Evidence for recency in observational data is rather dominant. Using large advertising and survey datasets, recent work, most notably Hill et al. (2013) and Sides and Vavreck (2013) has highlighted the transience of information effects. In addition to these observa-

tional studies, it is clear campaigns believe recency is more powerful, given they air the majority of advertising appeals in the final weeks of a campaign. Figure 3.3 shows the number of airings of political ads in all 2008-2012 United States House and Senate races, by time until the general election. While the causes of this regularity may not be completely clear, it is remarkably clear by campaigns' actions that they view late advertising as a valuable investment. Despite these relatively convincing studies, drawing causal inferences regarding the effects of order and timing on information remains problematic. Because revealing information in a campaign is extraordinarily strategic, its timing is not necessarily exogenous.

A number of experimental studies have also begun to address timing of political information. For example, Mitchell (2008) shows that information revealed late in a hypothetical multi-week campaign is far more impactful than early information (see also Mitchell 2012, Mitchell 2014, and Mitchell 2013). Unfortunately, despite some manipulation of when certain information is revealed during the campaign, these experiments often do not directly manipulate the order of how positive/negative and different types of information are revealed.[1]

Despite the relatively strong evidence for recency effects in political information, there are a number of plausible arguments for the power of primacy effects. If information is important, salient, or vivid, it can anchor evaluations and remain memorable, with enduring effects throughout a campaign. While we know much about anchoring effects with simple information in estimation tasks (e.g. Jacowitz and Kahneman 1995), we know little about the possibility of anchoring effects in person-centric candidate evaluation tasks.

These arguments for the effects of primacy in candidate evaluation often grow out of the first impressions literature, which argues that some early information can be so vivid that it serves as a defining memorable attribute of the target. The Obama campaign's negative framing of Romney as out-of-touch or elitist in early summer 2012 is held up as an example of a prominent display of primacy, anchoring evaluations among voters (Halperin and Heilemann, 2013). Some argued Obama created an insurmountable gap through this large advertising push, allowing him to win the election (Halperin and Heilemann 2013; though, see Sides and Vavreck 2013 for a rather convincing rebuttal regarding the endurance of these effects). Of course, this argument is not novel to 2012; in particular, Popkin (1994) argues for what he calls "Gresham's Law of Political Information," or the idea that certain bits of salient 'bad' information can push out policy-relevant information over the course of campaigns. The theoretical foundation for expecting primacy effects is quite simple: Strong, relatable, and vivid information early in a campaign may help anchor evaluations of that candidate and make it hard for evaluations to shift far away from the initial evaluation.

Arguments about order and timing ultimately hinge on the debate around the accessibility of information and its impact in evaluations. Unfortunately, much of the work intended to disentangle primacy and recency in the political landscape has largely ignored the possibility

[1]Relatedly, a number of experimental studies have examined issues related to the framing of issues over time (e.g. Cobb and Kuklinski 1997, Druckman et al. 2010, Chong and Druckman 2013). While not directly addressing candidate evaluation and the temporality of information about candidates, they provide strong evidence of how effects of frames and cues may be different over time, with frames being more effective anchors at the beginning of policy debates.

that information can vary greatly in its valence and content. As we see in the next sections, if we consider that other factors beside time are operating, we can better understand why we see conflicting evidence in observational studies of campaign effects.

Information positivity & negativity

Many of the arguments above regarding primacy and recency hinge on moderating factors of the type of information. Within the context of electoral campaigns, the valence, particularly the negativity, of campaign information, has received extensive study (Lau and Pomper, 2004; Ansolabehere et al., 1999; Lau and Pomper, 2001; Brooks, 2006; Mark, 2009; Lau and Rovner, 2009). While much of the debate surrounding negative campaigning has focused on what effects, if any, it has on persuasion and mobilization, work has seldom focused on the *variation* in effectiveness of negative campaigning, particularly with respect to its timing in a campaign. Yet, there is meaningful variation in the positivity of ads over the course of the campaign, as displayed in Figure 5.1. Markedly, the proportion of purely positive ads decreases significantly over the course of a campaign, with the percentage of promotion ads decreasing from over 80% to under 40%.[2]

Why might the positivity of information matter for its impact? We should expect that, if information is persuasive, positive information should increase evaluations of a candidate, while negative information should decrease evaluations. While these main effects may be straightforward, we have few expectations from the literature about how information varying in its valence, or positivity, will be remembered, as well as how it may affect candidate evaluations over time.

Information content: Personal or political relevance

Of course, information can vary in its content as well as its valence. Yet, despite the temptation of survey-level discussion of electoral choice (e.g. Erikson and Tedin (2011)) to separate types of candidate information into neat, mutually-exclusive silos such as *party*, *policy*, *personal*, and *performance*, these categories are often not mutually exclusive cognitively, nor are they communicated separately in campaigns. Despite these issues, we can broadly think of two types of candidate information: *personal*, communicating information about the candidate as a person without being explicitly political information, and *policy*, communicating information about the candidate's policy positions, political groups, or experience in political office. This broad distinction is commonly used to code campaign communications, such as television ads. The Wisconsin Advertising Project (Goldstein et al., 2011), uses

[2]This general trend may be due to several strategic factors, three of which I highlight here. First, ads during the primary campaign may be more positive because of uncertainty over the choice of the general election opponent. Second, campaigns may feel the need to generate name recognition for their own candidate early by running promotion ads. Third, campaigns may view last-minute negative ads as having maximum impact.

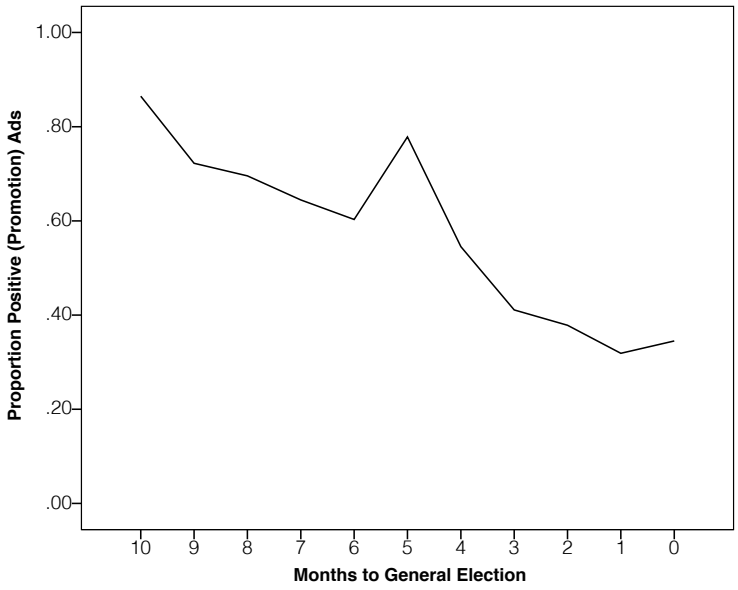


Figure 5.1: Promotion television advertisements by time in all 2008 US House and Senate races

NOTE: Timing is rounded to the nearest month, so month zero consists of ads aired in the last half-week of the campaign. Other ads are either categorized as contrast or attack ads. SOURCE: Wisconsin Ads Project/Campaign Media Analysis Group

these two categories, as well as a third category for a mixed advertisement, in hand-coding political advertising.

Actual electoral campaigns vary greatly in the types of information they present at different times during a campaign. Figure 5.2 shows this pattern quite clearly, drawing on television advertisements in all US House, Senate, and Governor races in 2008 (Goldstein et al., 2011). As we would expect, candidates are more likely to advertise personal characteristics in the primary season, likely to differentiate themselves from copartisan candidates, and are more likely to air policy ads in the general election period.[3] Additionally, different information strategies appear to be employed close to both the primary and general elections, intended to bombard viewers with memorable and recent information. While this last push towards personal information is quite clear in the primary, its pattern in the general election is less clear. However, despite these observational patterns, we do not know how effective these strategies are.

Due to its ubiquity and centrality to person perception, we might expect personal in-

[3]NOTE: Not all primaries occur at the same time, so this point on the plot shifts slightly from state to state, although most occur 4-5 months from the general election. If one centers the time on the primary election or presents primary and general ads separately, similar clear patterns emerge. Because either of these strategies requires fixing multiple points in time, the time period between the two must either be stretched or compressed to normalize the distance. For simplicity, the time to the general election is shown here.

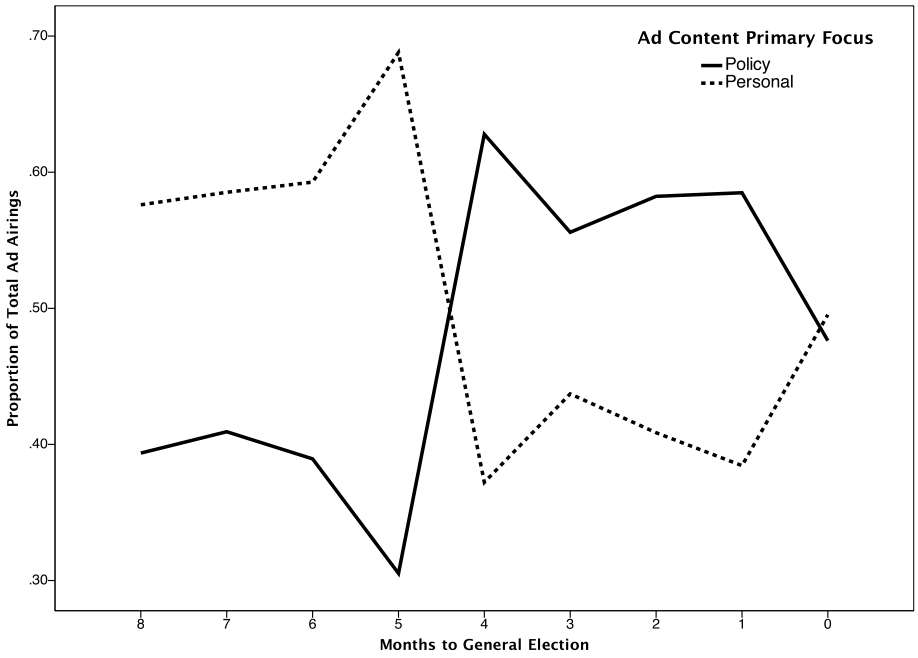


Figure 5.2: Television advertisement focus by time in all 2008 US House and Senate races
NOTE: Ads with a mix of personal/policy content collapsed into personal category so that proportions sum to one. Timing is rounded to the nearest month, so month zero consists of ads aired in the last half-month of the campaign.
SOURCE: Wisconsin Ads Project/Campaign Media Analysis Group

formation to be more accessible and therefore differentially more impactful. As laid out in Popkin (1994), personal information is extremely sticky in voters' minds, and can help color any later information they receive. This ability of personal information to vividly anchor evaluations suggests it may play a far different role in information processing over time than do policy positions. Arbour (2007), using a large set of interviews with campaign consultants, as well as advertising and experimental evidence, argues persuasively for the power of personal appeals, or utilizing a candidate's personal background, to anchor and affect evaluations.

The long literature on duration neglect in psychological reasoning studies (e.g. Fredrickson and Kahneman 1993) highlights how variance in information can factor into retrospective evaluations. The findings of this study, often called the 'peak-end' rule –that the two most impactful parts of an experience are the peak and the end –highlights an important distinction that needs to be made in political information: It is not all the same. Certain types of information, whether personal or politically-relevant, positive or negative, may be particularly memorable or impactful.

5.2 Empirical strategy: Multi-wave experiments

In order to assess how order, positivity, and content of information affect evaluations of candidates over the course of a campaign, two separate three-wave survey experiments were conducted.[4] Survey experiments are ideal for evaluating these effects, as we can keep the information constant and only vary information order, timing, and the content of the information presentation. While the patterns in advertising data highlighted in the first section of this chapter demonstrate broad variation in information type and time, we understand little about the mechanisms that shape these aggregate patterns.

The designs of the experiments were broadly similar, with the first designed to provide a clean test of order effects and their relation to positivity without varying information type, and with the second designed to more closely examine the moderating role of information type, operationalized as either personal or policy information. I first discuss characteristics of the sample, followed by the design of the first experiment, then by a shorter discussion of the second experiment, noting only how it differs from the first's design. Details on the exact presentation of the stimuli are included in the Chapter appendix.

As many authors have pointed out (e.g. Berinsky et al. 2012 & Buhrmester et al. 2011), samples drawn from Mechanical Turk tend to be younger, better-educated, and more liberal than the larger United States population.[5] Still, as shown in Table 5.1, the experimental

[4]Both experiments were fielded in Spring 2014 on Amazon's Mechanical Turk.

[5]A Mechanical Turk sample can also give rise to two countervailing external validity concerns. First, workers on Mechanical Turk are paid for their work, and they often expect to be paid better if they do it well. In order to help address this concern, two careful steps were taken. First, respondents were told in all waves that they would not be penalized for correct or incorrect answers to the memory battery, and the survey was about their attitudes, not their memory for facts. Several respondents commented at the end of the third wave that if they had known there would be a memory test, they would have written the information down. Second, this would only be a concern if respondents were doing *too well* on the memory test. A pilot experiment not presented here had identical stimuli to Experiment 4, although it was conducted over a span of ten minutes, not several days. This study found no primacy or recency effects—on the contrary, respondents almost perfectly updated and averaged the information together in their final evaluation. While this was merely a pretest for stimuli, it clearly indicates how important time is as a factor. We simply do not see extremely high levels of recall (nor do we see levels at chance responding). We do see recency effects, as we might expect in the real world. If anything, these estimates are on the low end in terms of recency effects, due to the shorter time span, and the motivation of respondents. Furthermore, any arguments about the comparisons between experimental groups would have to rely on an argument about differential bias between conditions, for which there is no clear support.

A second concern with the Mechanical Turk sample could be made with regard to how many tasks (HITs) workers perform per day, leading to lower levels of memory.Note that this is, essentially, the opposite concern as above. However, on average, respondents spent 31.1 seconds ($SD = 27.3$) in the first wave reading about the candidate, and 31.5 seconds ($SD = 31.8$) in the second wave reading about the candidate. While this is relatively quick, it does amount to about the same time of a typical television advertisement for a candidate, and with remarkably similar information. Additionally, one might expect that respondents are paying extremely little attention to the survey, as respondents in the second experiment reported taking an average of 14 surveys per day. If one regresses the total number of items remembered by a respondent on the number of HITs they reported doing daily, one does find the expected negative relationship, which while statistically significant, is extremely substantively small. A simple OLS model was constructed here, with an expected

samples were relatively diverse.

	Experiment 3	**Experiment 4**
Average Age	31.5 (SD = 9.4)	31.6 (SD = 10.9)
% Male	66.3%	62.7%
% White	74.4%	77.8%
% Highest Education: High School	24.1%	32.0%
% Highest Education: Associate's	11.9%	15.3%
% Highest Education: Bachelor's	49.3%	40.7%
% Highest Education: Graduate Degree	10.3%	10.5%
% Democrat (with leaners)	65.2%	61.7%
% Republican (with leaners)	17.8%	21.0%
% Independent	13.7%	15.7%
% Liberal	63.5%	57.7%
% Moderate	14.1%	19.3%
% Conservative	18.2%	21.7%
N	265	502

Table 5.1: Sample demographics and political affiliation
NOTE: Only respondents who completed all three waves of the experiment are included in this table.

The first experiment (N=265), which I refer to as Experiment 3 in tables and figures to avoid confusion with the experiments in Chapter 4, was conducted in three waves, with each wave occurring a minimum of 18 hours apart, and a maximum of 36 hours apart. Depending on a respondent's original completion time of the survey, they were emailed between 18 and 24 hours after completion of the previous wave. Respondents were given up to 36 hours between waves to complete the follow-up wave, although the vast majority of responses were completed within several hours of the recontact emails. 400 respondents completed Wave 1, 299 respondents completed Wave 2, and 265 successfully completed all three waves, and attrition did not systematically differ by treatment group.

