Political Disagreement and Decision-Making in American Politics

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Dedication

To David, Stacy, and Cassie

Abstract

This dissertation explores how political disagreement and disagreeable information shape the nature and quality of citizens' political judgments. People encounter disagreeable information on a routine basis, yet little is known about how exposure to this kind of information shapes people's political decision-making. I examine if and when exposure to political disagreement and disagreeable information leads people to make open-minded, accurate political judgments rather than closed-minded, biased decisions. Using a series of experiments, I demonstrate that exposure to high levels of political disagreement can shape how people make judgments, and that, at times, it leads people to be more open-minded and accurate in their approach to decision-making. This research has important implications for understanding how inherent features of the democratic process shape the quality of citizens' judgments.

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Chapter 1

Introduction

1.1 Background

Reflect for a moment on the contentious debate that surrounded President Obama's 2009 push for health care reform. Arguments and debate about the reform took place for almost a year prior to passage, and by no means are the disagreements settled today. One of the most enduring images to come out of the debate was that of angry citizens attending town hall meetings with their elected officials during July and August of that year. These meetings served as "battle lines" between those in support and opposition to reform. Liberals and backers of the President's agenda rallied in support of reform while conservatives marshaled opponents of the law. The result was a clash of viewpoints on both sides of the issue. People chanted "Yes we can" in support of reform while others yelled "Just say no" to convey opposition. Disagreements were so fierce that some of the town hall meetings led to violent clashes between supporters and opponents.[1]

Now think of two hypothetical attendees of one of those town hall meetings. We will call them John and Alice. Assume that John and Alice have equally

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[1]http://www.cnn.com/2009/POLITICS/08/07/health.care.scuffles/

strong positions on health care reform, in both cases being strongly in support of the President's proposals. Upon arriving at the meeting, they are confronted by a variety of arguments surrounding the issue. Some of those arguments and views are consistent with their own; however many are not. Those at the meeting who strongly advocate their disdain for the President's reform offer points of view that are at odds with the attitudes and prior beliefs John and Alice hold so dear. The result is that John and Alice are directly confronted by *political disagreement* and, specifically, *disagreeable information.*

While John and Alice are confronted by similar types and amounts of disagreement, they behave in very different ways. Alice reacts by "digging in" and is resolute in protecting her opinions through a variety of biased processes. She engages in mental gymnastics like counterarguing (actively countering arguments she does not like), and selective exposure (the avoidance of challenging information) to protect her beliefs in the face of disagreeable information. For example, she chooses to reject the premise that people are able to easily obtain affordable health care. Why? Because she personally knows people who have serious issues with obtaining coverage. Scholars employ different labels for the assorted strategies Alice utilizes to minimize the effect of disagreeable information. Dissonance theorists refer to selective perception, attention, and learning (Festinger 1957; Abselon, Aronson and MacGuire 1968; Fiske and Taylor 2008) while, more recently, these processes have been referred to as *motivated reasoning* (Kunda 1990; Sinclair and Kunda 1999; Lodge and Taber 2000). Regardless of the label, strategies like these allow Alice to leave the meeting with her views about reform intact and actually stronger than they were before the meeting began. In short, Alice is closed-minded in the face of political disagreement and disagreeable information.

John has a very different reaction to the town hall meeting and the disagreeable information with which he is confronted. He open-mindedly listens to the

arguments about health care reform. While, like Alice, he disagrees with many of the positions advocated by opponents of reform, he still takes the time to listen to these disagreeable perspectives. Some of the arguments even strike a chord with him and he is curious enough to seek out more information from these perspectives. When the meeting concludes and John leaves, he is more uncertain about his prior attitude and more aware of the other side's arguments. In short, disagreement led John to think about his own attitudes and those of the opposition. While not necessarily changing his mind, this does give John a greater appreciation of all sides of the issue.

John resembles what many people think of as the ideal citizen, one who is open to new ideas but not susceptible to the whims of whatever he has heard lately. John is also the type of citizen who political scientists leave little reason to believe actually exists. Be it citizens' lack of attention to and knowledge of politics (Converse 1964; Delli Carpini and Keeter 1996) or their strong tendency to protect their prior beliefs (Lodge, Taber and Weber 2006; Taber and Lodge 2006), few scholars believe that people like John exist. It is my contention that this is not the case; citizens can and do behave in an open-minded way. Moreover, features of our political system - notably the amount of disagreement and disagreeable information surrounding an issue - can motivate people to be more open-minded.

The preceding example is instructive because it highlights the two overarching themes of my dissertation. First, the example speaks to my primary independent and dependent variables, political disagreement and open- vs. closed-minded reasoning respectively. All of my research is tied together by a common question: How does political disagreement influence the nature and quality of citizens' political decisions? The example also illustrates the conceptual dependent variables that I study. One way to view John and Alice is as ideal types of the two types of decision-making on which I focus in my research. Alice is the biased, 'motivated

reasoner' while John is the even-handed open-minded decision-maker. Ultimately the focus of my dissertation is understanding if and under what conditions people react to exposure to political disagreement in a relatively open- vs. closed-minded fashion.

The second reason this example is valuable is because it emphasizes an important theoretical contribution this dissertation makes to the study of political decision-making. Historically research in political science has treated decision-making as a static endpoint. Decisions are measured at a single point in time and decision quality is assessed by comparing how a particular decision is correlated with a concept that political scientists view as normatively good or bad. For example, a study could rely on a cross-sectional survey to study vote choice by relying on the pre-post measures of citizens' preferences for political candidates. To test if people are grounding their support in substantive criteria, one could correlate participants' issue preferences with their candidate evaluations. Depending on the positions of the candidates, these correlations could be used to generate inferences about the health and quality of those evaluations.

The contrast between Alice (the biased reasoner) and John (the open-minded reasoner) illustrates why a static, correlational, approach is poorly equipped to study decision quality. Assume that a scholar chooses to study the effect of being exposed to disagreeable information during the town hall on how John and Alice think and reason about politics. Were the researcher's strategy to rely on a survey administered at the end of meeting, she would find no difference in attitudes about reform between John and Alice. This could lead to a conclusion that the effect of the 'intervention' to which John and Alice were exposed (the town hall meeting) was the same for both people. In reality, however, John and Alice reacted to the disagreement in distinct ways while still reaching the same conclusion about health care reform that they had prior to attending the meeting. The likely, and incorrect,

inference drawn by examining only John and Alice's final attitudes would be that the town hall meeting, or, more specifically, the disagreeable information to which they were exposed while at the town hall, had no effect on their decision-making.

The reality is that Alice and John made two very different decisions for two very different reasons. Alice was biased and a motivated reasoner. John, on the other hand, fulfilled his role as a democratic citizen by carefully weighing information that was both consonant and dissonant with his views. That he reached the same conclusion after exposure to this information as his original attitude is an important illustration that decision-quality is not solely tied to final outcomes. In fact, relying solely on final outcomes, like vote choice or issue preferences, can make it difficult to draw conclusions about the nature and quality of those judgments. What is required is the ability to unpack people's decisions, which necessitates observing the processes and behaviors in which they engage prior to rendering their final judgment. Stepping back from the final decision and exploring behaviors leading up to the judgment, such as the kinds of information people collect and what they think about that information, can provide useful ways to better understand the quality of people's judgments.

All of this is to say that questions about judgment quality require a clear and precise definition of what constitutes a good decision and an effective research design to identify when good or bad decisions occur. In general I rely on two approaches for identifying what is a good decision. The first is to precisely define what is meant by a good vs. bad judgment. For this research, a good political judgment is one that is "open-minded." While open-minded is a broad term, it has been marshaled effectively in empirical studies of reasoning (Kruglanski 2004) and public opinion (Kam 2006). Of open-minded thinking, Kam (2006, p. 932) writes, "Citizens should not confine their thinking to the reasons that buttress their preferred side; they ought to be engaged in both sides of an issue."

The normative importance of open-minded thinking is rooted in a great deal of scholarship on citizenship theory (Mill 1859; Dewey 1916). In discussing how people should think about politics, the works of Dewey and Mill highlight that people should, as Kam wrote, consider perspectives and points of view other than their own. By engaging in a process along these lines, people will be able to better articulate and draw from their opinions while also being more appreciative and knowledgeable of perspectives and ideas other than their own. In short, by considering pro- and counterattitudinal (agreeable and disagreeable, respectively) points of view, people will be able to more effectively think and reason about politics.