While this time variation is quite small relative to the overall length of a campaign, it allows us a clean test of many of our critical hypotheses. While there are obvious external validity concerns regarding the durability of information effects over weeks, let alone months, there is little reason to believe that the additional time will change the relationships between the experimental factors. Rather, it will only serve as an additive shift in terms of place on the forgetting curve with far fewer information retained. The first wave was substantially longer than the second and third waves, due to the inclusion of a demographic questionnaire at the beginning. The first and second waves presented respondents with a battery of four

effect of $-.025$ fewer items remembered per additional HIT completed each day ($SE = .007$, $p < .001$). Given there are 11 items in the memory scale, this effect is quite small, indicating that respondents who completed 50 HITs per day (the maximum response) would only miss an additional 1.25 out of 11 memory questions compared to someone who only took this HIT.

screens of both personal and policy information about a hypothetical politician, including his name, photo, and partisan affiliation, while the third wave only asked questions about the politician. Respondents were given the politician's name and photo to aid in recall in the third wave, but no other information.

The first experiment used a 2x2 factorial design. The first factor, order, determined whether respondents viewed a battery of entirely positive information or negative information in Wave 1, with the opposite battery presented in Wave 2.[6] The second factor, online evaluation, determined whether respondents received questions about the hypothetical politician in all three waves, or only in wave three. This was manipulated to ensure that questioning respondents about the politician in each wave, and forcing them to come to a summary evaluation, did not substantially alter the impressions they formed in Wave 3. The party of the politician was not manipulated between subjects. Respondents were presented with a party cue attached to the politician, however, this party cue was tailored to the respondent's own partisan identification, including independents.[7]

The second experiment (N=502), which I refer to as Experiment 4 in tables and figures to avoid confusion with the experiments in Chapter 4, was also conducted in three waves, with the same time bounds. 759 respondents completed Wave 1, 590 respondents completed Wave 2, and 502 successfully completed all three waves, and attrition did not systematically differ by treatment group. The second experiment also used a 2x2 design.[8] The first factor, information type, determined whether the respondents were presented with positive policy information and negative personal information, or positive personal information and negative policy information, with only one type displayed in each of the first two waves. This information is nearly identical to the information presented in the first experiment, except the content subsetted by its personal or policy content. The second factor, order, determined whether these two sets of information were presented with positive or negative first.[9]

In Experiment 3, respondents were asked to rate their favorability towards the politician on a 0-100 scale. Half rated the politician in all three waves, while half rated the politician (on the same scale) only in Wave 3. In Experiment 4, this 0-100 evaluation occurred in all three waves for all respondents. In Wave 3 of both experiments, all respondents also

[6]This manipulation has the virtue that by Wave 3, respondents in both conditions had been exposed to the exact same stimuli, with only order manipulated. Therefore, any differences in conditions is not due to possible confounds in the vignette content.

[7]Therefore, all Democratic respondents rated a Democratic candidate, Republican respondents rated a Republican candidate, and independents rated an independent candidate. While this may limit external validity, it provides an approximate scenario of evaluating a candidate in one's partisan primary, while controlling for the effects of party information.

[8]Because results from the online evaluation condition were comparable to those from respondents who only rated the politician in Wave 3, respondents were asked to evaluate the politician in all three waves in Experiment 4.

[9]One can more easily conceptualize this design as containing two separate parallel experiments that contain identical information with only order manipulated. The full factorial of positive/negative and personal/policy was not manipulated in order to save power, as limited inference would come from positive/negative policy comparisons and positive/negative personal comparisons.

completed a multiple choice memory battery, which is shown in the Chapter appendix.[10]

5.3 Empirical results: The interactive role of order and information

Because of the similarities in experimental designs, results from both experiments are presented side-by-side in the following sections, organized by outcome and experimental factors.[11] I first highlight the effects of the experimental factors on summary evaluations of the candidates, then by a discussion of observed effects in memory, and finally by an examination of the relationship between memory and evaluation.

Effects on evaluations

Because the two batteries of information were either positive or negative in both experiments, the simplest way to evaluate the effect of order is to examine differences in the evaluations in Wave 3. If they were equivalent, we would conclude there are no order effects, and that respondents perfectly averaged the information from the first two waves. If we saw that the group that received positive information second has higher evaluations than those that received it first, we would say that this is evidence of recency. If the opposite were true, we have evidence of primacy. This gap, as shown in Figure 5.3, is highly statistically significant, with respondents receiving the positive information second rating the candidate 12.2 points higher, which corresponds to over 10% of the length of the evaluation scale, suggesting a strong overall recency effect.

Another illustrative way to look for order effects is to compare the evaluations in each wave to Wave 3. We would have evidence of primacy if the evaluations in Wave 3 were closer to those at the beginning in Wave 1. We would have evidence of recency if the evaluations in Wave 3 are closest to those in Wave 2, and we would have evidence of neither if the evaluation in Wave 3 was merely an average of the evaluations in the first two waves. Yet

[10] In both experiments, respondents also completed a short battery of trait evaluations, scaled 1-7. Included traits were: strong leader, moral, compassionate, honest, hard working, experienced, moderate, and trustworthy. Because the seven trait evaluations in Wave 3 scale quite strongly together (Cronbach's α in experiment one = 0.920, experiment two = 0.915), and are highly correlated with the overall evaluation, they are omitted from this paper. One can obtain substantially similar results as those from the overall evaluation by scaling the trait ratings together. Respondents also were asked to place the politician on a 1-7 liberal-conservative scale, although little variation in this variable occurs due to the strength of the party cue. These alternative measures of evaluation are omitted for brevity.

[11] All plots specifically note the experiment from which the data were drawn, and data are never pooled in the same plot. All data presented is pooled across party of the respondent, as the presented candidate was always copartisan. As shown in the Chapter appendix, the policy and personal information was crafted to be ambiguous as to the party of the politician, with valence issues and relatively non-partisan political backgrounds.

another way to present this with a statistical test, which I do next, would be to regress Wave 3 evaluations on Wave 1 and 2, and compare coefficients.

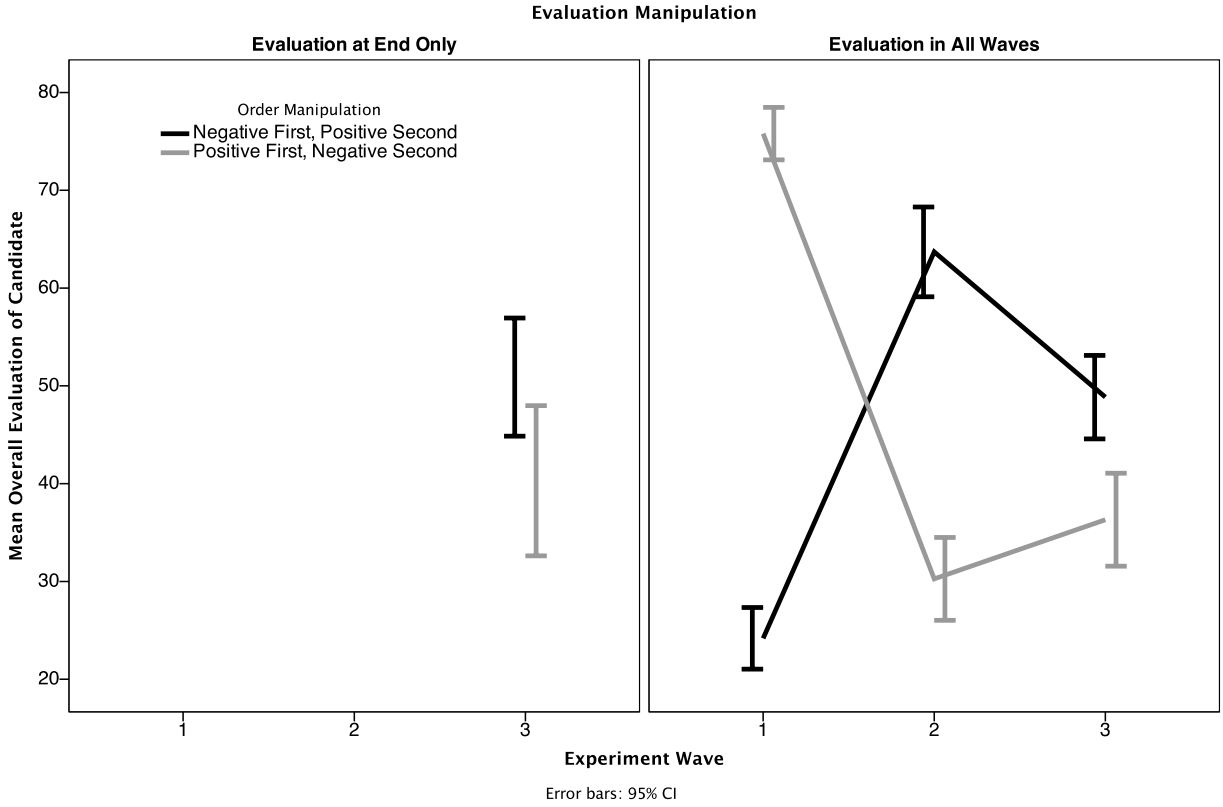


Figure 5.3: Experiment 3: Evaluation of candidate by wave, evaluation manipulation, and order

Beyond the robust finding of recency, there is also evidence for an asymmetry in the recency effect by positivity. Specifically, more recent negative information anchors evaluations more than recent positive information. This effect can be seen in the right panel of Figure 5.3 by comparing the slopes of the lines between Wave 2 and Wave 3 to see the extent to which the information's effect on evaluations fades. Specifically, the evaluation in Wave 3 is more similar to the evaluation in Wave 2 when the information in Wave 2 was negative. A comparison of the absolute value of these slopes (-14.66 and 9.33) reveals they are statistically different, $t = 2.9$, $p = .004$, indicating that the effect of positive information in Wave 2 fades more quickly than the negative information.

We can also assess these effects using regression. Table 5.2 displays the results from three OLS regressions of Wave 3 evaluations on both the experimental factors, as well as the Wave 1 and 2 evaluations. Model one, showing the Wave 3 evaluation regressed on the two experimental factors, reproduces the main recency effect noted above, indicating that those that received negative information in the second wave gave the candidate an

	Model 1	Model 2	Model 3
Wave 2 Eval	–	0.724***	0.734***
		(0.040)	(0.044)
Wave 1 Eval	–	0.179***	0.151*
		(0.034)	(0.062)
+ First / - Second	−11.867***	–	2.288
	(2.683)		(4.304)
Eval in All Waves	−2.882	–	–
	(2.797)		
Constant	51.394	0.756	0.504
	(2.472)	(3.161)	(3.203)
Adj. R^2	0.070	0.668	0.667
N	265	170	170

Table 5.2: Experiment 3: Predicting Wave 3 evaluations
NOTE: $*** = p < .001, ** = p < .01, * = p < .05$. Standard Errors in parentheses. The N varies between models because some of the sample was randomly assigned to not complete evaluations of the candidate in the first two waves.

evaluation 11.9 points lower than those that received positive information in the second wave. This model also controls for the effect of being asked to evaluate the candidate in all three waves, demonstrating this has no overall positive or negative effect on the candidate evaluation. Because asking for evaluations in each wave did not substantially affect the evaluation outcomes of interest, this manipulation was dropped in the design of the second experiment.

The second model in Table 5.2 demonstrates the recency finding another way. By regressing the Wave 3 evaluation on the evaluations from the first two waves, we find that the second wave evaluation is far more predictive - just over four times as large - as the predictive power of the Wave 1 evaluation. Finally, the third model displays the Wave 3 evaluation regressed on the experimental order factor and the Wave 1 and Wave 2 evaluations.[12] This model shows quite clearly that the entirety of the experimental treatment is mediated by the Wave 1 and Wave 2 evaluations of the candidate.

The results from the second experiment corroborate the main findings from the first, as well as provide evidence for an additional asymmetry by the type (policy or personal) of information. The mean evaluations over all three waves by experimental treatments can be seen in Figure 5.4. First, we find that those that received negative information in Wave 2 evaluated the candidate in Wave 3 an average of 7.96 points lower than those that received positive information in the second wave, $t = -4.6, p < .001$. If we look for evidence of an asymmetry in the recency effect by positivity, we find that the absolute values of the change in evaluation from Wave 2 to Wave 3 are marginally statistically significant. This effect,

[12]The evaluation in all waves experimental factor cannot be included in this model, as only those that completed evaluations in all waves are included.

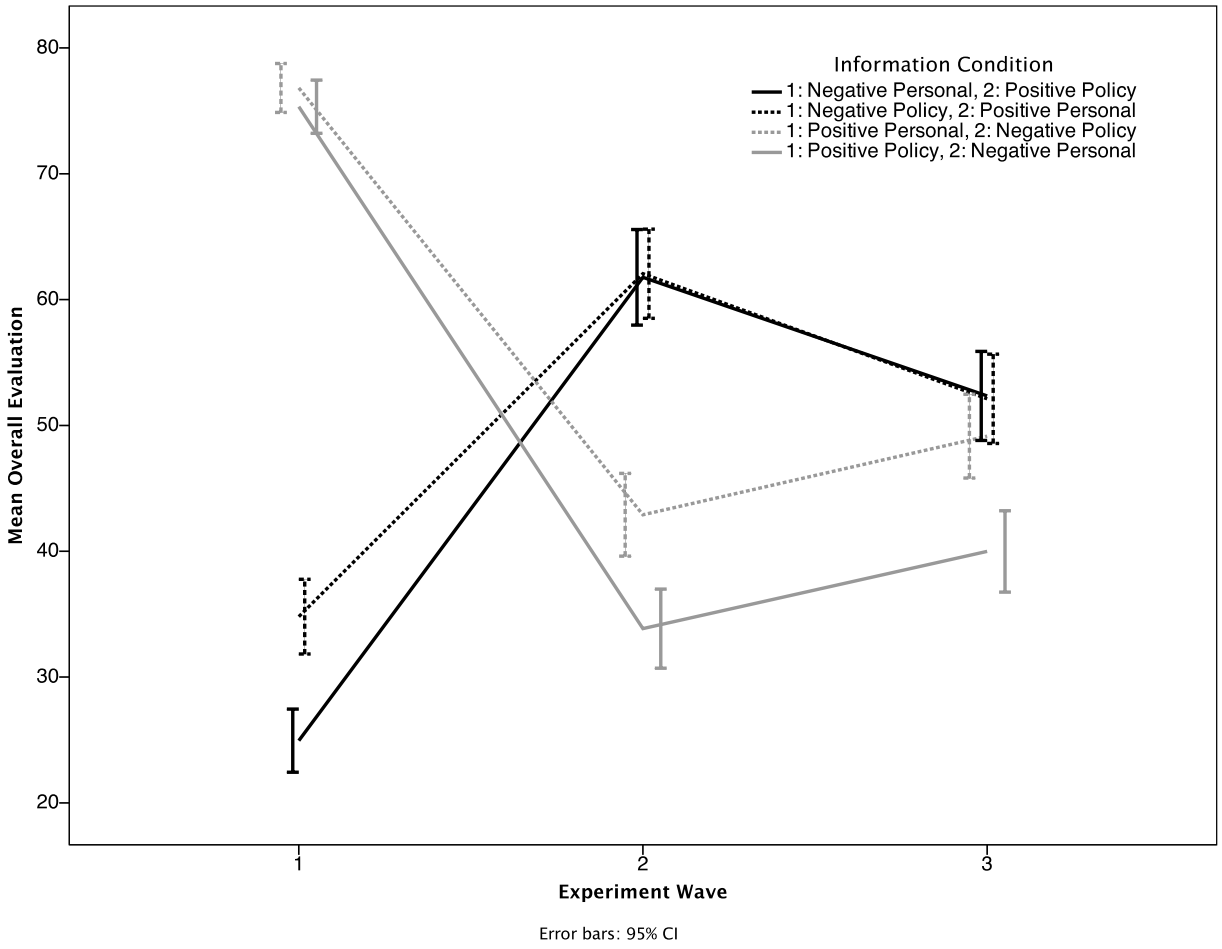


Figure 5.4: Experiment 4: Evaluation of candidate by wave, information condition, and order

while of similar but smaller magnitude in Experiment 4 (slopes of −9.20 and 6.67), is not statistically significant at conventional levels, $t = 1.85$, $p = .064$. This difference is likely due to the additional manipulation of the type of information in the design of the second experiment.[13]

In order to systematically evaluate the main and interactive effects in Experiment 4, a set of three OLS regressions were run, regressing the Wave 3 evaluation on the experimental factors, their interactions, and Wave 1 and 2 evaluations. These results are shown in Table 5.3. The first model in this table shows the effects of the experimentally-assigned conditions, as well as their interaction. Notably, this model demonstrates 1) the strong overall effect

[13]While the first experiment bundled policy and personal information together, resulting in a strong positive (and negative) battery, the second experiment separated this information, so it is possible that one type of information alone diminishes this asymmetry. The findings in the next several paragraphs demonstrate this is the most probable explanation.

of recency, 2) no overall effect of the personal/policy information manipulation, but 3) a significant interaction effect of the two. The interaction of having positive personal information displayed first and negative policy information displayed second erases the overall effect of recency, suggesting the positive personal information served as a powerful anchor. This interaction can be clearly understood in Figure 5.4, as the condition with positive personal information first and negative policy information second is not statistically distinguishable from the two conditions with negative information first.

	Model 1	Model 2	Model 3
Wave 2 Eval	–	0.652***	0.627***
		(0.026)	(0.030)
Wave 1 Eval	–	0.169***	0.213***
		(0.022)	(0.039)
+ First / - Second	−12.356***	–	−5.750*
	(2.367)		(2.887)
+ Personal / - Policy	−0.229	–	−2.013
	(2.461)		(1.740)
+ First * + Personal	9.387 * *	–	5.195*
Interaction	(3.460)		(2.432)
Constant	52.341	7.260	8.831
	(1.683)	(2.005)	(2.148)
Adj. R^2	0.061	0.569	0.571
N	502	488	488

Table 5.3: Experiment 4: Predicting Wave 3 evaluations
NOTE: $* * * = p < .001, ** = p < .01, * = p < .05$. Standard Errors in parentheses. The N varies slightly as a small number of respondents declined to answer the evaluation question in Wave 1 or 2.

As with Experiment 3, we see strong evidence for the recency effect by examining model two in Table 5.3. This regression of Wave 3 evaluations on evaluations in the first two waves results demonstrates the far stronger predictive power of the evaluation in the second wave. Not only are these coefficients statistically distinguishable from one another ($p < .001$), the second wave effect is four times as large as the coefficient for evaluations in Wave 1. Finally, the third model in Table 5.3 shows the same regression with both wave evaluations and experimental factors in the model. Unlike with Experiment 3, the effects of the experimental factors are still significant, although are attenuated by about half. Notably, the effect of Wave 1 and Wave 2 evaluations remain quite strong, indicating the mediating effect of these evaluations. That is, respondents are updating their evaluations of the candidate in response to the the treatment information.

Effects on memory

While the effect of time, order, and information on candidate evaluations are of primary interest, we can also examine respondents' memories of the information presented to them across waves.[14] Several experimental factors are of interest here: First, did the evaluation manipulation in experiment one created stronger memories? Second, is there variation in memory by recency, positivity, or the type of information?

Memory checks in Experiment 3 provide some basic tests about whether the online manipulation, in which respondents were asked the dependent variable battery in each wave, affected their memory for the details contained in the vignettes. The proportion recalling each fact about the candidate, as well as a composite scale of all the items, by online condition, is shown in Table 5.4. As we might expect, asking respondents to evaluate the candidate in each wave resulted in their remembering more details about the candidate in the third wave. Despite this difference in memory, there was no mean difference in evaluations of the candidate between these conditions. Additionally, these results provide some evidence that respondents were taking the evaluative task seriously, as all memories are better than chance, even if a conservative guessing correction (i.e. assume all respondents are guessing at random) is applied.[15]

	Eval at End Only	**Eval in All Waves**	**Diff p-value**
Party	0.74	0.84	0.059
	(.047)	(.028)	
Occupation	0.57	0.71	0.030
	(.053)	(.035)	
Branch of Military	0.46	0.52	0.343
	(.053)	(.038)	
Type of Company	0.43	0.53	0.119
	(.053)	(.038)	
Previous Elected Office	0.46	0.41	0.405
	(.053)	(.038)	
Full Scale	2.68	3.01	0.048
	(.115)	(.091)	

Table 5.4: Experiment 3: Proportion remembering candidate attributes by evaluation condition

NOTE: Standard errors in parentheses.

Because the tested facts were presented in both the positive and negative information about the candidate, we cannot measure whether facts obtained in Wave 2 are remembered

[14] All memory questions for both experiments are shown in the chapter appendix.

[15] Comparing across types of information (e.g. party memory to occupation memory) is not advisable, as it conflates memory of those items with the difficulty of the question. Because multiple choice questions varied in number of responses, varying conservative guessing corrections could be applied. However, because these guessing corrections nearly all assume guessing at random, this corrections would still not fully fix the problem, as respondents may use differential base rates for particular items and questions. Therefore, uncorrected for guessing means are displayed here.

more or less than those in Wave 1. For this, we must turn to the second experiment. The second experiment also permits us to examine whether personal or policy information is more memorable. Each of the four conditions (positive/negative and personal/policy) had five or six facts embedded in them which were tested in the third wave, just as in the first experiment.[16] For the policy facts, respondents were asked to recall which policy domains the candidate spoke about. Because the exact number of facts was not constant across vignettes, proportions correct are displayed in Table 5.5.

	When in First Wave	When in Second Wave	Diff p-value
Positive Personal	**0.489**	**0.474**	0.659
	(.022)	(.025)	
Positive Policy	**0.321**	**0.314**	0.779
	(.017)	(.019)	
Negative Personal	**0.351**	**0.443**	0.004
	(.024)	(.021)	
Negative Policy	**0.303**	**0.355**	0.091
	(.022)	(.021)	

Table 5.5: Experiment 4: Proportion correctly remembered by wave and content
NOTE: Standard errors in parentheses.

First, there is a striking pattern—information in the positive vignettes is remembered at about the same rate regardless of whether it is presented in the first or second wave of the experiment. However, negative information is remembered better when it comes in the second wave, particularly when it is negative personal information. This finding suggests that despite negative information's more powerful impact, it fades more quickly in memory. There are differences across the rows in Table 5.5, as well. Averaging across wave of information and personal and policy type, we find that positive information is 3.0% more memorable, $t = 1.97, p = .049$. Averaging across wave of presentation and valence, personal information is remembered 11.2% more than policy information, $t = 7.88, p < .001$.

An obvious question arises after seeing these results – is memory related to evaluation? Table 5.6 presents results from two regressions of the overall evaluations of the candidate on the number of recalled positive and negative items.[17] Interestingly, recalling negative pieces of information from the negative vignettes strongly predicts more negative evaluations. However, this reverse is not true: memory of positive pieces of information do not significantly predict more positive evaluations. Once again, the asymmetry between positive and negative information emerges in terms of not only its memory, but its effect on overall evaluations, even when controlling for prior evaluations in Wave 1 and Wave 2, as shown in model 2.

[16]The second experiment had a longer multiple-choice memory battery than the first experiment. All questions are shown in the Chapter appendix.

[17]Note that one cannot split this apart by personal and policy as well, as respondents only saw one type of each information. However, all respondents saw one positive and negative information block, allowing this analysis.

	Model 1	Model 2
Positive Memory	4.14	0.38
	(3.67)	(2.43)
Negative Memory	$-19.72 * **$	$-7.25 * *$
	(3.60)	(2.44)
Wave 2 Eval	–	$0.65 * **$
		(0.03)
Wave 1 Eval	–	$0.18 * **$
		(0.02)
Constant	53.73	9.33
	(2.08)	(2.38)
Adj. R^2	0.055	0.602
N	486	476

Table 5.6: Experiment 4: Regressions of Wave 3 evaluation on proportion of of positive/negative items recalled

NOTE: OLS regressions, standard errors in parentheses.

5.4 Discussion

While a number of other studies have sought to demonstrate the transience of information effects with observational, and more rarely experimental, data, this study provides an important clarification: Not all information is the same. Specifically, positive and negative information differ substantially both in terms of their impact on overall evaluations as well as their memorability, particularly as they vary over time. Additionally, the content of the information matters, with personal information more impactful and memorable in evaluations than policy information.

While experiments provide excellent platforms to draw inferences in a controlled environment, they are nevertheless susceptible to a number of arguments regarding their validity in the real world. Two particular and possibly important differences exist between the carefully controlled experiment presented in this paper and how voters learn about candidates in the real world. First, concerns regarding the attentiveness of the sample to the information are warranted. However, respondents spent, on average, just over 60 seconds reading the information in Waves 1 and 2. While not an extraordinarily lengthy amount of time, this closely approximates the amount of time, as well as the type of content, that one might be exposed to in a political advertisement.[18]

Second, the timeframe of these experiments is compressed to several days, not the full length of a campaign. This, while a concern, would largely only make forgetting worse, and there is no reason to believe that this extension of time would differentially contribute to forgetting certain types of information (e.g. positive, personal, positive, negative) more than others. While these studies took place over several days, not months, they provide evidence of asymmetries that would only compound themselves over longer time periods.

[18] A lengthier discussion of this concern and more evidence is shown in the Chapter appendix.

Despite concerns about external validity, this study provides rather strong evidence of the asymmetric differences in positive and negative information in terms of its ability to be held in memory, as well as its impact on overall evaluations of political candidates. Specifically, while both positive information and negative information are more impactful when presented closer to the time when a voter evaluates the candidate, the negative information is more impactful than positive information, fading less quickly in memory and in its impact on evaluations.

Furthermore, both experiments provide quite tight control – while many vignette-based studies are susceptible to the criticism that there is a confounding factor in the vignette content, nearly all of the comparisons here are not subject to this criticism. That is, because respondents in nearly all conditions saw the same material, with only order changed, there is nothing about the information itself that could lead to the observed effects.

The evidence from these experiments suggests that bombardments of positive and negative information, with personal or policy content, at different times in the campaign can have wildly varying effects. While many argue that policy information should be held as more important in voter decisions, personal information of certain kinds can be more memorable and more impactful in voters evaluations, particularly when that personal information is negative. Even if information effects are relatively fleeting, it is clear that there is important variation in *how* fleeting they are, which can advantage certain campaign messaging strategies.

5.5 Chapter appendix

Candidate information in Experiment 3

All information in both experiments was presented alongside a photo and the name of the candidate. Information was presented on four separate survey pages, with page breaks noted below, in order to encourage respondents to more carefully read the material.

Positive information

Robert Mettler has had a decorated career in the United States Navy, rising to the rank of captain.

He has been a strong advocate for a reasonable foreign policy that respects the needs and sacrifices of our troops.

[Page Break]

Robert has also served on the board of a number of nonprofit organizations and charities.

He has helped push a number of charitable initiatives as well as argued for a modest social safety net for those that need it.

[Page Break]

Robert has also championed economic growth - he recently helped grow his state's economy as well as its tax base.

He was most recently the CEO of one of the states largest technology companies, overseeing a workforce of several thousand and a period of rapid growth for the company.

[Page Break]

As a **[INSERT PARTY]**, Robert has previously served on a City Council, and currently serves in his States Legislature.

In those roles, Robert has helped enact pragmatic public policy that has made our government more efficient.

Negative information

Robert Mettler has had a relatively controversial career in the United States Navy, having been accused of overstating his combat record and rank.

More recently, he has come under fire for advocating cutting benefits for our troops, although he defends it as measures to make our military more efficient.

[Page Break]

Robert's involvement on the board of a number of nonprofit organizations and charities has also raised some ethical concerns regarding his own business interests.

He has pushed for public policy that would tax charitable giving and some say would diminish resources for those in poverty.

[Page Break]

Robert has also pushed for relatively controversial economic policy in his home state. Economists from both parties have noted lower than average growth rates, and a rising deficit as cause for concern.

He was most recently the CEO of one of the states largest technology companies, overseeing a large number of layoffs despite moderate growth for the company.

[**Page Break**]

A [**INSERT PARTY**], Robert has previously served on a City Council and in his State's Legislature. In those roles, Robert has come under some criticism by members of both parties regarding his lack of accomplishments while in office.

Some have argued that the policies he has pursued have complicated our government and made it less efficient.

Candidate information in Experiment 4

All information in both experiments was presented alongside a photo and the name of the candidate. Information was presented on four separate survey pages, with page breaks noted below, in order to encourage respondents to more carefully read the material.

Positive personal information

Howard Grady has had a decorated career in the United States Navy, rising to the rank of captain.

[**Page Break**]

He has served on the board of a number of nonprofit organizations and charities, both at the local and state level.

[**Page Break**]

Howard was most recently the CEO of one of the states largest technology companies, overseeing a workforce of several thousand and a period of rapid growth for the company.

[**Page Break**]

As a [**INSERT PARTY**], Howard has previously served on a City Council, and currently serves in his States Legislature.

Positive policy information

Howard Grady has been a strong advocate for a reasonable foreign policy that respects the needs and sacrifices of our troops.

[**Page Break**]

He has helped push a number of charitable initiatives as well as argued for a modest social safety net for those in extreme poverty.

[**Page Break**]

Howard has also championed economic growth. He recently pushed public policy that helped grow his state's economy as well as its tax base, and earned the praise of a number of economists.

[**Page Break**]

A [**INSERT PARTY**], Howard has been praised by both parties for helping to enact pragmatic public policy that has made our government more efficient.

Negative personal information

Howard Grady has had a relatively controversial career in the United States Navy, having been accused of overstating his combat record and rank.

[**Page Break**]

His involvement on the board of a number of nonprofit organizations and charities has also raised some ethical concerns regarding his own business interests.

[**Page Break**]

Howard was most recently the CEO of one of the states largest technology companies, overseeing a large number of layoffs despite moderate growth for the company.

[**Page Break**]

A [**INSERT PARTY**], Howard has previously served on a City Council and in his State's Legislature. In those roles, Howard has come under some criticism by members of both parties regarding his lack of accomplishments while in office.

Negative policy information

Howard Grady has come under harsh criticism from both parties for advocating cutting benefits for our troops, although he defends it as measures to make our military more efficient.

[**Page Break**]

He has also pushed for public policy that would tax charitable giving and many argue would diminish resources for those in extreme poverty.

[**Page Break**]

Howard has also pushed for relatively controversial economic policy in his home state. Economists from both parties have noted lower than average growth rates, and a rising deficit as cause for concern.

[**Page Break**]

A [**INSERT PARTY**], Howard has pursued policies that some have argued complicated our government and made it less efficient.

Candidate photographs

A color photograph of a white male candidate was displayed alongside each screen of information in both waves. A different photo was used in each experiment, shown below in Figure 5.5, with the left candidate shown in Experiment 3, and the right candidate shown in Experiment 4. These photos were taken from the Mississippi State Senate website `http://billstatus.ls.state.ms.us/members/ss_membs.xml` in January 2014, chosen due to their consistency and photograph quality, as well as to render recognition of the politician extremely unlikely. After each experiment was completed, respondents were debriefed these were actual Mississippi State Senate members, not the fictional candidates as portrayed.