The behaviors that characterize open-minded thinking can take many forms. Typically, though, reasoning in this way is defined by people willingly exposing themselves to a variety of points of view and perspectives, including those which are disagreeable. Further, upon encountering these points of view, even when they are inconsistent with their prior beliefs, people should not dismiss them out of hand. Rather, as Kam (2006, p. 932) quotes from John Dewey, people must take the time to "...[turn] a subject over in the mind and [give] it serious...consideration" (Dewey [1933]1997). Ultimately the result of an open-minded approach to reasoning is that people are more willing to attend to relevant information while also being more likely to rely on this information when making judgments. This discussion also highlights three general dimensions in which open-minded reasoning can manifest: the search for political information, the processing of political information, and the use of information when constructing judgments. For now this is an important point to note because it bolsters my argument that the ingredients and processes leading to final decisions speak to the character - whether it is open- or closed-minded - of people's judgments.

Anchoring the other end of the decision quality spectrum are poor decisions,

which I define as decisions that are closed-minded. Closed-minded thinking is largely the opposite of open-minded thinking. Poor decisions are characterized by people favoring perspectives and points of view that are consistent with their existing beliefs about politics while avoiding and dismissing counterattitudinal (disagreeable) points of view (Kruglanski 2004). This form of reasoning is problematic for the opposite reasons that open-minded thinking is beneficial. People who are closed-minded are rarely, if ever, exposed to new points of view. Even if they are, they often fail to internalize the information. This makes it difficult for them to form beliefs based on criteria other than their existing attitudes. In turn, this can create problems for their willingness to consider changes to their attitudes and views about politics.

The reality is that judgments are not either open- or closed-minded. It is often the case that decision-making is about people balancing their desire to manage how much information they consider with the need to consider at least some new perspectives (Kruglanski 2004). What is key to understanding and assessing the quality of political judgments is identifying when and why people will approach judgments in a relatively open-minded manner and when they will react by closing off their mind and not engaging with new information.

As the example of John and Alice demonstrates, judgment quality is characterized by multiple behaviors and cannot be easily understood by looking only at the final choice a person makes. Rather than viewing this as a problem that makes understanding the quality of decisions intractable, this should instead be viewed as a feature of judgments that can be operationalized to better understand when people are making open- or closed minded decisions. This leads me to study decision quality by examining multiple stages in the decision-making process. This includes how people collect political information, how they process and think about that information, and how they ultimately utilize that information

when rendering a judgment. This approach allows me to overcome the ambiguity of relying solely on final outcomes to draw conclusions about the character of people's political judgments.

My second strategy for understanding judgment quality is to rely on experimental methods. The value of experiments in this specific area is that I have full control over the administration of treatments and can directly observe the effects of those treatments on outcomes (McDermott 2002). Precise knowledge of these facets of my studies allows me to generate expectations for decision quality based on how people *should* react when exposed to certain types of information. Concrete examples of this approach are seen in studies of bias and partisan cue taking. These works create artificial settings in which partisan cues are attached to pieces of information. By design, these studies can make it so that the cues offer participants no additional information, or even provide them with inaccurate information. Because of this feature, if people are observed to rely on the partisan cue, even when it leads them astray, scholars can draw inferences about the quality of the decision-making process participants engaged in. For instance, if cues lead people to dismiss relevant information then the cue is clearly biasing their judgment (Rahn 1993; Lau and Redlawsk 2001).

The experiments I utilize in my research provide me with two advantages when studying judgment. The first is the ability to control the kinds of information to which people have access. Similar to studies of partisan cue taking, this allows me to unambiguously understand how, if at all, people are relying on relevant information when making a judgment. Are they utilizing the information they access in an open-minded manner to help inform their judgments or, instead, do they ignore the information or even use that information (through processes of motivated reasoning) to facilitate making closed-minded decisions consistent with their prior beliefs? The second important feature of my experiments is that they

allow me to unpack the decision-making process. My studies are designed with the express purpose of observing the decision-making processes that precede final judgments.

1.2   Chapter Overview: Preview of Themes, Hypotheses, and Findings

The structure of this dissertation is as follows. In the next chapter, I outline the theoretical framework motivating my research and discuss the normative significance of understanding how disagreement affects political judgment. I conclude by providing a detailed outline of my empirical chapters, including an overview of my general hypotheses in each chapter. My third chapter provides an overview of my research design, which includes a detailed discussion of the experimental framework I created to study how exposure to disagreement affects how people think and reason about politics. It also provides information about the structure of my experiment, data from pilot tests of my stimuli, and initial descriptive statistics.

My fourth chapter is devoted to an empirical test of the argument I offer in Chapter 2. The question motivating these analysis is, "Does exposure to political disagreement affect how people reason about politics by making them open-minded?" I expect that as people are exposed to increasingly high levels of political disagreement, they will be motivated to engage in more open-minded thinking. The findings from this chapter generally conform to this expectation for each of the areas of the judgment process I study. Exposure to high levels of disagreement leads people to seek more information and to be more open to collecting information from oppositional points of view. Disagreement also encourages people to

think more deeply and in a more open-minded fashion. Finally, it causes people to rely more heavily on relevant information when rendering a judgment, even when that information is disagreeable. In short, disagreement makes people more open-minded across multiple dimensions of decision-making. This finding is an important contribution of my research to political science studies of judgment and decision-making. The results serve as an important counterpoint to recent work, which argues that bias and motivated reasoning permeate nearly all aspects of political decision-making.

In my fifth chapter I study a similar set of outcomes, although I focus exclusively on information search and use, and examine how people's political predispositions shape their reactions to disagreement in these areas. Specifically, I investigate how individual differences in openness to experience and the need for closure moderate the effect of political disagreement on information search and information use when making judgments. My general expectation is that people who are high in openness will react more favorably to disagreement compared to people who are low in openness. I expect the opposite to be true for people who are high in need for closure, which should lead people to be more closed-minded. In most instances the findings confirm my expectations, although there are important caveats. Openness to experience shapes reactions to disagreement at the information search phase while closure plays a larger role when people actually bring information to bear on a judgment. Findings from this chapter extend those of chapter 3 by identifying how citizens' predispositions shape their reactions to disagreement.

The focus of my sixth chapter shifts in a number of ways from the preceding chapters. Foremost, in this chapter I examine how party cues attached to disagreeable information shape people's reactions to that information. The question I ask in this research is, "Does exposure to disagreeable information that is attributed

to political parties affect citizens' party identification and how they bring that identity to bear on evaluations?" To answer this question I present people with varying amounts of (attitude) disagreeable information that is either attributed to their own party, the opposition party, or no party. This allows me to examine how exposure to information that places people's partisan identities and issue attitudes in opposition to one another affects their party identifications. For example, how does a Democrat who is faced with a great deal of disagreeable information that is attributed to the Republican party differ from a Democrat who is faced with a great deal of disagreeable information that is attributed to their own (Democratic) party in terms of what they think about their partisan identity and how, in turn, this affects the way in which they bring that identity to bear in judgment?

I situate this research in the on-going debate about the link between party identification and issue attitudes. I show that exposure to information that places citizens' issue attitudes in opposition to their partisan identities can make people question their party identification and, in turn, favor other criteria, specifically their issue attitudes, when making judgments. Importantly, this behavior occurs in a relatively short window of time, which is an important point of departure from most of the work in this area, which examines changes over a period of years.

In sum, this project contributes to the study of political decision-making in the US context in a number of ways. In the broadest sense, I offer an argument and provide compelling evidence that people can be motivated to approach decision-making with an open mind and that this motivation can stem from a core feature of democracy - the amount of political disagreement people encounter about an issue. In the next chapter I outline my theory for why political disagreement can motivate people to be more open-minded and provide an overview of the theoretical focus in each of my empirical chapters.