Figure 5.5: Candidate photos

Memory battery in Experiment 3

The following questions (response options in brackets) appeared after evaluation in Wave 3:

1. What was Robert Mettler's party affiliation? [*Republican / Democrat / Independent / I don't know*]
2. Was Robert Mettler the CEO or CFO of a corporation? [*CEO / CFO/ I don't know*]
3. What type of company did Robert Mettler work for? [*Healthcare / Technology / Energy / I don't know*]
4. Which of the previous elected offices did Robert Mettler hold? [*School Board Member / US Congressman / State Legislator / Lieutenant Governor / I don't know*]
5. What was Howard Grady's rank in the military? [*Captain / Lieutenant / Commander / I don't know*]

Memory Battery in Experiment 4

The following questions (response options in brackets) appeared after evaluation in Wave 3:

1. What was Howard Grady's party affiliation? [*Republican / Democrat / Independent / I don't know*]
2. Was Howard Grady the CEO or CFO of a corporation? [*CEO / CFO/ I don't know*]
3. In what branch of the military was Howard Grady? [*Navy / Army / Air Force/ I don't know*]
4. What type of company did Howard Grady work for? [*Healthcare / Technology / Energy / I don't know*]

5. Which of the previous elected offices did Howard Grady hold? [*School Board Member / US Congressman / State Legislator / Lieutenant Governor / I don't know*]
6. What was Howard Grady's rank in the military? [*Captain / Lieutenant / Commander / I don't know*]
7. What was Howard Grady's role with a nonprofit organization? [*He was on its board / He was its director / He was a major donor / I don't know*]
8. Which of the following policy areas did Howard Grady take a position on? Please check all that apply. [*Foreign Policy / Poverty / Economy / Health Care / Education / Government Efficiency / Transportation / Veterans' Affairs / Energy / Immigration / Tax Policy / Social Security*]

Chapter 6

Biography in the minds of voters: Partisanship and stereotypicality

When considering the impact of information on decision-making, it is immediately clear that pieces of information are rarely, if ever, presented alone. Particularly in the political sphere, party is a powerful identity and stereotype that voters use to form a cohesive impression of candidates. Because biographical information is rarely the only piece of information presented and used by voters in decision-making, this chapter explores, through a variety of experimental designs, the role of biographical information alongside many of the more prevalent pieces of information in campaigns, including policy stances and party information. Insights from these experiments reveal a sometimes interactive role of biographical information with candidates' parties, particularly when it violates partisan stereotypes.

6.1 The power of partisan stereotypes: A type of Democrat; a type of Republican

Since *The American Voter*'s publication, scholars have held central the notion that political partisanship is one of the most powerful influences in voting behavior. As Campbell et al. (1960) argue, one's political party forms a perceptual screen that can then shape one's view of both politicians and policies. The influence of party identification is well-known and well-documented, and its effects on evaluations of candidates are quite clear, both in this dissertation, and in the long literatures on candidate evaluation.

Yet, much of the work on the effects of political parties and party identification on voting behavior have largely focused on its main effect - that is, its direct effect on candidate preferences. However, we also know from diverse methodological strategies in the ownership literature that party images are distinct and can connote other information. The theory of ownership, first termed by Budge and Farlie (1983) and later expounded with respect to issues by Petrocik (1996), suggests that the Democratic and Republican parties have different perceived competencies on a wide variety of issues, and attempt to shift discourse

toward issues on which they hold an advantage. This influential literature, later expanded to candidate personality traits by Hayes (2005), suggests that voters have different preconceptions about candidates from the two parties, possibly inferring different competences or different personalities because of the attached party label. Despite this suggestion, there is mixed empirical support for the conclusion that voters engage in this process for both issues and traits (Goggin and Theodoridis, 2016). This process, although not explicitly described as such in the ownership literature, directly resembles the process of an application of a stereotype. However, in the candidate evaluation literature, studies by Rahn (1993) and Arceneaux (2008) explicitly demonstrate that partisan labels can lead to inferences about candidate's issues.

If a partisan affiliation brings expectations for certain qualities about candidates in voters' minds, then a party label may interact with the other personal and policy information voters know about a candidate. That is, a particular biographical quality, e.g., having children, may mean different things to voters depending on whether the candidate is a Democrat or Republican. Assessing differential effects of information about candidates based on the candidate's party is not an easy task. Because we know that certain types of candidates are more likely to belong to the Democratic and Republican parties, as demonstrated in Chapter 3, observational studies of the impact of personal and issue information cannot help us understand how party and other information about a candidate may interact. Yet, in the long line of experimental work on candidate evaluation, few have directly examined how party labels of candidates interact with other information of interest. As McGraw (2011) describes, researchers have often employed strategies to control the effects of party by either omitting the party label of a candidate, or by holding the party label constant. In addition to not allowing us to assess the interactive role of party, these strategies also result in other design issues that limit the inferences one can make.[1]

Therefore, experimental designs must vary the party label of a candidate, as well as other information about the candidate, in order to allow the inferences we need to assess partisan stereotyping. In this chapter, I present data from four separate experiments - the two experiments already presented in Chapter 4, Experiments 1 and 2, as well as two new experiments, Experiments 5 and 6. Together, these help us understand whether voters hold differential expectations for candidates of the two parties, leading to differential effects of personal and policy information on not only candidate evaluation, but the inferred ideology of candidates, as well as their typicality in a party.

For partisan stereotypes of both personal qualities and issue priorities to exist, there first would likely be real associations between these qualities and parties. While it is theoretically possible for voters to hold associations that do not actually exist, recent work on partisan associative networks largely finds that this is not the case (Goggin et al., 2016). Rather,

[1]For example, as Theodoridis and Goggin (2016) demonstrate, omitting a party label does not necessarily mean its effects are controlled, as partisan respondents will attempt to infer a party label from other information in the vignette, even if this information does not have a clear party stereotype. A positive or negative valence to information will lead respondents to infer the candidate is a co-partisan or of the other party, respectively.

voters generally only make Type II errors – failing to notice differences between candidates of the two parties that actually do exist.

As shown in Chapter 3, many biographical attributes are more common among candidates of a particular party. Whether these differences arise from mechanisms of candidate selection by parties, voter preferences, or self-selection by candidates, these correlations are quite robust. Notably, Democratic candidates are more likely to be female, more highly educated, more likely to be attorneys or work in public service, and more likely to be Jewish. Democratic candidates are also less likely to be married or have children, less likely to be medical doctors, less likely to have business or executive backgrounds, less likely to have military experience, and more likely to be Protestant or evangelical. However, even if candidates of the two parties are different, it does not mean that voters possess these associations in their mind.

For many reasons, we might expect voters to pick up on these associations and integrate them into their partisan stereotypes, particularly those that are strongest and are culturally widespread and shared. Unfortunately, until recent work by Goggin et al. (2016), few empirical studies had assessed the various partisan and ideological associations voters held with respect to biographical information and issue priorities of candidates. As the authors find, voters do hold many of the associations noted above that actually exist. When presented with randomly-generated fictional candidate profiles and asked whether they thought it was more likely for that candidate to be a Republican or Democrat, candidates who were female, working in public service, or who espoused issue priorities such as the environment, social services, and health care were more likely to be assumed to be Democratic. Candidates with religious backgrounds, military experience, business backgrounds, or who suggested strengthening national defense or promoting moral values were all assumed to be Republican. Interestingly, relatively large agreement on these stereotypes between both Democratic and Republican respondents exists, suggesting that because the task was not evaluative, partisan identity effects did not cloud the application of voters' stereotype content.

Even if these stereotypes exist and are widespread, we know very little about how they may influence the judgment of voters when they are applied alongside consistent or inconsistent individuating information. In the next section, I present results from four experiments designed to examine how varying policy and personal content will lead to differential evaluations when in-line or counter to party stereotypes. In addition to demonstrating that expectancy from partisan stereotypes can shape evaluations of candidates themselves, I also show it can shape support for particular policies when candidates are perceived to have more credibility on the issue due to either partisan stereotypes or particular personal qualities.

6.2 Empirical results: Conforming to and deviating from partisan stereotypes

To assess how partisan stereotypes are related to a variety of biographical and policy information, I rely on data from four separate experiments. The first two experiments are those previously discussed in Chapter 4: Two over-time conjoint-style experiments that manipulated a wide variety of personal and policy information about a candidate, as well as the candidate's party. Unlike the previous analyses focusing on experimental main effects, however, here we can examine the interactive effects of information with a candidate's party. In addition to examining the effect of these interactions on overall candidate evaluation, we can examine a possible mediator – the perceived ideology of a candidate. That is, particular policy or personal information may lead respondents to view a candidate as more liberal or conservative, thus leading to a more positive or negative evaluation of the candidate. These experiments provide us with a starting point for how the impact of a wide variety of personal and policy information may be contingent upon that information's conformance to, or violation of, party stereotypes.

Experiment 5 provides us with a clearer test of how candidates are evaluated and ideologically perceived when they violate many personal norms that politicians of both parties are expected to follow. This vignette experiment utilizing fictional candidates was fielded on the Institute of Governmental Studies (IGS) California 2015 Poll, which utilized a Survey Sampling International (SSI) sample of California residents.[2] By varying a candidate's party, as well as his familial, occupation, and military background in line with both Democratic and Republican party stereotypes, we can assess how characteristics of a candidate and his party can interact to shape evaluations, particularly when a candidate violates these stereotypes and "trespasses" onto personal attributes typically associated with the other party.

Finally, Experiment 6 assesses how familial, occupational, and political policy backgrounds can be used to shape opinion on public policy. This experiment was a simple vignette experiment fielded on the IGS California 2014 Poll.[3] This survey experiment, also fielded on a SSI sample, described two real female Democratic and Republican legislators in the California State Assembly and Senate working on educational legislation. By varying their justification for the policy stance based on their occupational background as educators, their experience with their children's education, or their background in educational policy, we can assess how different explanations can alter policy support, particularly with their partisan background.

[2]This experiment had 2289 respondents, with 56% Democratic respondents, 13.1% independent respondents, and 30.8% Republican respondents. All four manipulated variables were between subjects and manipulated factorially.

[3]$N = 1055$. The sample was comprised of 54.0% Democratic respondents, 11.0% independent respondents, and 27.3% Republican respondents. The experimental design was a fully factorial, between subjects 2x4 design, with two levels of the candidate party, and four possible policy justifications.

Partisan interactions in conjoint experiments

Because the experiments presented in Chapter 4 manipulated a wide variety of personal attributes, as well as party and policy information, they provide us with an ideal test of how both policy and biography can interact with party images. While typical conjoint designs are typically underpowered for examining interactions, a simple interaction between the presented candidate's party and the other experimentally-manipulated variables is relatively simple to examine.

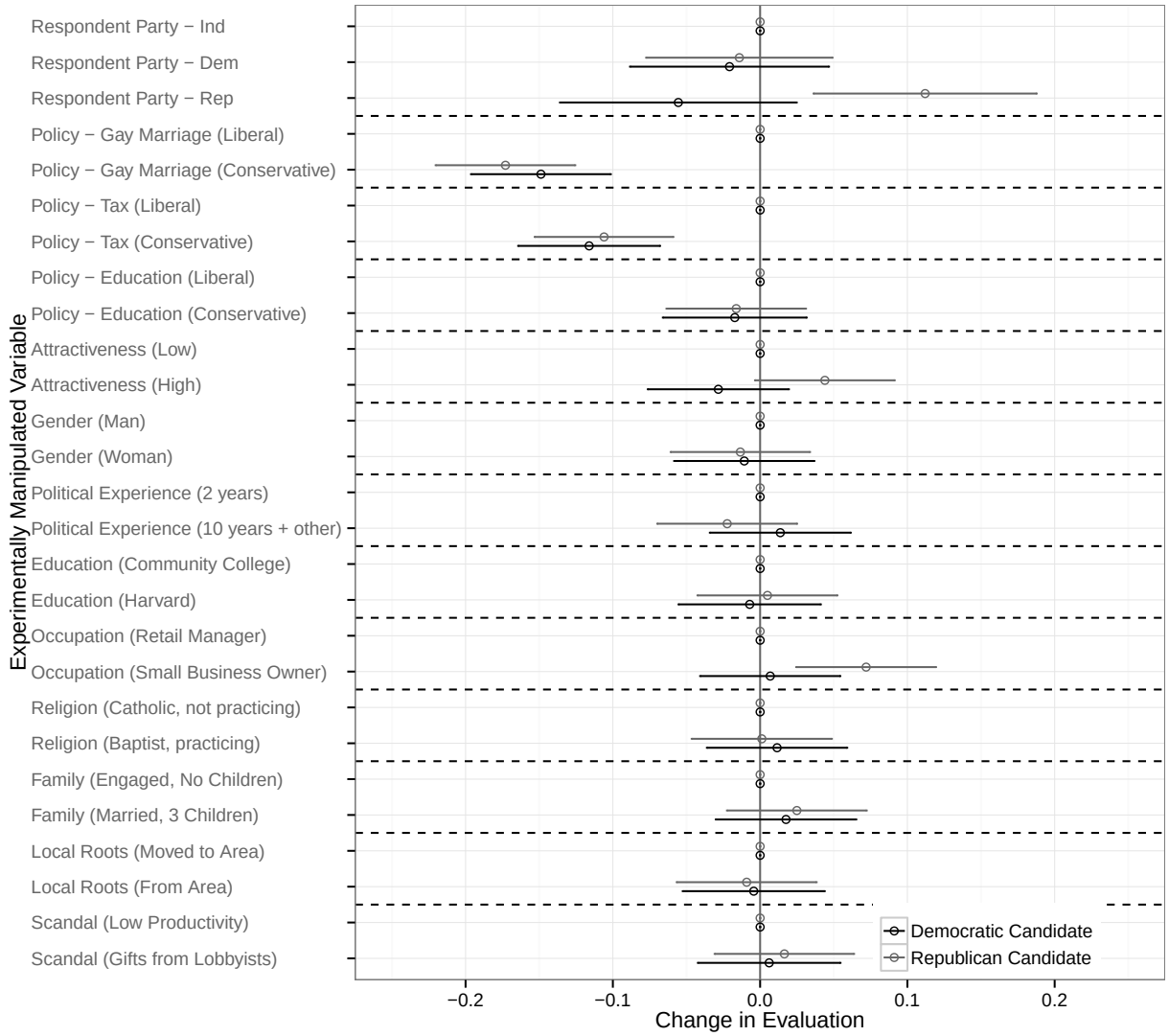


Figure 6.1: Experiment 1: Wave 1 evaluation by treatment and candidate partisanship
NOTE: Estimates from OLS regression, with all variables coded 0-1. 95% Confidence intervals shown.

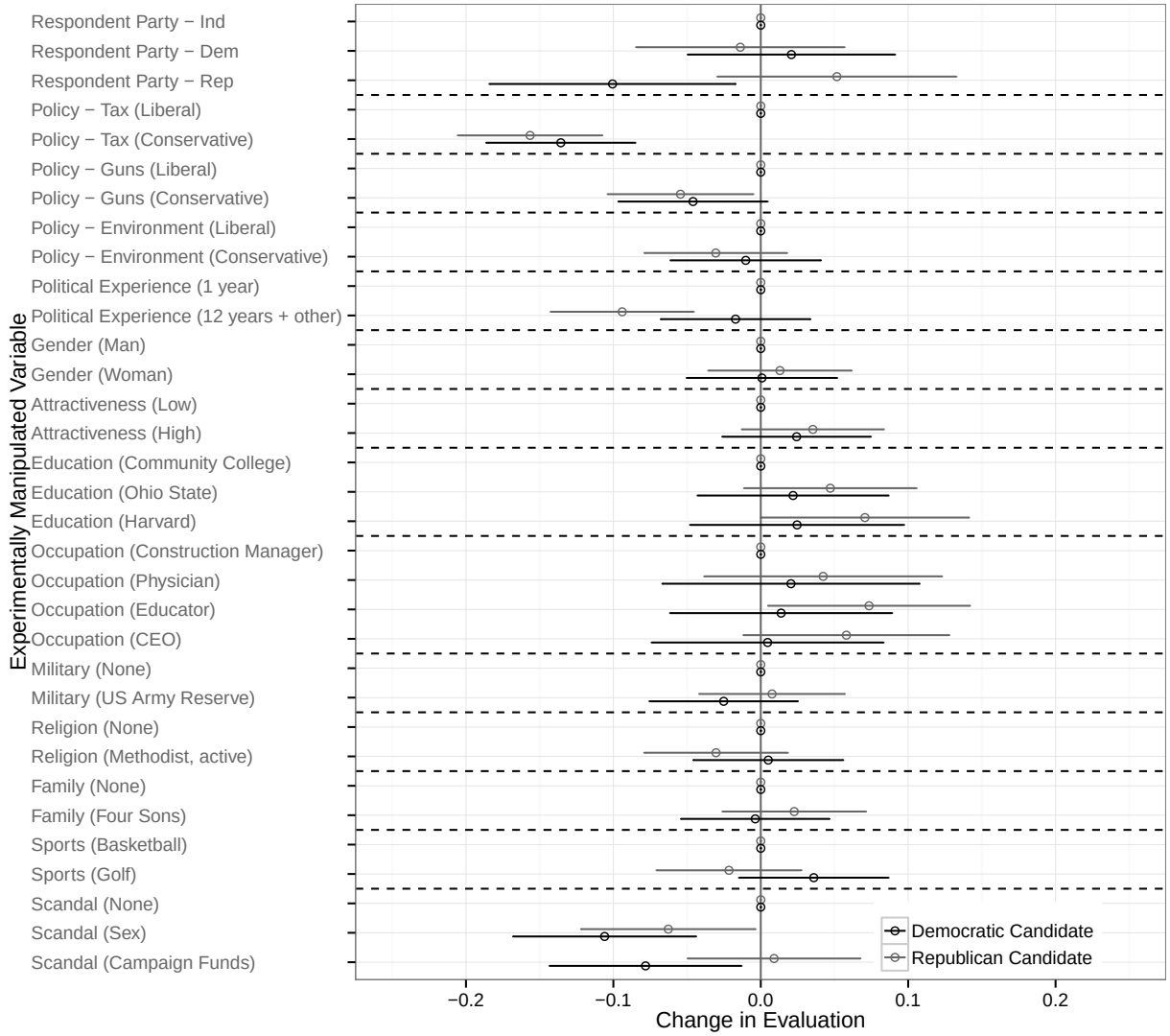


Figure 6.2: Experiment 2: Wave 1 evaluation by treatment and candidate partisanship
NOTE: Estimates from OLS regression, with all variables coded 0-1. 95% Confidence intervals shown.

Figures 6.1 and 6.2 display the effects of the experimentally manipulated personal and policy information, paneled by the partisanship of the presented candidate, on the overall evaluations of the candidate in two separate experiments.[4] What is relatively clear from both figures is that, for the most part, there appears to be little evidence of interactions between

[4]Figures 6.16 and 6.17 in the Chapter appendix display the same plots, but for evaluations in the second wave of these over-time experiments. These plots display more attenuated effects due to memory, but also may help reveal any patterns that may result from imperfect memories of the candidates, particularly if any stereotypic information is used in recall.

the candidate's party and his/her personal characteristics and policy positions. However, for a few manipulations, relatively clear interactions exist, largely in line with party stereotypes. For instance, in Experiment 1, Republican candidates who are small business owners are rated more favorably, while Democratic candidates receive no such benefit from their occupation. Additionally, it appears Republican candidates who are more attractive receive an additional benefit, while attractive Democratic candidates are evaluated slightly more negatively. In Experiment 2, having lengthy political experience is negative for Republican candidates, while it makes little difference for Democratic candidates. Additionally, there is a more positive benefit to playing golf for Democratic candidates than for Republican candidates, and it appears there is a more powerful negative reaction to scandal information for Democratic candidates than Republican candidates.

However, as discussed previously, respondents' partisanship can powerfully shape their reaction to this information, as their own partisan identity may lead them to view their own party's candidates more favorably. While a main effect of respondent partisanship is presented in Figures 6.1 and 6.2, we do not know if respondents' partisanship interacted with the information itself. For this reason, Figures 6.3 and 6.4 display the results for Experiment 1, broken apart by respondents' partisanship, with independent respondents omitted.[5] Figures 6.5 and 6.6 do the same for Experiment 2.

These figures reveal very interesting patterns by respondents' partisanship. In Experiment 1, Democratic respondents respond more positively to 1) attractive Republican candidates than attractive Democratic candidates, 2) to Republicans who are small business owners than Democratic candidates with the same attribute, and more negatively to 3) Republican candidates with local roots than Democratic candidates with local roots. For Republican respondents, fewer differences exist, partially due to the increased uncertainty of the estimates. However, Republican respondents respond more positively to Republican candidates with political experience than Democratic candidates with political experience, and more negatively to Republican candidates who are religious than Democratic candidates who are religious. Given partisan expectations for religiousity, and the negativity out-party political experience connotes, these patterns are not unexpected.

In Experiment 2, we find Democratic respondents react more negatively to Republican candidates with political experience, and more positively to Republican candidates who are CEOs. Additionally, they respond more negatively to religious Republican candidates than religious Democratic candidates. For Republican respondents, we see that they respond more positively to Democratic candidates with a conservative environmental policy proposal than Republican candidates with a conservative proposal. It is possible that this policy proposal, actually quite conservative, could be interpreted as moderate, producing this divergence, with respondents viewing it as somewhere between the actual two party positions. Additionally, Republican respondents react more negatively to Republican candidates with experience, and more positively to Democratic candidates who are more religious.

[5]Because of the smaller number of Republican respondents in Amazon Mechanical Turk samples, the uncertainty of estimates are much larger.

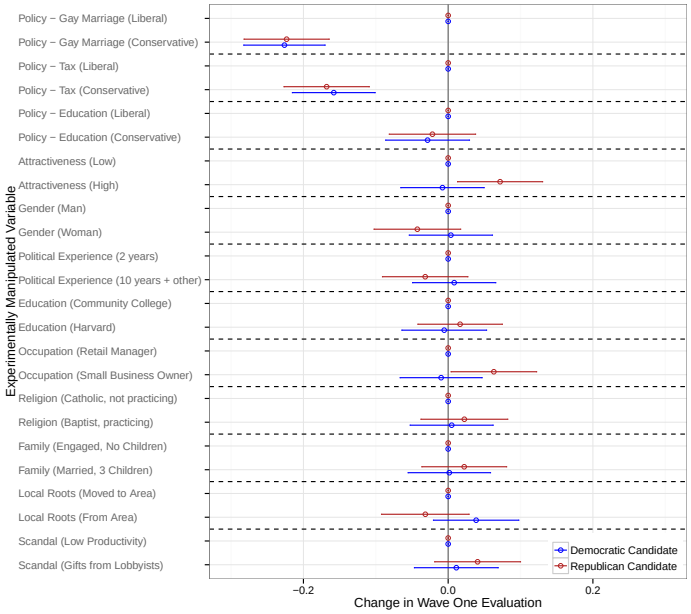


Figure 6.3: Experiment 1: Wave 1 evaluation by treatment and candidate partisanship, Democratic respondents only

NOTE: Estimates from OLS regression, with all variables coded 0-1. 95% Confidence intervals shown.

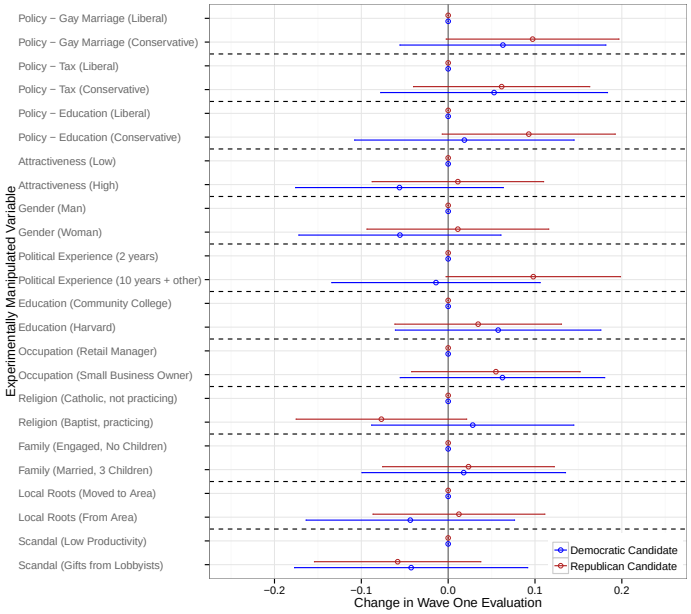


Figure 6.4: Experiment 1: Wave 1 evaluation by treatment and candidate partisanship, Republican respondents only

NOTE: Estimates from OLS regression, with all variables coded 0-1. 95% Confidence intervals shown.

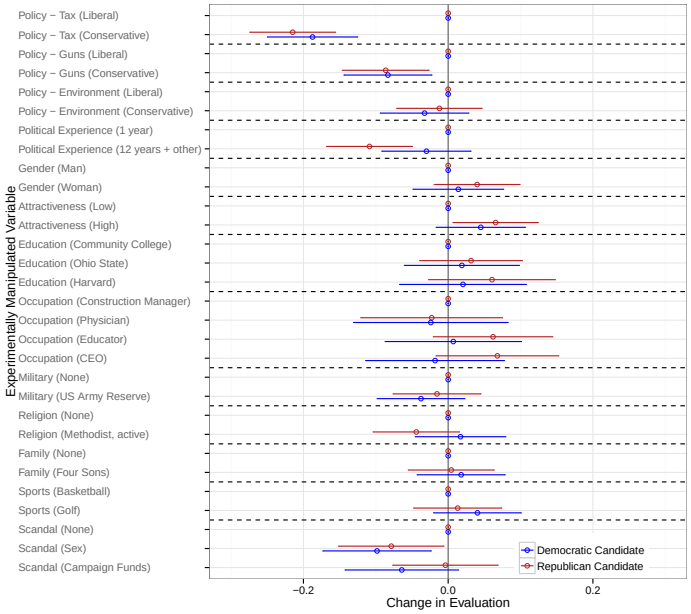


Figure 6.5: Experiment 2: Wave 1 evaluation by treatment and candidate partisanship, Democratic respondents only

NOTE: Estimates from OLS regression, with all variables coded 0-1. 95% Confidence intervals shown.

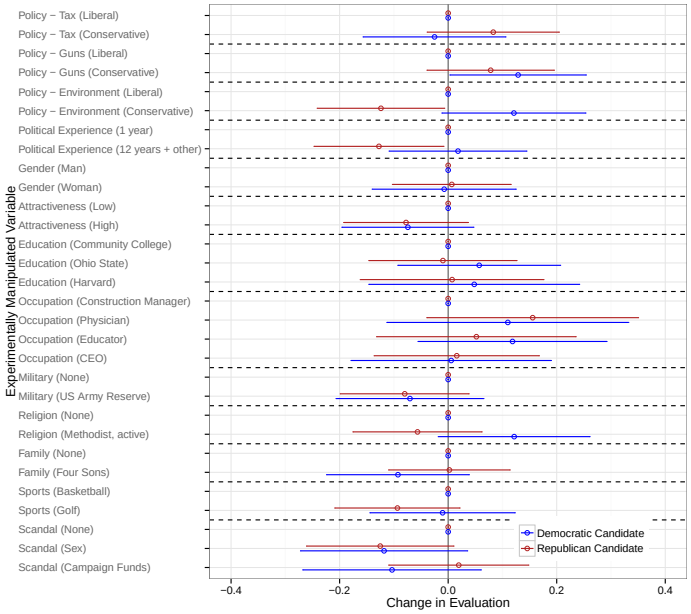


Figure 6.6: Experiment 2: Wave 1 evaluation by treatment and candidate partisanship, Republican respondents only

NOTE: Estimates from OLS regression, with all variables coded 0-1. 95% Confidence intervals shown.

Interestingly, except for environmental policy in Experiment 2, we see little interactive effect with the policy positions, suggesting few additional costs or benefits of violating partisan policy expectations. Furthermore, while ratings diverge by candidate and respondent party in several important places, it is clear that partisan stereotypes do not completely shape evaluations when large quantities of individuating information about the candidates is also presented.

What explains these patterns? One possible explanation is a divergence in the perceived ideology of the candidates based on the personal and policy information, beyond the ideological signal given by the candidate's party. For this reason, after the initial evaluation in Wave 2 of these experiments, respondents were asked how liberal or conservative they perceived the candidate to be.[6]

Figures 6.7 and 6.8 display the perceived ideology of the candidates by the experimental manipulations and the candidate party, with higher numbers (and therefore positive effects) indicating increased conservatism. From these, it is clear that the policy positions do, in fact, move the perceived ideology of the candidates, but they do not appear to do so differentially based on the candidate's party. Furthermore, we see little difference in ideological placement by respondent's party. In Experiment 1, we see attractive Republican candidates perceived as more conservative, while attractive Democratic candidates perceived as more liberal. We also see quite strong evidence of partisan stereotyping based on education, finding that highly educated Democratic candidates are perceived as more conservative, while highly educated Republican candidates are perceived as more liberal.

In Experiment 2, we see similar evidence of a lack of partisan interaction for many of the experimentally manipulated variables. Interestingly, however, the interaction of attractiveness with candidate party runs in the opposite direction as in the previous experiment, with attractive Democratic candidates perceived as more conservative than attractive Republican candidates. With respect to gender, we see that female Democratic candidates are perceived as more liberal, however female Republican candidates are not rated as more liberal than male Democratic or Republican candidates. When a candidate has a golf hobby, we see that it makes Republican candidates perceived as more liberal, while Democratic candidates perceived as more conservative, possibly owing to the relatively negative association of golfing with politicians.

While there is evidence in places of partisan stereotyping, it appears there is remarkably little, possibly because of the large quantity of individuating information about the candidate provided to respondents. For this reason, I now turn to two separate vignette experiments specifically designed to examine how violations of personal and policy party stereotypes change perceptions of a candidate.

[6]This was a standard 1-7 ideological placement question, with labels ranging from "Extremely Liberal" to "Extremely Conservative."

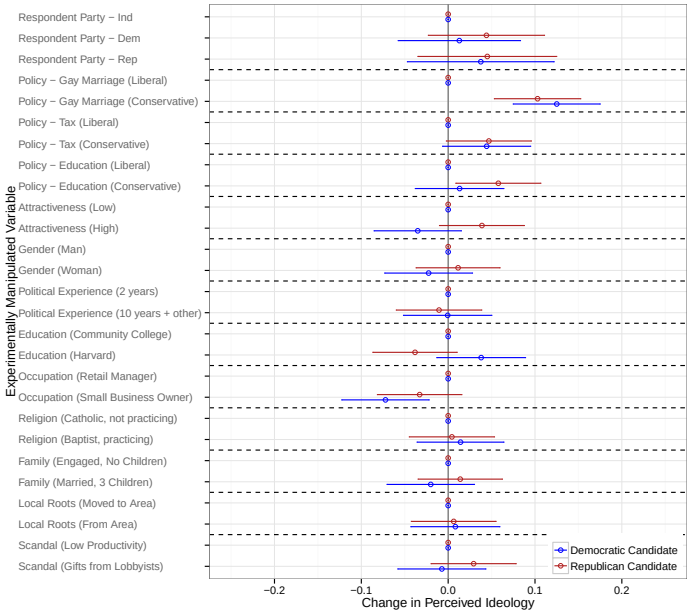


Figure 6.7: Experiment 1: Wave 2 perceived ideology by treatment and candidate partisanship

NOTE: Estimates from OLS regression, with all variables coded 0-1. 95% Confidence intervals shown.

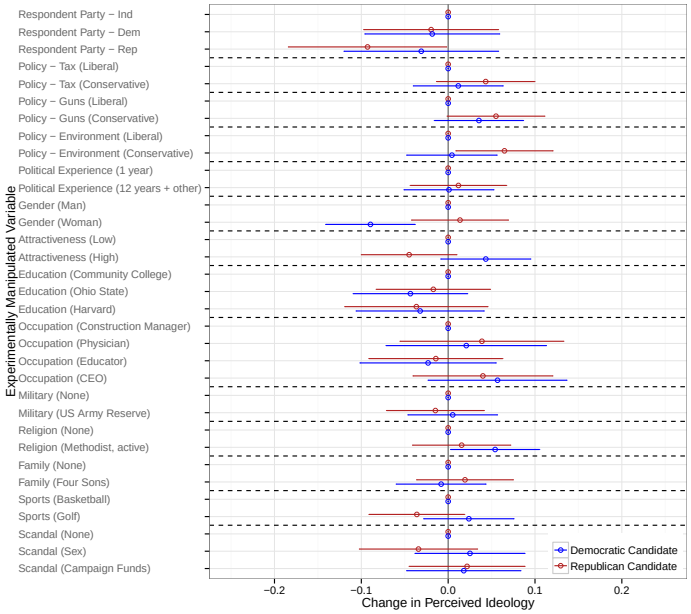


Figure 6.8: Experiment 2: Wave 2 perceived ideology by treatment and candidate partisanship

NOTE: Estimates from OLS regression, with all variables coded 0-1. 95% Confidence intervals shown.