Chapter 2

Literature Review & Theoretical Expectations

2.1 Literature Review

The central argument of my dissertation is that exposure to political disagreement and disagreeable information can lead people to rely on a more accurate, open-minded approach to political decision-making. By disagreeable information I mean simply information that is challenging to, and inconsistent with, people's prior political beliefs. On the one hand, exposure to higher levels of disagreeable information may lead people to "hunker down" and protect their political beliefs in a biased manner. Disagreeable information challenges people's self-concepts and, because of this, may lead them to engage in behaviors aimed at protecting and bolstering their attitudes. On the other hand, people are not able to engage in biased processes unconditionally and without limit. Because of this, I expect that the tendency for people to engage in biased processes will be conditioned by the amount of disagreement and disagreeable information they encounter. As people are faced with increasingly high levels of disagreeable information, they will find

it more difficult to react in a biased manner and will instead engage in a more open-minded approach to reasoning.

This chapter provides the theoretical motivation and evidence for my argument that disagreement and disagreeable information can lead people to shift their approach to reasoning and motivate them to make more open-minded decisions. The structure of this chapter is as follows. I begin with a review of the major theories of how people make political judgments and identify where I believe past studies of judgment and decision-making fall short. I then turn to a discussion of deliberative theories of democracy, the central role disagreement plays in those theories, and how disagreeable *information* can affect judgment. The final portion of my literature review is devoted to my argument that disagreeable information can motivate people to be more open-minded. The chapter concludes with a detailed overview of my empirical chapters.

Prior Approaches to Reasoning

Assessing the quality of citizens' political decisions occupies an interesting space in the study of public opinion and American politics. On the one hand, citizen judgment motivates and is at the forefront of most, if not all, major pieces of public opinion research. Scholars from a variety of perspectives are directly concerned with whether or not citizens can and do make good political judgments. Much of what motivates these works are concerns with the vitality of the representational link between citizens and politicians. In representational theories which focus on the principle-agent relationship, people elect representatives to "stand in" for them and to act on behalf of their interests and preferences. Elected officials are then held accountable by these constituents through the mechanism of elections (Pitkin 1972; Mansbridge 2003; Urbinati and Warren 2008). At the

beginning of his classic work *Home Style*, Fenno (1978) quotes James Madison and writes, "...the government in general should have a common interest with the people, so it is particularly essential that the branch of it under consideration [The House of Representatives] should have an immediate dependence on and an intimate sympathy with, the people."[1] Dependence is guaranteed by the accountability engendered by regularly holding elections, and an electorate that brings genuine preferences to bear when casting their votes.

Because the vitality of the principle-agent relationship has historically motivated studies of voting behavior and public opinion, this research typically focuses on preference congruence or elections and accountability. Preference congruence is important because politicians are expected to enact policies that align to the interests of their constituents. This has led scholars to examine whether there is any correspondence between policy preferences of members of the mass public and their elected officials (Miller and Stokes 1963) or to which groups of constituents elected officials are most responsive (Bartels 2010). A great deal of work is also concerned with questions of preferences formation, such as whether or not citizens can and do form preferences for elected officials to represent or if citizens derive their preferences from the positions adopted by politicians (Converse 1964; Zaller 1992; Druckman 2004). Similarly, empirical studies of elections assess the quality of voting by examining the criteria voters use to evaluate politicians (Campbell, Converse, Miller and Stokes 1960), and the effect of elections on the behavior of elected officials (Sulkin 2005).

Good judgment is important to this approach because it could be necessary for a healthy principle-agent relationship. It guarantees the substance of citizens' preferences and the legitimacy of their choices at the ballot box. Because of this focus, past works have engaged with questions about decision-making and judg-

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[1]This quote is taken from Federalist No. 52.

ment quality by grounding their research in questions of preference formation and their use in voting. Examining research in this tradition reveals three overarching views of citizen reasoning and competence.

The first is that of the *unthinking voter* (Campbell et al. 1960; Converse 1964; Zaller 1992; Delli Carpini and Keeter 1996). The authors of *The American Voter* (Campbell et al. 1960) and Converse (1964) set the agenda by arguing that the vast majority of citizens lack coherent belief systems and views about politics, which prevents them from reasoning effectively about political candidates and issues. If citizens lack coherent preferences, how are they able to choose politicians and hold them to account for their actions in office? This tradition is continued by Zaller (1992), who writes of his theory of public opinion formation, "[That it] makes no allowance for citizens to think, reason, or deliberate about politics" (p. 45). While Zaller is less pessimistic about the implications for representation and accountability than are Converse and his contemporaries, his view that people spend little, if any, time or effort thinking about politics is broadly consistent with how Converse and his colleagues view the American voter. In short, this collection of scholarship consistently paints a pessimistic image of reasoning and citizen competence because people devote little time and effort toward generating substantive preferences.

The second body of scholarship, the *efficient/heuristic voter*, paints a more optimistic vision of the quality of judgments citizens can make, although with certain important caveats. Scholars of the heuristics school (Downs 1957; Popkin 1991; Sniderman, Brody and Tetlock 1991; Lupia and McCubbins 1998; Sniderman 2000; Boudreau 2009) draw heavily from work in cognitive psychology on the limitations of human reasoning and the strategies people have evolved to more efficiently seek and rely on information when making decisions. In doing so, they articulate a strong argument that people need not be fully informed about an

array of political issues and candidates to make good judgments. Instead, they can rely on information shortcuts, like party identification, to simplify the judgment process. The efficient voter looks very much like the unthinking voter insofar as they both minimize effort when making judgments. However, where the unthinking and efficient voters diverge is with respect to the ability for citizens to render good political judgments despite a lack of mental engagement. Heuristics scholars are relatively more optimistic about the ability of people to make good judgments. That said, heuristics are not a cure-all. There is ample documentation in psychology (Tversky and Kahneman 1974) and political science (Lau and Redlawsk 2001; Dancey and Sheagley 2013) showing that relying on heuristics can also harm judgment quality and lead to problematic outcomes like misinformation.

The final approach, the *biased reasoner*, is also the most recent. In the broadest sense, this perspective holds that citizens approach information processing and decision-making tasks with the goal of reinforcing and protecting existing beliefs. In other words, the biased voter behaves very much like Alice from the previous chapter, by digging in and protecting existing political attitudes. While motivations for bias are numerous, people typically engage in biased processing to protect their political attitudes (Lodge and Taber 2000, 2005; Taber and Lodge 2006; Taber, Cann and Kucsova 2009) and partisan identities (Campbell et al. 1960; Rahn 1993; Bartels 2002; Goren 2002; Gaines, Kuklinski, Quirk, Peyton and Verkuilen 2007). Because I discuss this research in greater depth later in this chapter, all I will say now is that this perspective dominates research on public opinion and judgment in contemporary American politics.

There are two important drawbacks to much of the existing public opinion research on decision-making and judgment quality. The first is that these works paint a homogenous image of how people approach political judgment. Voters are either universally disengaged, lazy but efficient users of heuristics, or consistently

biased. But, there is good reason to believe that decision-makers are more mentally flexible than each individual theory allows for. Work in social psychology, and increasingly in political science, demonstrates that people often approach reasoning, judgment, and decision-making in a variety of ways. Sometimes people favor the protection of prior attitudes along the lines described by work about the biased reasoner, while at other times they look very much like the disengaged unthinking voter described by Zaller. More recently scholars have provided a new image of reasoning, one which suggests that voters sometimes take the time and effort required to make accurate, thoughtful decisions (Lavine, Johnston and Steenbergen 2012).

That there is diversity in how people think and reason about information, even political information, should come as little surprise to people who pay attention to research in social and political psychology. Dual-process theories, for example, hold that there are two routes to decision-making, and that the route on which people rely is a function of individual and situational characteristics (Petty and Wegener 1998; Evans 2008). The first route, often referred to as System 1, is characterized by ease and automaticity, and is largely unconscious (or preconscious), automatic, and relatively low effort. This is in contrast to System 2, which is conscious, controlled, and requires the decision-maker to expend substantially more conscious effort. System 1 processes are generally viewed as the default mode of processing while System 2 is situationally activated to override the automatic processes that permeate everyday life.[2]

Dual-process theories are increasingly being applied to the study of politics.

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[2]Increasingly work in social psychology and political science views System 1 and System 2 processes as occurring simultaneously. People do not turn off automatic processes when they choose to engage in a more deliberate System 2 approach to reasoning. But, neither are they necessarily slaves to their unconscious, automatic processes (Evans 2008). Regardless of the particular balance between conscious, System 2 approaches and automatic, System 1 reasoning, what this research demonstrates is that viewing political reasoning in a homogenous way likely understates the ways in which think and reason about politics.