Stereotyping partisan personal attributes

To assess how partisan personal stereotypes can change perceptions of a candidate, a short, two-screen vignette experiment was conducted on the 2015 IGS Poll. A candidate was described in several short paragraphs, alongside a photo of the candidate, manipulating the candidate's party, military service, occupation, and familial status. Then, evaluations of the candidate, their perceived ideology, and perceived typicality for a candidate in that party was assessed. The full vignette display can be seen in the Chapter appendix. To maintain consistency with labeling in earlier chapters, I refer to this experiment as Experiment 5 in tables and figures.

Figure 6.9 displays the main experimental results, paneled by the candidate's partisanship. While there is no effect of occupation for either candidate, we do see that Democratic candidates are better evaluated when holding a stereotypically Republican military service background, as well as a stereotypically Republican large family. That is, we see gains to "trespassing," or holding personal attributes typically associated with the other party.

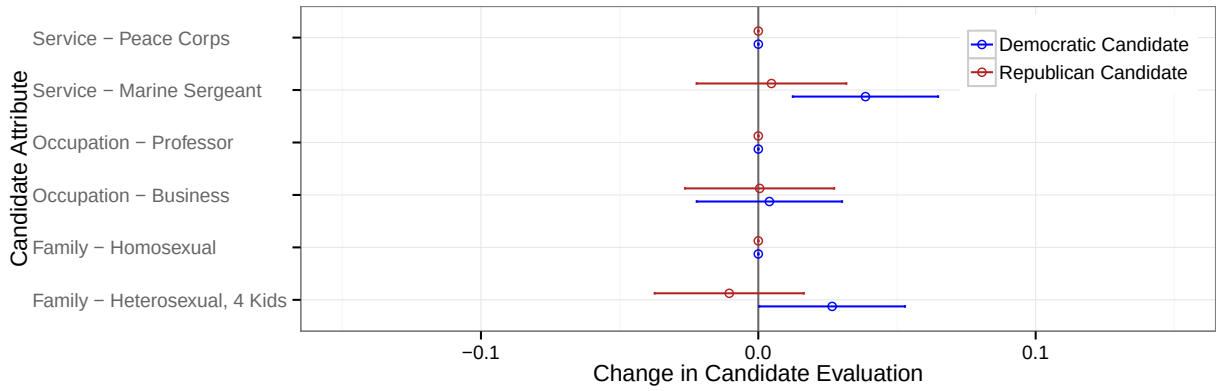


Figure 6.9: Experiment 5: Evaluation by stereotypical personal attributes and candidate party

NOTE: Estimates from OLS regression, with all variables coded 0-1. Omitted categories display no error bars. 95% Confidence intervals shown.

Of course, respondents of different partisan backgrounds may value some personal attributes as more positive than others. Figure 6.10 displays the experimental results additionally broken down by respondents' partisanship, with partisan leaners included with each party. Importantly, there does appear to be heterogeneity in reactions to the candidate's background by respondent partisanship. Particularly, we see that Democratic respondents respond more positively to the openly gay candidate, while Republican respondents respond far more positively to the heterosexual candidate with four children, and even more positively to Democratic candidates than Republican candidates with this familial description. Additionally, despite the higher uncertainty of the estimates due to smaller sample sizes for independent respondents, we see that they more positively react to Democratic candidates

with a business background than Republican candidates. All together, this suggests that, while there are gains to possessing personal attributes typically associated with the other party, these patterns do vary based on the partisanship of a respondent.

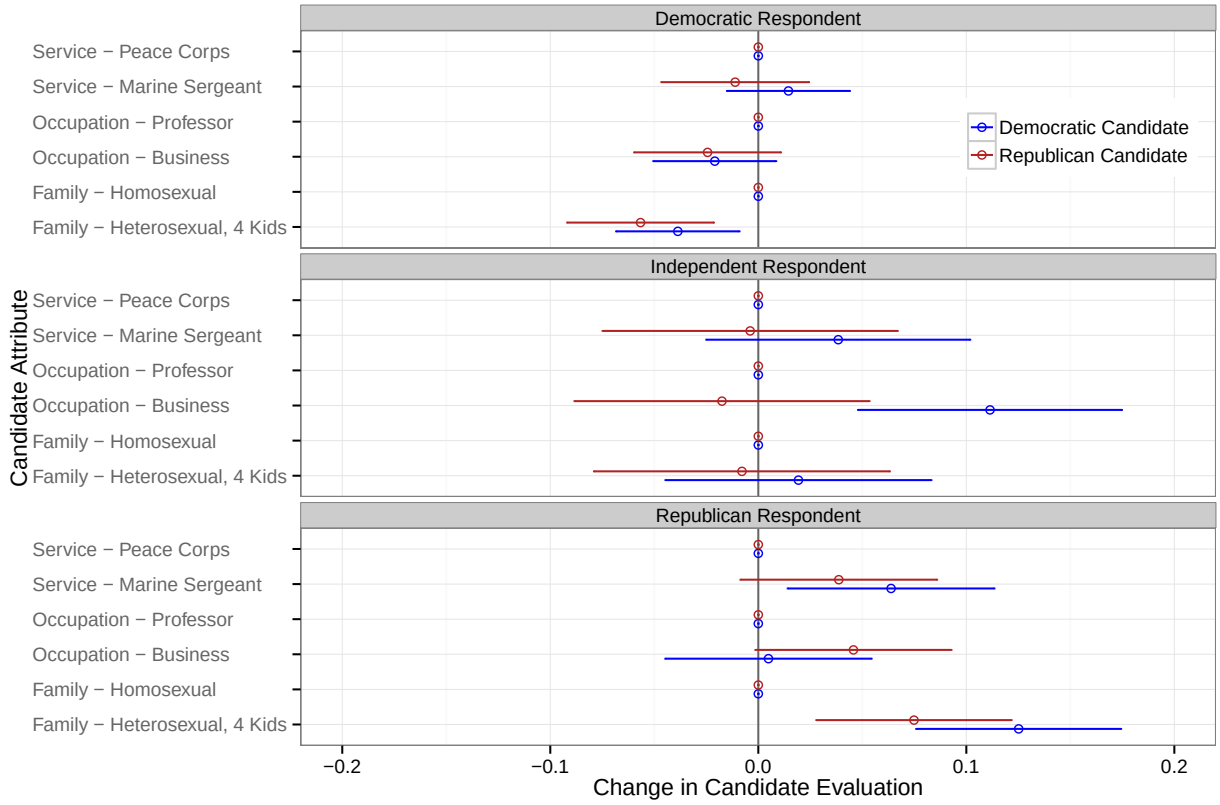


Figure 6.10: Experiment 5: Evaluation by stereotypical personal attributes, candidate party, and respondent party

NOTE: Estimates from OLS regression, with all variables coded 0-1. Omitted categories display no error bars. 95% Confidence intervals shown.

What is it that produces these effects? As before, it is possible that the personal background of the candidate signals a more liberal or conservative ideology. As Figure 6.11 shows, the personal attributes do indeed lead to differences in the perceived ideology of the candidate. Notably, the openly gay candidate is perceived as far more liberal than the heterosexual candidate with four children, with no interactive difference by the candidate's party. With respect to military service, we see that serving as a Marine sergeant leads to a greater conservative shift for Democratic candidates than Republican candidates.

On the following survey screen, respondents were asked how typical of a Republican or Democratic candidate they perceived the candidate to be. As Figure 6.12 displays, the intended manipulations clearly worked, with the family manipulation by far the most powerful. That is, Republican candidates with military service were perceived as more typical than

Democratic candidates with military service. While not statistically significant, Republican candidates with a business background were perceived as more typical than Democratic candidates with a business background. Finally, Republican candidates with four children were perceived as very typical of their party, while there was no change in typicality for this attribute for Democratic candidates.

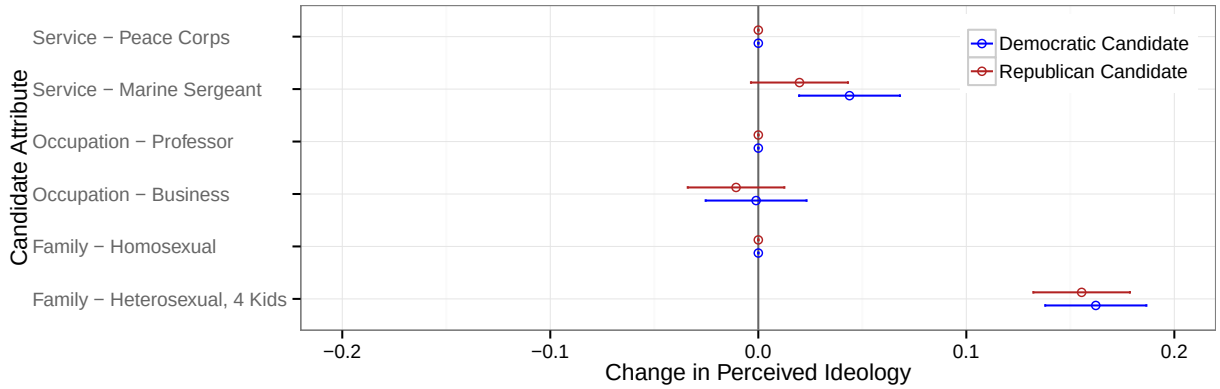


Figure 6.11: Experiment 5: Perceived ideology by stereotypical personal attributes and candidate party

NOTE: Estimates from OLS regression, with all variables coded 0-1. Omitted categories display no error bars. 95% Confidence intervals shown.

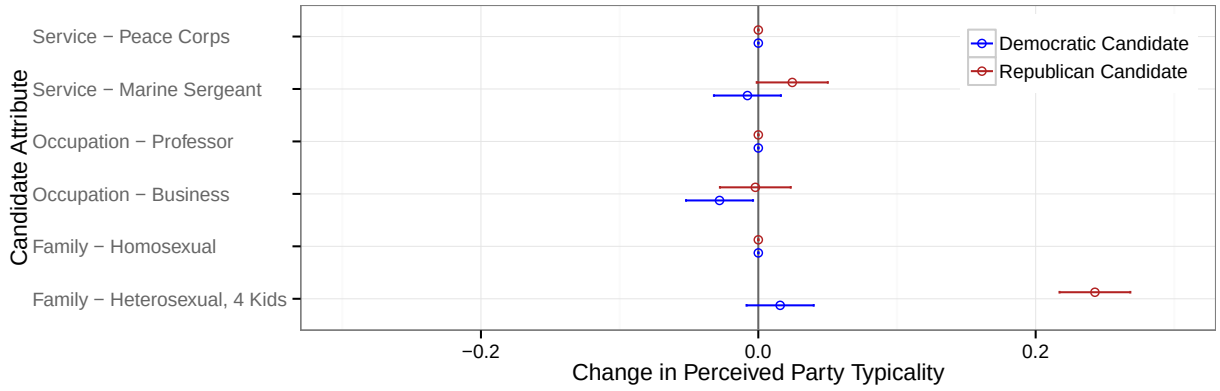


Figure 6.12: Experiment 5: Perceived party typicality by stereotypical personal attributes and candidate party

NOTE: Estimates from OLS regression, with all variables coded 0-1. Omitted categories display no error bars. 95% Confidence intervals shown.

Selling policy expertise with partisan and personal stereotypes

The previous experiment provides quite strong evidence that partisan personal stereotypes exist, and that voters differentially reward candidates based on their personal background and party. But what about with respect to policy? Candidates in policy debates often explain or justify their policy position based on their experience and their personal background. Do voters assume certain candidates have particular policy competencies based on their party?

To answer these questions, a simple vignette was provided to respondents of the IGS 2014 Poll about actual education policy proposals in the 2013-2014 session of the California state legislature. These pieces of legislation, one from a Democrat and one a Republican, were largely similar in scope, dealing with relatively mundane K-12 educational teacher training proposals. Additionally, authors of both pieces of legislation were female, had several children, were previous educators, and had served on educational committees in the legislature, and on local school boards. Because of these similarities, vignettes were able to be constructed that were essentially constant, except for manipulations of the partisanship of the candidate, as well as the justification given to the policy proposal. Four possible justifications were randomly assigned; the first, a justification based on the policy itself, served as the comparison condition.[7] This justification merely stated that the policy was worth passing. Second, the legislator could justify the legislation by referencing their former occupation as an educator. Third, the legislator could justify the proposal by referencing their school-aged children. Finally, the legislator could justify the proposal by discussing their background working on education policy in either the California State Assembly or Senate. After the vignette, respondents were asked for their level of support for the legislation on a slider scale. To maintain consistency with prior labeling, I refer to this study as Experiment 6 in tables and figures.

The raw aggregate effects of these justifications on policy support, broken down by the partisanship of the candidate, can be seen in Figure 6.13. First, there is no main effect of any of the justifications; no justification led to higher support for candidates of both parties. However, for the Democratic legislator, the justification based on their family background and children led to significantly higher support than all three other justifications. Just as we saw in the previous experiment, Democratic candidates referencing their familial background appeared to receive an increase in support.

Figure 6.14 displays the mean policy support by candidate party, justification, and paneled by respondent party. As before, we do see a number of important differences across respondent party. Notably, all respondents were more favorable towards the education policy than unfavorable, even when proposed by a politician of the opposite party. For Democratic respondents, policy support was higher when proposed by a Democratic candidate with occupational or family justifications. However, there was no statistically significant difference between policy support when a policy or experience-based justification was given by candidates of either party. In fact, the experience justification from a Republican candidate

[7]The full text of all these vignettes can be seen in the Chapter appendix.

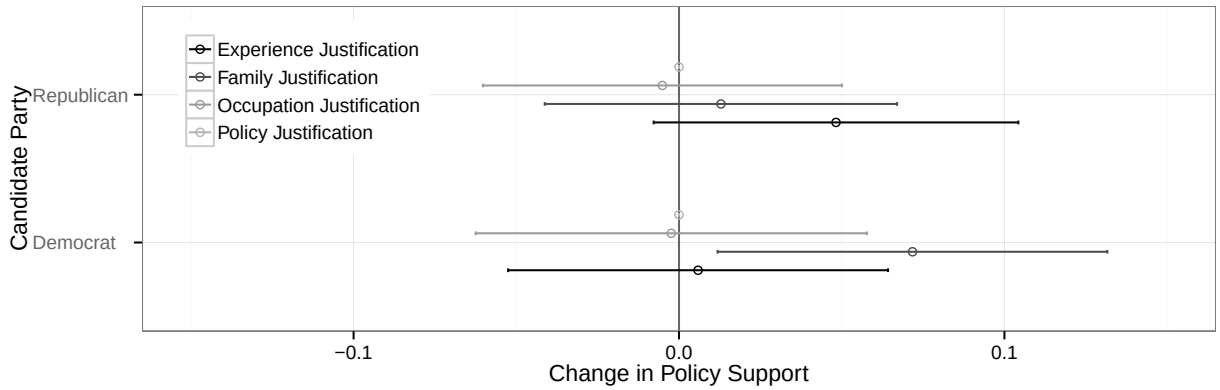


Figure 6.13: Experiment 6: Policy support by personal justification and candidate party
NOTE: Estimates from OLS regression, with all variables coded 0-1. A policy justification is the omitted category and therefore displays no error bars. 95% Confidence intervals shown.

makes the policy support indistinguishable from any of the justifications given by a Democratic candidate, suggesting this justification is quite effective for Republican candidates.

For Republican respondents, we see far more pronounced effects of party, with Republican respondents far more favorable to the policy when presented by a Republican politician than a Democratic politician. However, when the policy was supported by a Democratic candidate and justified with the candidate's family, the level of support was indistinguishable from those levels for Republican candidates, no matter the justification. Together, this suggests that while familial policy appeals are effective for Democratic candidates, appeals based on policy experience for Republican candidates, particularly in the domain of education, can also be effective.

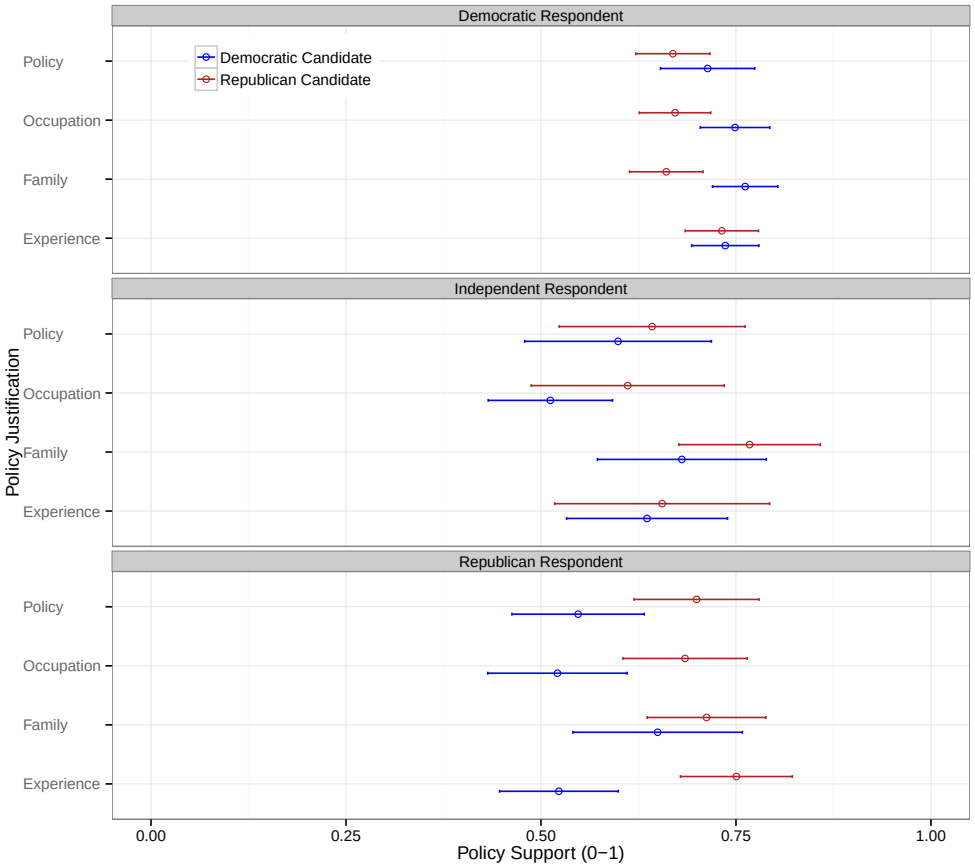


Figure 6.14: Experiment 6: Policy support by personal justification, candidate party, and respondent party

NOTE: Raw means shown, with all variables coded 0-1. 95% Confidence intervals shown.

6.3 Discussion

While the four experiments presented offer some evidence that partisan stereotypes can interact with individuating personal and policy information about candidates in order to shape evaluations of both candidates and policy, they also provide relatively widespread evidence of the power of personal and policy information, regardless of party. From the results of the two over-time conjoint experiments presented in Chapter 4, we see that there are remarkably similar effects of personal and policy information about the candidate regardless of the candidate's party. While some information – such as political experience, scandal, golfing, business ownership, and attractiveness – produce differential effects by candidate party, there are many places where we might expect an interaction between party stereotypes and the particular information presented where one does not exist. Beyond overall evaluations, we also see that particular information can connote a more liberal or conservative ideology

of a candidate, particularly when the candidate's partisanship does not match the policy stance or personal background.

Several reasons may account for the lack of partisan interactions for much of the information. First, it is possible that the violations of expectations of respondents was not strong enough to produce a positive or negative response to the candidate. Second, it is possible that there are both gains to trespassing as well as gains to bolstering one's party image, resulting in the oft-hypothesized effects in the ownership literature largely cancelling out in the aggregate. Finally, it is possible that the wide variety of information presented about the candidate provided so much detail to respondents that it minimized the influence of the partisan stereotype.

In Experiment 5, we see that particular personal attributes – military service, occupation, and family and sexual orientation – do have clear partisan associations and do result in differential evaluations of a candidate when they are against partisan expectations. Particularly, Democratic candidates with military experience receive a more positive evaluation than Republicans with similar experience. Additionally, Democratic candidates with four children are more highly evaluated than Republicans with the same quality, suggesting that there are gains to "trespassing" on biographical attributes by possessing qualities out of line with the general stereotype of one's party. Notably, these differences do vary by the respondent's partisanship, suggesting that partisans do, in fact, value different qualities, and infer an ideological signal from the personal information. That is, some personal qualities may connote strength of partisanship, or possibly influence a voter's certainty of that candidate's commitment to their party.

Finally, in Experiment 6, I find that policy justifications based on the personal backgrounds of candidates can vary in their effectiveness depending on a candidate's party. Using policy information about real education legislation from real candidates, I find that a Democratic candidate's appeal based on her family is more effective than other justifications for a policy proposal based on her occupational background or policy expertise. For Republican candidates, I find suggestive evidence that justifications based on policy expertise are more effective than personal appeals. While not conclusive, these findings suggest that within the realm of educational policy, partisan stereotypes may guide particular assumptions about a candidate's background and their perceived policy expertise.

On balance, therefore, I find both that effects of policy and personal information can be contingent upon the partisanship of a political candidate, and in many domains, effects are consistent no matter the candidate's party. While seemingly contradictory, these results suggest that, while partisan stereotypes and identity effects may be very powerful, they do not always guide evaluations in the presence of individuating information. While candidates may benefit somewhat from "filling in gaps" in expectations by possessing qualities often associated with candidates of the other party, it is clear this strategy does not necessarily always work nor does it override the independent effects of personal and policy information about that candidate.

6.4 Chapter appendix

Experimental materials

Experiment 6 - IGS Poll 2014

Democrat - Occupational justification

SB 1060, An act to amend Section 44277 of the Education Code, relating to school employees was proposed in the California Legislature this session.

This act would provide teachers, administrators, and paraprofessional educators with additional programs for professional development.

As a former high school history teacher, Carol Liu (Democrat - 24th State Senate District), the acts author, argues that it is crucial we continue to provide opportunities for our educators to continue their training so that they can better educate the states children. Opponents argue that it places an unfair burden on local school districts for implementation.

Democrat - Family justification

SB 1060, An act to amend Section 44277 of the Education Code, relating to school employees was proposed in the California Legislature this session.

This act would provide teachers, administrators, and paraprofessional educators with additional programs for professional development.

As a mother of three, Carol Liu (Democrat - 24th State Senate District), the acts author, argues that it is crucial we continue to provide opportunities for our educators to continue their training so that they can better educate the states children. Opponents argue that it places an unfair burden on local school districts for implementation.

Democrat - Policy justification

SB 1060, An act to amend Section 44277 of the Education Code, relating to school employees was proposed in the California Legislature this session.

This act would provide teachers, administrators, and paraprofessional educators with additional programs for professional development.

As a chair of the Education Committee, Carol Liu (Democrat - 24th State Senate District), the acts author, argues that it is crucial we continue to provide opportunities for our educators to continue their training so that they can better educate the states children. Opponents argue that it places an unfair burden on local school districts for implementation.

Democrat - Experience justification

SB 1060, An act to amend Section 44277 of the Education Code, relating to school employees was proposed in the California Legislature this session.

This act would provide teachers, administrators, and paraprofessional educators with additional programs for professional development.

As an expert on education policy, Carol Liu (Democrat - 24th State Senate District), the acts author, argues that it is crucial we continue to provide opportunities for our educators to continue their training so that they can better educate the states children. Opponents argue that it places an unfair burden on local school districts for implementation.

Republican - Occupational justification

AB 430, An act to add Article 3.3 to the Education Code, relating to teachers was proposed in the California Legislature this session.

This act would establish the Teacher Professional Growth Plan, which provides standards for educators to encourage professional development.

As a former educator, Kristin Olsen (Republican - 12th Assembly District), the acts author, argues that it is crucial we continue to ensure our educators are properly trained and evaluated so that they can better educate the states children. Opponents argue that it places an unfair burden on local school districts for implementation.

Republican - Family justification

AB 430, An act to add Article 3.3 to the Education Code, relating to teachers was proposed in the California Legislature this session.

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Legislation text (Not shown to respondents):
Liu: SB 1060 `http://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201320140SB1060`
Olsen: AB 430 `http://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201320140AB430`

Support question: Do you support or oppose this piece of education legislation in the California legislature? [0-100 slider scale]

Experiment 5 - IGS Poll 2015

Four variables were randomized, each with two levels:

Party Text:

- Republican
- Democrat

Military Text:

- served in the United States Marine Corps, rising to the rank of Sergeant.
- volunteered in the Peace Corps, serving for several years in West Africa.

Family Text:

- is a proud father of four young children with his wife, Meghan.
- is openly gay, and is proudly married to his husband, Charles.

Occupation Text:

- owns his own successful local business, which has expanded to over 400 employees under his leadership.
- teaches at a local university, primarily studying and teaching issues related to social programs and public policy.

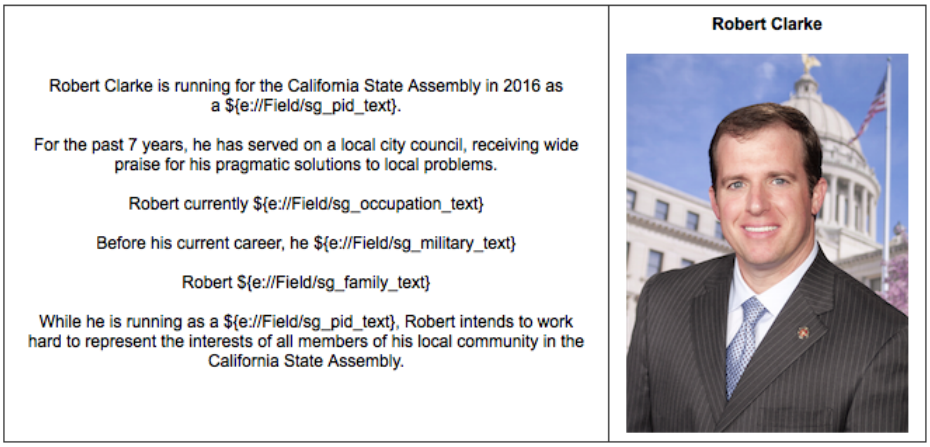

Figure 6.15: Experiment 5 - IGS Poll 2015 vignette display

Evaluation question: We're interested in your overall feelings towards Robert Clarke. Please indicate the extent to which you feel favorable or unfavorable toward him with the slider below. [0-100 slider scale]

Ideology question: Please indicate how liberal or conservative you think Robert Clarke is. [1-7 slider scale]

Typicality question: Robert Clarke is a [party_text]. Compared to other [party_text]s, how typical do you think Robert Clarke is? [0-10 slider scale]

Additional analyses

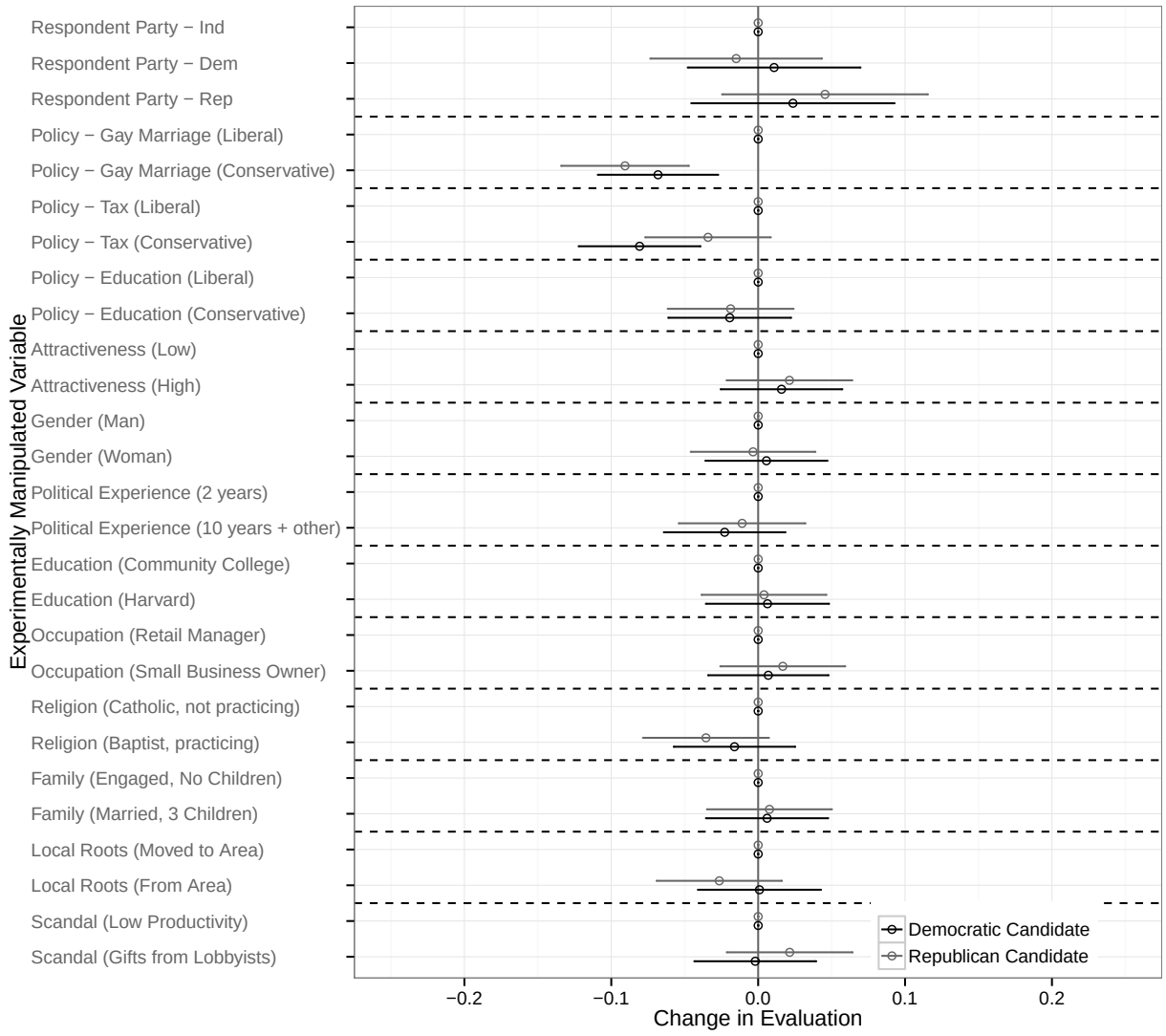

Figure 6.16: Experiment 1: Wave 2 evaluation by treatment and candidate partisanship