The work of Marcus and colleagues shows that people who feel large amounts of anxiety are more likely to rely on System 2 approaches to judgment (Marcus, Neuman and MacKuen 2000; MacKuen, Marcus and W. Russell Neuman 2007). In this area, use of System 2 processes appear to lead people toward better judgment by making them rely less heavily on easy cues, like party identification, while choosing instead to rely on more complex decision criteria, like issue positions. Alternatively, drawing from work in psychology on automaticity (Fazio, Sanbonmatsu, Powell and Kardes 1986), Milton Lodge, Charles Taber, and various others argue that political judgments and behaviors are determined mostly from automatic and pre-conscious (i.e., System 1) processes. This leads them to conclude that people have little conscious control over how and what they think (Lodge and Taber 2000, 2005).

Recent work on *partisan ambivalence* (Lavine, Johnston and Steenbergen 2012), which is the disconnect between people's long-term party identifications and short-term views and attitudes about the political parties, also draws heavily from dual-process theories and in many ways bridges research that emphasizes the importance of either System 1 or System 2 approaches to political reasoning. These scholars show that when people are ambivalent partisans they are much more likely to engage in high-effort, System 2, processing but that the typical approach people take to reasoning looks very much like low-effort, System 1 processing. All of this is to say that there is reason to believe that people can and do take a more diverse approach to decision-making, even in the domain of politics, than most of the existing theories of citizen reasoning allow for.

The second shortcoming of existing work is one of orientation rather than omission. By focusing heavily on the principle-agent relationship and the quality of citizens' political preferences, these works take a narrow view of what constitutes a good or poor political judgment. Focusing on preferences and elections naturally

leads scholars to ask questions about if and when citizens have preferences, whether or not those preferences are 'real', e.g., endogenous to the behaviors and positions taken by political elites, and the role elections play in facilitating or hindering the principle-agent relationship. While these are important questions and this scholarship is generally of the utmost quality, there are other ways to think about the democratic process and what defines good citizenship. I address this point in the next section.

Disagreement & Deliberation Theory

Recently scholars in public opinion have paid greater attention to deliberation theory as an important framework from which to motivate their research. Deliberative theories shift the focus from a view of democracy based largely on the principle-agent relationship, which values a high degree of correspondence between policy inputs and outputs, to one rooted in a broader image of the democratic process. The process of democracy is key to works in this area, with scholars paying close attention to the ways in which the democratic process constructs people's views and attitudes about politics. For theories of deliberation, the legitimacy of a democratic government is about more than citizen preferences and elite policy outputs (Urbinati and Warren 2008). Deliberative theories of democracy are concerned with the ability of, and degree to which, political elites, institutions, and contexts lead to an open-minded and critical electorate through active engagement of citizens at multiple steps of the political process (Jacobs and Shapiro 2000). In short, for deliberative theories, what people believe and how that relates to outputs does not tell the full story. Rather, how people think and reason about political issues and candidates speaks equally, if not more, to the vitality of the democratic process.

A key tenet of deliberative theories is that people are able to navigate the conflict and disagreement inherent in deliberative processes to reach consensus (Gutmann and Thompson 1996; Mendelberg 2002; Barabas 2004; Ackerman and Fishkin 2005). Politics, by its very definition, is difficult, contentious, and challenging. Debates revolve not simply around material concerns, like whether or not a pothole will be filled on a street, but about disagreements derived from fundamentally divergent political values, ideologies, and world views. Someone's beliefs about tax cuts, for example, likely involve some degree of material self-interest while also being grounded in deeply held political values (Gutmann and Thompson 1996). Elections are not sufficient, so argue scholars of deliberation, to resolve conflicts rooted in these deep divisions. As Gutmann and Thompson (1996, p. 16) write, "Insofar as deliberation is missing in political life, citizens also lack a mutually justifiable way of living with their ongoing moral disagreements." The deliberative process serves as a way for people to engage in debate and resolve conflict, the process of which generates a more informed and knowledgeable citizenry (Jacobs and Shapiro 2000).

More recently, the importance of deliberation to normative theories of democracy has gained the attention of public opinion scholars. One of the most significant inroads deliberative theories of democracy have made to empirical studies of public opinion is through studies of a core feature of the deliberative process: people being exposed to political disagreement. Most of the empirical work in this area has examined the impact of people being exposed to disagreement and oppositional points of view. These works show that disagreement can lead people to be more aware and tolerant of oppositional points of view (Huckfeldt, Johnson and Sprague 2004; Huckfeldt and Mendez 2008) and affect citizens' willingness to participate in politics (Mutz 2006). Like other works on political disagreement, I approach the study of deliberative theory and public opinion by focusing on this

specific feature of the deliberative process and attempt isolate its effect on political behavior. I depart from existing public opinion research on political disagreement by directly studying its effect on political decision-making.

A curious omission from empirical studies of public opinion which draw from deliberative theories is an understanding of the impact disagreement has on *decision-making*. This omission is especially problematic in light of the fact that deliberation scholars argue that deliberation and disagreement will affect how people reason about politics. Deliberation and disagreement should lead citizens to "...improve their understanding of their own preferences...[and that] political decisions will become more considered and informed by relevant reasons and evidence" (Mendelberg 2002, p. 153). A central point of deliberation theory is that disagreement will give rise to reasoned and informed decisions even, or perhaps especially, when disagreement exposes people to information that challenges their core ideas and beliefs. In short, exposure to political disagreement should lead people be more open-minded in their judgments and thus make more normatively good political decisions.

To be clear, it is not my contention that disagreement in and of itself captures all aspects of the deliberative process. Deliberative theories concern themselves with a whole host of questions aimed at understanding citizenship, including how the process of people coming together collectively to navigate conflict results in important political outcomes, like mutual understanding of oppositional view points, political tolerance, and political engagement (Ackerman and Fishkin 2005; Mutz 2006). However, these works also highlight that how people navigate this conflict should have implications for political judgment. By engaging in the deliberative process and being exposed to disagreeable points of view, citizens should react by making better, more open-minded, judgments.

In sum, a great deal of research in public opinion is concerned with the com-

petence of citizens and the quality of their political judgments. To date, most of these works paint a pessimistic picture of the mass public. Citizens are either unable to generate even basic political attitudes, are disengaged but able, with varying degrees of success, to rely on shortcuts to act as if they are informed, or are so caught up in protecting their prior attitudes that they give little, if any, thought to counterattitudinal points of view.

However, this research has important shortcomings. One is too great an emphasis on the universal applicability of their particular theory of reasoning. Rather than all citizens approaching judgment in the same way, it is increasingly evident that the judgment process is situational and that people approach decision-making in a variety of ways. Importantly, I will argue and demonstrate empirically that one situational determinant of how people approach judgment and decision-making is the level of disagreement they encounter and that high levels of disagreement can lead to a more open-minded approach to judgment.

The second shortcoming is one of focus, with existing research evaluating evidence of citizen competence and judgment quality based on a relatively narrow conception of what constitutes good citizenship in the democratic process. Without question, preference formation and elections are key features of democracy. But as deliberative theories show us, there are other aspects of reasoning that scholars of public opinion should value. Thoughtfulness, the willingness to consider alternative points of view, and, ultimately, being open-minded in the face of disagreeable information, are critical and necessary features of a healthy democracy. Because of this, my research examines a core feature of deliberation theory - political disagreement - and asks how exposure to disagreeable information affects the quality of citizens' judgments.

In the next section I discuss the important role information can play in determining how people approach political judgment. My argument is that information

can serve as a situational determinant of how people make judgments. I then turn to an integration of literatures in psychology and political science which form the foundation of my theory about the effect of disagreement and disagreeable information on the nature and quality of citizens' judgments. In doing so I outline my theory for how disagreement can affect reasoning in general, and why exposure to higher levels of disagreeable information can motivate people to be more open-minded when making judgments.

Information and Reasoning

Information can play a key role in determining what kinds of decisions citizens make. Scholars of decision-making and political behavior are increasingly aware that the kinds of information to which people have access and to which they are exposed (or choose to expose themselves to) determine important political outcomes. In doing so, these works highlight two distinct, though related, ways in which information can be important.