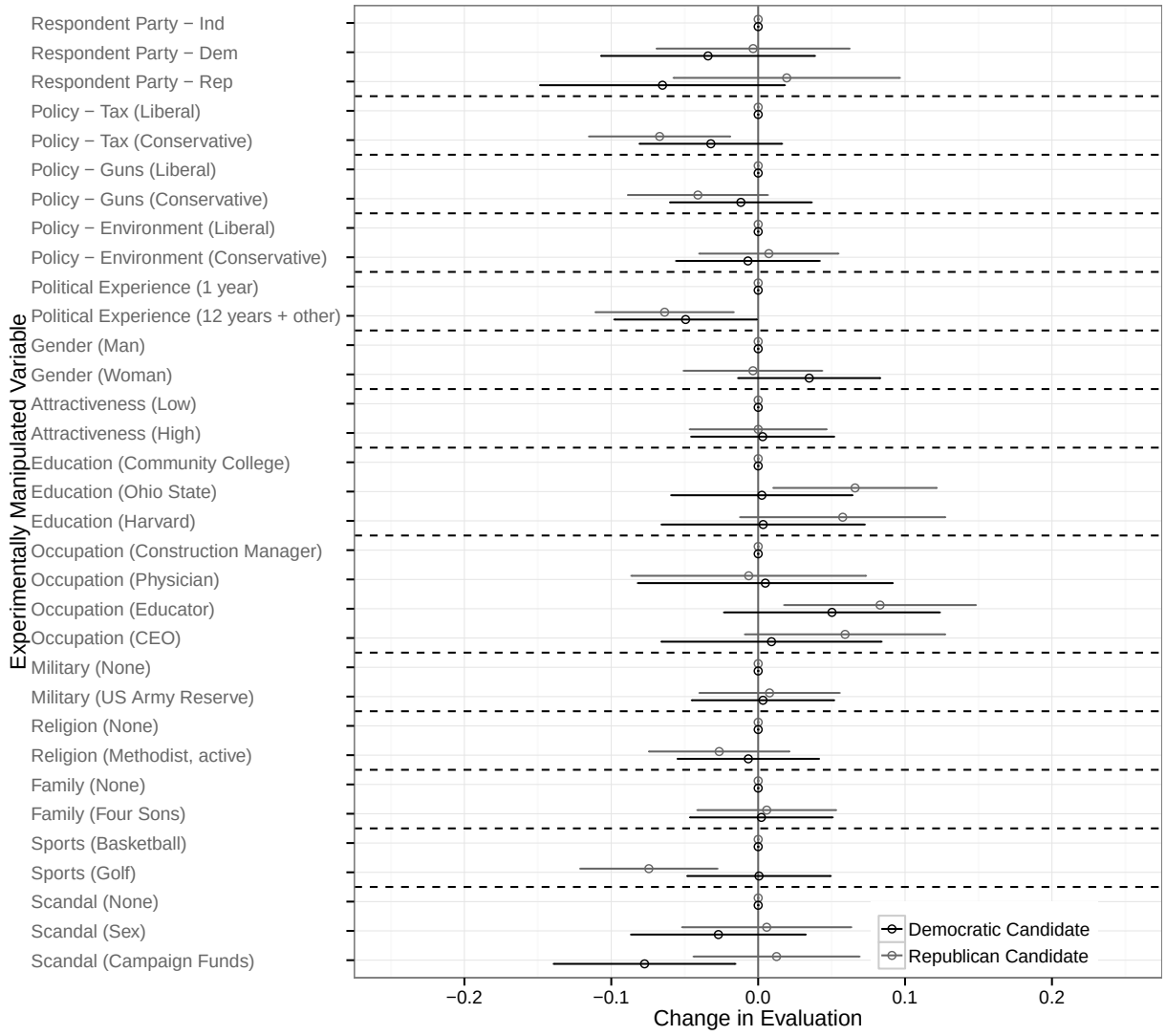

Figure 6.17: Experiment 2: Wave 2 evaluation by treatment and candidate partisanship

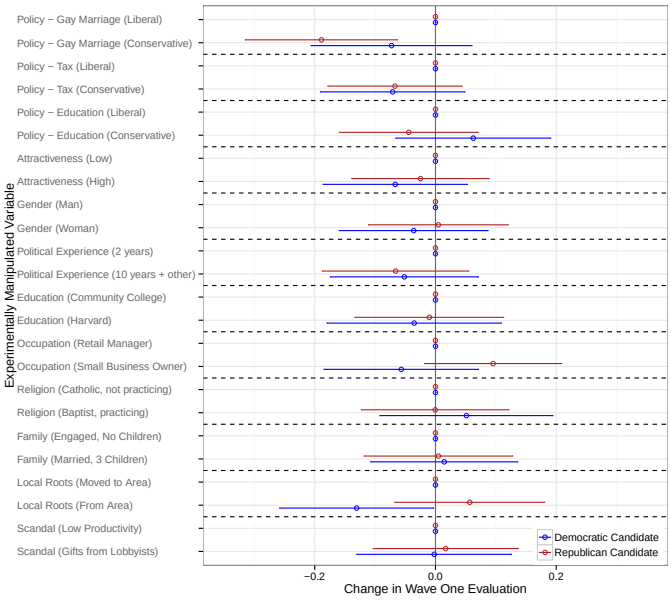

Figure 6.18: Experiment 1: Wave 1 evaluation by treatment and candidate partisanship, independent respondents only

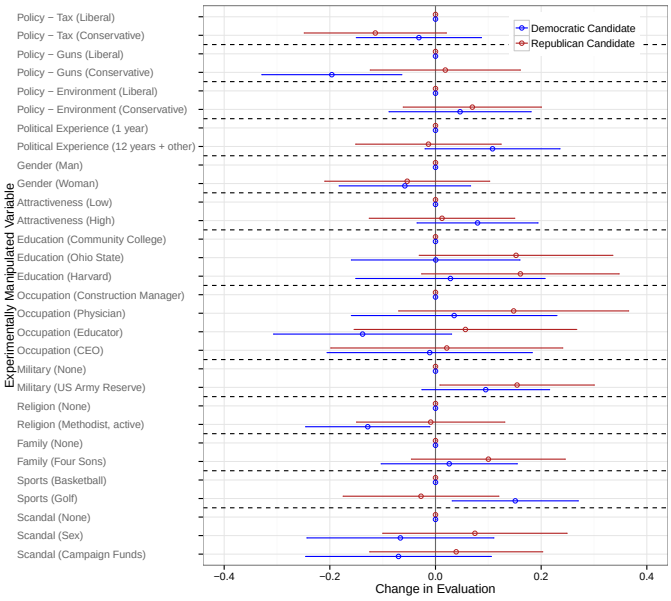

Figure 6.19: Experiment 2: Wave 1 evaluation by treatment and candidate partisanship, independent respondents only

Chapter 7

Biography, candidates, voters, and democratic accountability

In any representative democratic system, the behavior of political candidates and the behavior of voters are intimately tied together. Who politicians are – their education, their occupation, their family, their roots – affects not only their behavior, but the behavior of voters, as well. In this concluding chapter, I discuss what we have learned, how this relates to previous literature, and limitations and avenues for future work. Each of the four empirical chapters in this dissertation provide us with a slightly different view into how politicians' biographies can shape the electoral connection and democratic accountability, particularly in the context of United States congressional elections.

In Chapter 3, using a dataset that, for the first time, captures extensive biographical information about both winning and losing candidates for congress, we find that many biographical traits are distinctly associated with candidates of the two political parties, as well as with electoral success. Given the larger number of female, college-educated, attorneys, and Jewish candidates in the Democratic party, we might expect this to influence both personal and policy stereotypes about the Democratic party. With Republican candidates more likely to be married, have children, be medical doctors, business executives, have a military background, be Protestant and evangelical, and more likely to belong to more local civic organizations, we see how candidates from the two parties diverge in their typical backgrounds. Whether these associations are due to candidate selection based on party officials, differential resources among those within the party, or purely based on the personal partisan affiliations of different types of people, these personal differences across candidates from the two parties can lead to lasting party stereotypes in voters' minds, and lasting changes in the type of issues the two parties consider.

Even when controlling for a variety of factors that typically predict electoral success, we find that candidates who are currently married, possess law degrees or business executive experience, are currently politicians in a lower office, or belong to more local and national civic organizations are all more likely to win election. These characteristics provide us with a much richer picture of what we often merely describe as "candidate quality," typically

measured solely by whether or not a candidate has previously held elected office. While this captures some of these differences, it is clear that the types of candidates who are more successful often have a constellation of other key attributes.

Given the relatively structured nature of candidate biographies, employing automated analysis of biographical text leads us to many of the same conclusions as the hand-coded biographies. Certain educational, occupational, religious, and civic words appear differentially among candidates from the two parties, as well as among winners.

When we examine how candidates present themselves through costly television advertising, we see patterns that largely resemble the overall distribution of candidates' biographies. That is, it appears that, in the aggregate, candidates are largely presenting the attributes that they hold, not distorting their personal presentation far from the truth. We also find that personal presentation is prevalent; Even in ads that have a primary focus on policy differences between candidates, these ads often feature relevant personal information about a candidate to bolster a claim or appear qualified. I find that Democratic candidates advertise their occupational background more than Republican candidates, while Republican candidates advertise their family far more than Democratic candidates, particularly by showing them visually in ads. Interestingly, Democratic candidates talk about their parents and grandparents, yet Republicans display their spouses and children more commonly. These differences likely partially reflect the different issues that candidates from the two parties discuss, with Republicans more likely to highlight family values, while Democrats are more likely to highlight social programs for the elderly. Additionally, I find that Democratic candidates are more likely to make references to local places, and more likely to tie themselves to a district or state by also visually showing more constituents in their advertising.

Unsurprisingly, we also find that House candidates are more likely to promote themselves personally than Senate candidates. Given expectations for the House to be "of the people," it makes sense that House candidates present their occupation and their family more than candidates for the Senate. I also find that personal presentation is far more common, across all types, in primary election season. Given candidates at that time are running against candidates with very similar policy platforms, it makes sense the candidates highlight their differences on personal grounds, as well as spend more time introducing themselves positively.

In Chapters 4-6, I highlight a variety of mechanisms that shape how voters respond to the biographies of politicians, as well as gauge the overall impact of this information. Chapter 4 provides us with empirical tests of the impact of a variety of personal, policy, and party information on voters' cognition about candidates. Through two multi-wave experiments, we gain measures of the relative impact of the candidate attributes, as well as their subjective importance to voters and the memorability of the information. Because of the structure of these studies, we can also gain insight into their interrelationship - how both the memorability and importance of information to voters can shape their impact.

I find that while, unsurprisingly, the impact of all information fades over time, several personal attributes are impactful for voters' evaluations of candidates, even alongside powerful party and policy cues. While policy stances on easy issues – tax policy, gun control, and gay marriage – shape evaluations of candidates, small business background, religion,

political experience, and scandal can all affect evaluations. Additionally, the impact of this information varies by respondents, and not just based on respondents' own party or policy position. That is, it is clear different respondents value different attributes in their decisions more than others. However, if we assess the subjective importance each voter says they place on a given policy domain or personal attribute when deciding whom to vote for, we find essentially no correspondence between what voters say is important and its actual impact on their decision.

These two experiments also provide novel tests of three different types of memory – open-ended recall, recognition accuracy, and recognition of the valence of a particular class of information. I find that recall of information about candidates is dominated by the use of personality trait words, as well as descriptors of "types" of candidates, such as party, ideology, race, gender, family, political experience, and occupation. After devising careful tests of memory accuracy to get around issues regarding question comparability and guessing corrections, I find that while memory of the candidates fades over a week after presentation, a remarkable number of characteristics about a candidate remain in memory. As with open-ended recall, party, ideology, and other core descriptors of candidates are more prevalent in memory, as well as salient information like scandal.

Perhaps one of the most important findings with respect to memory is that while the actual information may fade and respondents no longer accurately recognize it, they appear to retain a valence for that particular type of information. That is, if a respondent encountered a candidate with a very poor educational background, he or she may forget the exact details of the candidate's education, but remember up to a week later that they felt negative about the candidate's education or intelligence. Finally, as expected, many of the effects of the information on evaluations are contingent upon respondents remembering the valence of a particular type of information.

Given that electoral campaigns unfold over time, Chapter 5 presents two three-wave experiments that assess how the order of presentation of information about politicians may change its impact. By presenting both positive and negative and personal and policy information separately, we can gauge whether certain types of candidate attributes are more susceptible to fading in memory, and which provide more powerful anchoring effects with respect to evaluations. In line with large bodies of evidence from observational work, I find strong evidence for recency – that is, the most recent information is most impactful – yet, there are stronger effects of recent information for negative information than positive information, particularly negative personal information. Additionally, I find that respondents seem to retain personal information longer in memory than policy information.

Finally, Chapter 6 allows us to examine how variability in personal background among Democratic and Republican candidates can shape evaluations. As Chapter 3 described, the types of candidates who are Republicans and the types of candidates who are Democrats are quite different. Given these party differences, and evidence from other literatures on party images, stereotypes, and ownership, evidence from two new experiments and the experiments presented in Chapter 4 allow us to assess whether certain pieces of candidates' biographies have differential impact depending on whether they are in line with party stereotypes.

I find that for some biographical information, particularly family and military service, its effects are indeed contingent upon the information being in line or out of line with party stereotypes. For example, being a small business owner has a larger positive impact in evaluations for Republican candidates than Democratic candidates, and overall, Republican respondents are more strongly affected by the party label. Additional political experience is a more strongly negative cue for Republican candidates, yet makes no difference for Democratic politicians. Both a golf hobby and the presence of scandal are also more strongly negative for Democratic politicians than Republican politicians, even across respondents of different parties.

It is clear that violating some personal stereotypes of the parties can also be beneficial. I find that Democratic candidates who have served in the Marine Corps and have a large family receive a positive boost in evaluations, while no such boost exists for Republican candidates with the same background. Additionally, this increase in evaluations is largest for those that appear to value family background the most – Republican respondents. Additionally, these personal attributes sent ideological and partisan strength signals to respondents.

Finally, I show some evidence that biographical justifications for public policy can actually move opinion about that policy. For a Democratic candidate justifying their stance on educational policy issues, I find that respondents more positively respond to a justification based on the candidate's own family than other justifications. For Republican candidates, I find no difference, yet suggestive evidence that appeals to policy expertise are more effective. Together, this evidence suggests that policy explanations and justifications can vary in their effectiveness not just based on one's personal background, but by filling in gaps in competencies or stereotypes of the party image.

By using three new observational datasets – all communications from a sample of 61 2012 US House races, systematized biographies for all 2008-2014 Republican and Democratic congressional candidates, and television advertising data for 2008-2012 congressional candidates – we can learn quite a bit about the role of biography from candidates' perspectives. Additionally, we gain insight into what types of information politicians choose to present to voters, allowing us to carefully craft tests of this information in more controlled experimental settings. With four panel experiments and two other experiments, we can gauge the overall effect of a wide variety of biographical information alongside policy and party information, as well as how several other important factors related to biographical presentation can condition their impact.

Of course, this project does not answer all questions regarding the role of candidates' biographies in electoral politics. Many questions about the changing role of biography over time, the role of more precise biographical information for candidates, as well as advertising and promotional materials more broad than just paid television advertising go largely unanswered. Yet, this project provides us with the first evidence of its kind of the overall magnitude of personal promotion by congressional candidates, as well as how the backgrounds of these candidates varies systematically by party and their electoral success. While previous work attempting to examine the role of candidates in electoral choice has often operationalized biography merely as perceived personality by voters, this project is one of

the first to look at the more objective, yet mutable, biographical backgrounds that undergird many of these trait inferences by voters.

Overall, this project paints a somewhat positive picture of voters' ability to select their representatives. I find that, while biographical information is impactful, it is only one of many things that voters consider in their evaluations of candidates. Furthermore, given the relatively close correspondence between who candidates actually are and how they advertise themselves, there is little evidence voters are being misled. While there is little correspondence between the subjective weight voters place on information and its impact at the individual level, there is a stronger correspondence in the aggregate.

Literatures on congressional elections have, for far too long, relied on crude measures of candidate *quality*. Rather, I present a more comprehensive picture of *candidate qualities*, or biography, how it descriptively varies across candidates, how it is advertised and related to electoral success, as well as extensive evidence about the role biographical attributes play in the minds of voters. As Congressman D described it in Fenno (1978), the "...gut feeling about the kind of human being they wanted to represent them" that many voters possess has been overlooked for far too long.

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