The first body of work in this area focuses narrowly on how the content of information affects preference formation and attitudes. The best example of this approach is the collection of scholarship on framing effects (Iyengar 1994; Nelson, Clawson and Oxley 1997; Druckman 2001; Druckman and Nelson 2003; Druckman 2004; Chong and Druckman 2007). The core concern of this research is understanding how information affects preference formation and judgment. Increasingly research in this tradition also examines how characteristics of information, such as its strength, interacts with psychological predispositions to shape the effect of information (Druckman and Nelson 2003). While consistently demonstrating that information affects preference formation, it suffers from important shortcomings. The most significant is that it treats the link between information and judgment

in a highly controlled way, with people being forced into information exposure (Druckman, Fein and Leeper 2012).[3] This ignores the very real ways in which predispositions and other factors shape exposure to, and thus the effect of, information.

The second body of literature improves on the first by allowing people wider latitude in determining the kinds of information they are exposed to and understanding how this control affects the influence of information on judgment. In doing so, however, it introduces its own set of weaknesses. In particular, it shifts the importance of information from determining outcomes to instead serving as an 'intervening variable' between someone's political predispositions and their behaviors or judgments (Lau 2003; Lau and Redlawsk 2006; Lodge and Taber 2000, 2005; Taber and Lodge 2006; Taber, Cann and Kucsova 2009). Work along these lines unpacks what predicts people exposing themselves to particular types and amounts of information, with the argument being that understanding this dynamic sheds light on the nature and quality of people's political judgments. For instance, research on motivated reasoning relies on the characteristics of people's search for information, such as their preference for pro-attitudinal information, to identify whether or not they are engaging in motivated reasoning (Taber and Lodge 2006). But in doing so, many of these works introduce a new weakness. By treating information chiefly as an intervening variable, it ignores, and often actively shifts the focus away from, how information can shape judgments.

While both approaches study information's effect in the domain of judgment and decision-making, the overlap between these works is minimal, with scholarship in one area largely ignoring that of the other.[4] This is unfortunate because each

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[3]There are certainly exceptions to this approach in the framing literature, with the work of Chong and Druckman (2010) serving as one important example. While this work may indicate a shift in how scholars are studying framing, as it stands, work that allows people to control their exposure to frames and information is the exception, not the rule.

[4]For an important exception see Druckman, Fein and Leeper 2012.

approach, on its own, highlights important ways in which information matters. When thinking about each perspective alongside the other, it becomes evident that information can be important for a reason entirely different than each approach allows for.

Specifically, I theorize that the content of information not only directly shapes people's attitudes, as the work on framing shows, but also how people seek and rely on information when making judgments. For the work on information exposure, this is a different way to understand the dynamics of the information search process and, ultimately, highlights a new way in which information can shape judgment and serve as more than an intervening variable. In short, the availability of different kinds of information can affect the strategies people rely on when seeking information. For scholars of framing and opinion formation, this expectation combines their precise understanding of how information shapes preference formation with a more realistic accounting of how the content of information shapes the steps in the reasoning process, like information search, that precede final judgment.

I am not the first to identify the potential for information to shape the dynamics of judgment. For example, information about a relatively few compared to large number of alternatives makes judgment easier, providing people with more time and motivation to engage in a complex approach to reasoning (Lau and Redlawsk 2006). An even better example is articulated by Druckman, Kuklinski and Sigelman (2009) when they argue that information presented to people in a "competitive" way (i.e., as two or more simultaneously available points of view on an issue) *changes* how people think about that information, with people being more thoughtful when they are exposed to information in a competitive context. The importance of this point cannot be understated because it demonstrates that information is important not only because it informs people about an issue, but rather that the content of information can *change* how people choose to think

about the information.

This raises the possibility that disagreeable information can affect how people make political decisions. Yet, if this is the case, an open question remains about what kinds and how much disagreeable information is necessary to change how people approach political judgment? Specifically, for what reason(s) would people who are exposed to disagreeable information react in a more open-minded manner? I take up this question in the next section.

2.2 Disagreement & Motivations

Understanding how disagreement and disagreeable information can influence judgment requires identifying the fundamental motivations people have to make judgments in the first place. Pittman (1998, p. 549) begins his chapter in the second edition of *Handbook of Social Psychology* by writing, "Motivation, the activation of internal desires, needs, and concerns, energizes behavior and sends the organism in a particular direction aimed at satisfaction of the motivational issues that gave rise to the increased energy." Motivation, in other words, drives human behavior and people engage in particular behaviors because they satisfy a given motivation. Pittman goes on to make a second important observation when he writes that, "...one of the things social psychologists discovered about human motivation is that connections between the energizing and direction functions are not always simple and straightforward" (Pittman 1998, p. 549).

Because behaviors satisfy motivations, understanding how a specific political situation gives rise to particular motivations reveals insight into the kinds of behaviors people can engage in to satisfy that need. A motivational approach to understanding political decision-making requires paying attention to the individual actor because the decision-maker in this approach has agency - power to control

the outcome of the situation. Rather than a "black box" which receives inputs that result in easily predictable outputs, humans and their behavior are a complicated mix of interactions between the contemporary social situation and a variety of features rooted in the individual. "If a computer analogy must be used, then for one interested in motivation it has to be a motivated computer, a computer with an attitude, with a heart as well as a mind" (Pittman 1998, p. 550).

But what is the added benefit of understanding citizens' internal goals and desires when studying political decision-making? Understanding motivations provides clarity about why and how people will behave in a given situation. This is a key contribution made by the work on bias and motivated reasoning (Lodge and Taber 2000, 2005; Taber and Lodge 2006). Awareness of the automatic motivation people have to defend and bolster their prior beliefs and attitudes provides political scientists with a better understanding of how people will react to political information, situations, and candidates. In short, understanding motivations results in better understanding of how political situations affect people, which makes it possible to build better theory and models of political behavior.

Motivations are especially relevant to the study of decision-making because disagreement has the potential to activate multiple motivations. Disagreement and disagreeable information are not easy to mentally cope with. People want to believe that their beliefs and attitudes are correct (Kunda 1990; Petty and Wegener 1998). Lack of confidence about existing beliefs and/or challenges to those attitudes can lead to negative cognitive and affective states to which people are averse (Festinger 1957; Abselon, Aronson and MacGuire 1968). Disagreement directly confronts citizens' existing beliefs and attitudes and can create tensions in the minds of voters. The drive to eliminate these tensions and to remove oneself from such a state is where motivation becomes relevant, as it is the desire to regain confidence and eliminate the aversive mental state that energizes people in the face

of disagreement.

In sum, disagreement can create tensions in the minds of voters by directly confronting them with information that stands in opposition to their existing political beliefs and viewpoints. These tensions can create negative mental states that people are motivated to eliminate. Motivation is relevant to the study of political disagreement and decision-making because there are multiple ways in which these negative affective states can be eliminated. In the following section I discuss two of these motivations: the desire to protect and bolster existing attitudes by engaging in processes of motivated reasoning and the motivation to hold accurate political beliefs.

Motivations and Bias

In this section I outline my argument for the importance of two particular motivations to the study of judgment and disagreement. Consistent with work on motivated reasoning and bias in political decision-making (Lodge and Taber 2000, 2005; Taber and Lodge 2006), exposure to disagreement may lead people to engage in closed-minded, biased processes. A straightforward way people can eliminate the discomfort created by exposure to disagreement and disagreeable information is by engaging in behaviors aimed at protecting or bolstering prior political attitudes. At the same time, I argue that decision-makers rely on more than motivations aimed at bolstering their prior views and reinforcing their political attitudes. At times, they are motivated to engage in relatively unbiased, dispassionate processes with the intent of rendering more accurate and, ultimately, 'correct', political judgments. Moreover, exposure to political disagreement in particular may incentivize this relatively open-minded approach to reasoning.

Before discussing in-depth each approach to reasoning, it is important to high-

light that it is not my contention that there is a zero-sum tradeoff between motivations towards bias or accuracy. It is not that citizens are *either* biased reasoners or dispassionate thinkers. Rather, as Lodge and Taber (2000, pgs. 186-187) note, citizens' approach to reasoning can exist along a continuum defined by the degree to which they, in the words of Kunda (1990), rely on accuracy motives or directional (bias) motives. When people rely on either kind of motive is a function of the situation, such as exposure to disagreement, their personal characteristics, or the intersection of these factors (a point I examine in my fifth chapter).

Directional Motives & Motivated Reasoning

The first motivation that political disagreement may initiate in a person are those aimed at protecting and reinforcing existing beliefs, specifically directional motives and motivated reasoning. In political science, the explicit use of the term "motivated reasoning" dates back to the work of Lodge and Taber (2000), although much of what scholars of motivated reasoning and bias discuss finds its roots in social psychology research dating back to middle of the 20th century. The centrality of directional motives to reasoning was popularized by Kunda (1990) in her work on motivation and judgment. In that piece, she argues that people engage in a variety of strategies with the explicit intent of protecting their existing attitudes.

In a variety of pieces, Lodge and Taber adapt much of what Kunda argues about directional motives and apply it to the study of politics. In doing so, they find a great deal of evidence that people rely on directional motivations and engage in motivated reasoning. This leads them to conclude that, "...most citizens most of the time will be decidedly 'partisan' in what and how they think and reason about political leaders, events, and issues"(Lodge and Taber 2000, p. 185).

This conclusion is based on strong evidence that people who make political judgments engage in many of the behaviors identified by psychological work on

bias and motivated reasoning. People often prefer pro- over counterattitudinal information (Taber and Lodge 2006). When encountering information that runs contrary to their existing beliefs, people counterargue and dismiss it rather than integrating it into their views (Lodge and Taber 2005; Taber and Lodge 2006; Taber, Cann and Kucsova 2009). People also give differential weight to information, relying more heavily on that with which they agree while ignoring or dismissing disagreeable information. In general, these behaviors are thought to transcend many political contexts and situations and permeate almost all aspects of political behavior.

The link between motivated reasoning and disagreement in particular is straightforward. Disagreement exposes people to information that directly challenges their beliefs about politics. People cope by engaging in processes aimed at avoiding and/or dismissing disagreeable information. That a process like motivated reasoning could occur due to political disagreement is acknowledged by theorists of deliberation. Gutmann and Thompson (1996, p. 44) write, "It may be feared that extending the domain of deliberation has the risk of creating even greater conflict than it is intended to resolve. Once...citizens and officials are engaged, they may be less willing to compromise than before...[t]here are moral fanatics as well as moral sages, and in politics the former are likely to be more vocal than the latter."

Accuracy Motives

Most of the work in political science which integrates motivation focuses on the negative ways in which it influences judgment. Yet the pioneering work from which political science research on motivated reasoning originates (Kunda 1990) argues explicitly for two kinds of motivations in judgment. The first, which I have already discussed, are directional goals. These motivations are employed with the intent of reaching particular, pro-attitudinal conclusions. Yet Kunda (1990)

also argues that a second class of goals exist, those aimed at reaching accurate and correct judgments. Unlike directional goals, accuracy motivates are employed when someone wants to reach an accurate judgment, even if that judgment is as odds with existing beliefs.

A core element of Kunda's argument about motivation and judgment is that people's goal in decision-making *is not* simply to reinforce their prior beliefs and/or to render a judgment in-line with what they already believe. Rather, many judgments are tradeoffs between the desire to be accurate, on the one hand, and the desire to protect existing beliefs on the other. She writes, "People will come to believe what they want to believe only to the extent that reason permits. Often they will be forced to acknowledge and accept undesirable conclusions..." (Kunda 1990, p. 483). This suggests that the tendency for people to rely on directional motivations is conditional, and that sometimes people employ accuracy goals and are responsive to the content of information they encounter, likely because they want to hold correct beliefs (Petty and Wegener 1998).

While people react to disagreement by deploying directional goals, Kunda's research also provides multiple reasons to believe that exposure to disagreeable information could lead people to rely on accuracy motivations. First, given that people value being right (Petty and Wegener 1998), exposure to disagreeable information can make people question their existing attitudes. Lack of confidence in an attitude, in turn, may motivate them to seek information and reevaluate their prior belief (Ditto and Lopez 1992; Ditto, Scepansky, Munro, Apanovitch and Lockhart 1998; Lavine, Johnston and Steenbergen 2012). A reevaluation by no means guarantees unbiased, accuracy-based, thinking (Gal and Rucker 2010). In fact, many of the biased processes that define motivated reasoning require conscious, engaged reasoning. For example, counterarguing requires the individual to consciously generate arguments consistent with their priors and incompatible

with the oppositional information (Ditto and Lopez 1992; Taber and Lodge 2006). Why then would citizens who encounter disagreement employ accuracy motives? Because they are sensitive to reality (Kunda 1990; Ditto and Lopez 1992) and want to hold and maintain correct beliefs (Petty and Wegener 1998).

Encountering a large amount of political disagreement and disagreeable information can suggest to someone that there is a problem with the accuracy and correctness of their current belief. At the same time, the presence of a great deal of disagreement may make it difficult for people to engage in the rationalization processes necessary to maintain a belief that one is objective while still employing directional motivations. As Ditto and Lopez (1992)[p. 569] argue, "The rational aspects of 'rationalization' cannot be ignored. Judgments seem best characterized as a compromise between the wish to reach a particular conclusion and the plausibility of that conclusion given the available data."

A plausible expectation is that as people encounter larger amounts of disagreeable information, it will become increasingly difficult for them to employ directional motivations aimed at defending existing attitudes. As they encounter more disagreement, the reality of the information should become apparent to people because it will be more difficult to counterargue. If this is the case, the need to eliminate the imbalance created by disagreement may not be satisfied by motivated reasoning processes and could instead require a more open-minded approach to judgment.

Disagreement may also motivate a more accurate approach to judgment by serving as a signal to someone that they should question and revise their existing political attitude. If someone has an issue attitude and perceives that there is a great deal of disagreement (a lack of a consensus) surrounding that issue this too could provide an incentive to the decision-maker to take the time to approach the decision with a more even-handed strategy. An argument along these lines is

offered by Mutz (1998) in her work on how people rely on impersonal information as shortcuts for how to approach decision-making. One of her key findings is that people rely on perceptions of disagreement around issues to decide if and how much they want to think about that issue. When people perceive that their information environment contains little to no contentious, disagreeable information, they take this as a sign that the issue has been settled. The perception of consensus around an issue, in other words, serves as a heuristic for whether or not they should think more about the issue (c.f., Harkins and Petty 1981). By extending this argument, the presence of disagreement could operate as a cue to people that they should engage in open-minded thinking.

In sum, political disagreement is not easy for people to deal with. It involves information which directly confronts prior beliefs and attitudes about politics. These beliefs and ideas often serve as important facets of their self-concepts. Disagreement can create tensions in the minds of citizens which they are motivated to resolve. People have multiple strategies they can employ to resolve these tensions. They can be motivated reasoners, choosing to be closed-minded and to employ directional motives to avoid disagreement and disagreeable information and/or to dismiss it once encountered. However, by virtue of the fact that it can make employing directional motives less effective at resolving this tension, disagreement can also provide incentives for open-minded, accurate thinking.

What Is Missing?

At this point it is important to address the paucity of studies on accuracy motives compared to those on bias and motivated reasoning. If people rely on accuracy motives when making judgments, then why has there been so little focus on their presence in decision-making? Moreover, why do scholars of 'motivated

reasoning' (e.g. Lodge and Taber 2000, 2005) find so little evidence of a more accurate approach to political judgment? There are two readily apparent answers.

First, existing work on political judgment does little to 'push' citizens toward situations that could induce or require better judgment. Take a classic study on motivated reasoning authored by Taber and Lodge (2006). Participants in this study are placed in a situation where they have access to a balanced set of pro- and counterattitudinal information and are given the freedom to choose to access whatever information they want. Within this framework, however, scholars do not introduce incentives for a more accurate approach to judgment. Thinking about this research and my arguments about political disagreement, for example, shows why this is problematic. As I argue throughout my dissertation, exposure to higher levels of disagreeable information makes it more difficult to engage in motivated reasoning. Thus, by using this framework, one way to test if people could be motivated to rely on accuracy motives is to manipulate the kinds of information to which people have access.

Second, and more generally, the approach taken by researchers who study motivated reasoning and bias in political judgment has been to prove the existence of 'motivated' political reasoning rather than to understand the situational characteristics, like information, that make it more or less likely to occur. In short, their concern is very much in the same vein as scholars who study the disengaged and the heuristic citizen. They strive to demonstrate the universality of this particular theory of political reasoning. This leads to study designs aimed at testing precise questions about the presence vs. absence of motivated reasoning. While not a critique of the research specifically, it demonstrates an important difference between my research and that of work anchored more specifically in bias & motivated reasoning.

My interest is more general and is rooted in understanding when and if a

particular feature of American democracy, the level of disagreement people encounter, affects decision-making. Does disagreement necessarily lead people to be closed-minded and engage in motivated reasoning? Or can disagreement incentive people to be open-minded? Given our difference foci, it should not be surprising that I generate expectations about accuracy motives and open-minded thinking to which existing work pays little attention. To that end, my findings that exposure to political disagreement can lead people to be less biased and more open-minded does not necessarily exist in tension with the findings on motivated reasoning.

2.3   Overview of Empirical Chapters and Hypotheses

In this section I provide a detailed overview of my theoretical framework and expectations for each of my three empirical chapters. The first empirical chapter (Chapter 4) is motivated by the framework outlined in this chapter. In the following sections I provide brief overviews of how Chapters 5 and 6 extend this theoretical framework and the general hypotheses I test in each chapter.

Chapter 4 - Disagreement & Judgment

Chapter 4 serves as the first test of my theory of how political disagreement can influence judgment. Before discussing my general theoretical expectations, it is important to define how I operationalize decision-making and judgment in this chapter. For this, as well as my second empirical chapter (Chapter 5), the outcomes I examine correspond to the multiple stages of the decision-making process (what I also refer to as the reasoning process) that I have referenced repeatedly throughout these first chapters.

In line with an increasingly large body of scholarship exploring how people seek information (Lau and Redlawsk 2006; Redlawsk, Civettini and Emmerson 2010), the first set of behaviors I examine are information *search* patterns. Rather than focusing solely on how predispositions or other intra-individual characteristics shape the kinds of information people seek, I examine how the amount of available disagreeable information changes the character of people's search for information. The two dimensions of information search I examine are how disagreement affects the amount of information people collect and how it changes the kinds of information they collect.

The second stage of the reasoning process I study is how people process and *think* about the information they encounter. For these analyses my goal is to understand how different kinds and amounts of available disagreeable information shape whether people approach judgment in a relatively more open- or closed-minded fashion. To accomplish this I rely on a cognitive response task, a procedure that allows participants to freely report their thoughts after completing my study. I then examine how disagreement causes people to have different kinds of (pro- vs. counterattitudinal) thoughts.

The final stage of the reasoning process I examine is how people *use* information to make judgments, again with a specific focus on how the availability of disagreeable information shapes information use. The goal of the final type of analyses is to understand how disagreement shapes the ingredients of political judgment, specifically the power of prior political beliefs vs. contemporary information participants collect during my study when rendering a vote.

Exploring behavior at each of these stages illuminates whether and to what degree people rely on accuracy vs. directional motives when making judgments. If people are engaging in motivated reasoning and closed-minded thinking, then their behaviors at each of these stages should look like those found in existing

work on motivated reasoning. Specifically, people should prioritize accessing information that is consistent with their existing beliefs (Taber and Lodge 2006), should have thoughts aimed at reinforcing and protecting their existing beliefs (Taber, Cann and Kucsova 2009), and should rely on pro-attitudinal/agreeable information and/or reject counterattitudinal/disagreeable information when making judgments (Taber, Lodge and Glathar 2001).

On the other hand, if people are relying on accuracy motives and being more open-minded, there should be evidence of greater intellectual curiosity and a willingness to access information from opposing, disagreeable perspectives. People should also take the time to think about oppositional points of view regardless of the fact that they are disagreeable. There may even be evidence of greater reliance on information, even if it is inconsistent with existing attitudes, when making a judgment.

Combining the theoretical argument outlined in this chapter with a focus on these three stages of the reasoning process results in three general predictions for how disagreement will affect behaviors at each step. At the information search stage, I expect that exposure to higher levels of political disagreement will lead people to engage in deeper information searches and to be more willing to access disagreeable information. In terms of affecting how people think about information, I expect that encountering disagreement will also cause people to be more cognitively engaged and to be more willing to consider counterattitudinal (disagreeable) points of view. Finally, I expect that high levels of disagreement will change how people rely on information, specifically making them more likely to utilize disagreeable information when making a judgment.

Collectively these expectations are tied to my argument that exposure to high levels of disagreement will make it more difficult for people to rely on directional motives and to engage in motivated reasoning, while also incentivizing a more

open-minded, accurate, approach to judgment. These expectations are tested using an original experiment that I describe in detail in my next chapter.

Chapter 5 - Individual Differences, Disagreement, & Judgment

Until this point my argument has revolved around the importance of contemporary features of a person's political environment, most notably the amount of disagreement and disagreeable information surrounding an issue. Chapter 5 moves beyond examining the direct effect of disagreement on judgment by focusing on how people's characteristics, specifically their personalities and information-processing tendencies, shape how they react to disagreement. In doing so, I identify individual-level characteristics that lead people to be more or less open-minded in the face of disagreement.

A key contribution political psychology has offered to political science is an appreciation for the importance of stable features of citizens and their influence on a host of political behaviors, including information processing, attitude formation, attitude change, and political decision-making (Zaller 1992; Marcus, Sullivan, Theiss-Morse and Wood 1995). These long-term features, which I refer collectively to as *individual differences* (Marcus et al. 1995), shape how people react to political disagreement. For example, existing work demonstrates that in the domain of decision-making the strength of pre-existing attitudes (Lodge and Taber 2005), certain political values (Peffley and Hurwitz 1985; Goren 2004), and different personality characteristics (Mondak and Halperin 2008) influence decision-making in important ways.

There are two predispositions (individual differences) that I theorize are relevant to political decision-making in the face of disagreement. The first group of

individual differences are personality traits, which are stable, enduring individual-level characteristics. In the words of Mondak and Halperin (2008), personality is a, "...multifaceted and enduring internal, or psychological, structure. It is further assumed that personality is substantially rooted in biology, and that personality influences behavior." How does understanding a person's personality help political scientists understand the process and operation of politics? Does it matter if we know that one is relatively more extraverted? The short answer is that it depends on the situation.

Combined with good theory, understanding someone's personality can illuminate important ways in which the political process unfolds. For example, recent work by Gerber, Huber, Doherty and Dowling (2012) shows that people who are high in openness to experience, a Big 5 personality trait, are more likely to engage in political discussion with people who share divergent political opinions than are people who are low in openness to experience. Key to this finding is that prior work on disagreement and interpersonal communication have consistently yielded mixed results. Some works indicate a positive relationship between disagreement and interpersonal communication with others yielding negative relationships. The introduction of personality into the equation helped illuminate, at least in part, one explanation for mixed findings: people with different personality characteristics react in distinct ways to disagreement (Gerber et al. 2012).

Recently political science has experienced a renaissance of sort in this area, specifically with respect to the attention given to the role that individuals' personalities play in determining behavior (Mondak and Halperin 2008; Mondak 2010; Gerber, Huber, Doherty, Dowling and Ha 2010; Gerber, Huber, Doherty and Dowling 2011; Gerber et al. 2012). Many of these works draw on prior scholarship in psychology showing that variation in an individual's stable personality characteristics typically separate into five dimensions, collectively referred to as the 'Big 5'.

The first of these dimensions is *openness to experience* (OE). While the particulars of this trait dimension are subject to debate among personality scholars (see Mondak 2010, p. 48), it typically refers to people's intellect and their desire to be engaged and curious. People who are high in openness tend to be attracted to new experiences and require intellectual stimulation, the result being that they tend to be interested and engaged in politics and have an affinity for self-identifying as a liberal and a Democrat (Gerber et al. 2010).

The second dimension is conscientiousness, which refers to the tendency for people to be organized and dependable. In the domain of politics, conscientiousness is thought to operate in the opposite direction to openness (Mondak 2010). Extraversion, the third dimension of the Big 5, is also the most popularly known of the five traits. People who are high in this characteristic need social interaction and attention (Gerber et al. 2012). Agreeableness is the fourth dimension and refers to the tendency for people to desire having positive interpersonal interactions. People who are high in agreeableness, for example, are often viewed as warm, kind, and altruistic. The fifth and final dimension is emotional stability. People who are high in emotional stability are less likely to feel anxiety and tend to be more calm.

The other individual difference I study in detail is *need for closure*. A wide body of research in psychology demonstrates that in general people do not enjoy ambiguity and attitude uncertainty. However, an important subset of this research also shows the degree to which people seek certainty and avoiding ambiguity is a long-term stable predisposition that varies systematically across people. This individual difference, referred to as the need for closure, identifies the preference people have for holding strong, unambiguous attitudes (Dijksterhuis, Van Knippenberg, Kruglanski and Schaper 1996; Federico, Golec and Dial 2005).

I will outline my theoretical predictions for the link between disagreement,

decision-making, and these personality characteristics in detail in Chapter 5. As a brief preview, I focus my attention on the personality trait of openness to experience because recent work focuses on the link between openness and reactions to disagreement, albeit not in the domain of judgment (Gerber et al. 2012), and the close relationship between openness and information search and processing behaviors (Mondak 2010; Gerber et al. 2010). My general expectation is that people who are high in openness will be especially likely to react to disagreement and disagreeable information in a more open-minded fashion. Much like openness, I study the effect of closure because it has the potential to be strongly related to people's tolerance for political disagreement. People who are high in need for closure may be less willing than those who are low in closure to react favorably to disagreeable information and situations. In short, people who are high in need for closure may be dispositionally inclined to be closed-minded (Kruglanski 2004).

Chapter 6 - Partisan Disagreement

My final empirical chapter (Chapter 6) explores how attaching partisan cues to disagreeable information affects people's reliance on that information. Disagreement rarely occurs in a vacuum; when people encounter disagreement, be it from the informal perspectives offered during interpersonal communication, in a relatively more formalized context, such as a deliberative forum (Ackerman and Fishkin 2005), or in the form of more strategic communication, like newspaper stories, often these messages are laden with partisan cues. For this chapter I shift my focus from understanding how disagreement shapes the ways in which people seek, think about, and use information in judgment to unpacking how exposure to different forms of partisan disagreement can lead people to 1) reevaluate their partisan leanings and 2) modify their reliance on their party identification vs. their

existing issue attitudes when making judgments.

A key question in public opinion research is how people connect their issue positions to their partisan identities (and vice-versa). Do they favor their partisan identities by deriving issue attitudes from the positions staked out by members of the major political parties? Or do they lean on their issue attitudes vis-à-vis the positions staked by party elites to determine their views of the political parties? There is good reason to believe that encountering different kinds of partisan disagreement will affect how people think about either (or both) their issue preferences and partisan identities and how they bring them to bear on evaluations.

On the one hand, party identification serves as a "perceptual screen" through which individuals see the political world (Campbell et al. 1960, p. 133). Partisan identities shape how people see politics unfold, including how they store, interpret, and rely on information (Campbell et al. 1960; Goren 2002; Gaines et al. 2007; Goren, Federico and Kittilson 2009). An individual's party identification, for instance, biases what they perceive to be true, with the end result being that people lean heavily on party identifications when processing information and forming opinions (Rahn 1993; Bartels 2002; Green, Palmquist and Schickler 2004; Dancey and Goren 2010).

In-line with the biasing power of party, when party cues are consonant with disagreement, meaning that someone's party identification aligns with the attitude-consonant information they encounter, then it should be the case that they respond in a relatively uncritical, thoughtless way. Why? Because there is no reason to reevaluate either existing issue attitudes or partisan identities. However, as I show in this chapter, an interesting situation arises when the party cue and the disagreeable information are at odds with one another, for example, when partisan identifiers encounter attitude-disagreeable information that is consistent with

their party identification (i.e., attributed to the political party with which they identify). When a situation like this occurs, how do partisans cope? Do they simply adjust their issue attitudes to conform to their partisan beliefs? Or is the power of party conditioned by this information, resulting in people engaging in a more thoughtful process *despite* the presence of party cues?

In general, the literature is supportive of both of these processes occurring. For instance, Carsey and Layman (2006) show that when someone's party identification is inconsistent with their issue positions, they are willing to modify their party identification to be consistent with their issue position. This shows that there are situations that suggest people are thoughtfully revising their partisan identities. Yet the balance of the research shows that converse is true and that people more often modify their issue attitudes based on their existing partisan identities (Dancey and Goren 2010).

Also supportive of a more thoughtful response to the mismatch between party and issue positions is work showing that situations like these create cognitive tensions that motivate high effort information processing (Arceneaux 2008; Lavine, Johnston and Steenbergen 2012). Best demonstrated in the work on "ambivalent partisanship" by Lavine, Johnston and Steenbergen (2012), this research finds that some partisan identifiers can be ambivalent, a cognitive state that leads them to be more open-minded and thoughtful when making decisions. For example, ambivalent partisans are more likely to rely on complex decision-making criteria, like issues positions, when evaluating politicians. Less clear from this research is the precise cause of partisan ambivalence, though it seems intuitive that one potential cause, at least in the short-term, could be exposure to countervailing attitude and partisan information, such as when a partisan identifier encounters party-consistent but attitude-inconsistent information (or vice-versa). In short, the mismatch of party and attitude information may result in relatively high-

effort information processing that is in-line with the kinds of open-minded thinking discussed earlier.

I channel research on the connection between party identification and issue attitudes as well as recent work on partisan ambivalence to generate the hypotheses I test in this chapter. This leads me to two general expectations for how people will react when presented with information that places their issue attitudes in opposition to their partisan identities. I expect that encountering high levels of disagreeable information that places people's issue attitudes and partisan identities in opposition to one another (such as when Democratic identifiers encounter a great deal of attitude-disagreeable information that is attributed to Democratic elites) will motivate people to be more thoughtful and to reconsider their partisan identities. My second expectation is that variation in partisan identities will have a downstream effect on the degree to which people rely on their party ID and issue attitudes when forming evaluations. In short, people who reconsider their partisan identities should rely less on this identity when forming an evaluation and more on their issue attitudes. The findings I present in this chapter are supportive of both expectations.

Conclusion

The bulk of this chapter has been devoted to outlining and supporting my argument for why and how political disagreement can affect the nature and quality of citizens' political judgments, specifically by motivating them to be more open-minded. I began by identifying three traditions that undergird many of the studies of public opinion and political decision-making. While all of these approaches to studying judgment have merits, in light of recent work in psychology and political science it is increasingly evident that they paint too narrow a picture of how peo-

ple think and reason about politics. I focus on the central role disagreement and disagreeable information plays in the democratic process as the starting point for my argument that certain political situations can affect how people reason about politics. Drawing heavily from research on the different psychological motivations people can rely on when making judgments, I contend that large amounts of political disagreement and disagreeable information can depress the tendency people have to engage in biased, motivated reasoning and instead lead them to a more open-minded reasoning approach.

The next two chapters serve as the first test of this argument. While presented as separate chapters, they are best viewed as two pieces of a single chapter that has been split in half due to problems with brevity. Chapter 3 introduces the original study I designed and implemented to explore disagreement and reasoning. I rely on data collected from these studies for all of the empirical analyses in this project so I spend a good deal of time giving an overview of the study design. This includes detailing what my experiment required participants to do and what kinds of stimuli they encountered. I also provide details about sample characteristics and recruitment. It is also in this portion of the chapter that I give an overview of my approach to experimentally manipulating political disagreement.

The second half of my third chapter is devoted to basic analyses of data from the experiment. These analyses serve two purposes. The first is to provide a simple overview of what people do during my study. To that end, these analyses show that people spend time engaging with the information they encounter during my study. The second is to provide an overview of how some traditional political science variables, like political sophistication, and demographic characteristics relate to patterns of information search. While neither set of descriptions and analyses is meant to test theoretical predictions, together they provide a measure of face validity that my study affects how people think about politics.

My fourth chapter serves as the empirical test of the predictions outlined in the previous section of this chapter. Relying on the data discussed in Chapter 3, this chapter examines how exposure to varying levels of political disagreement affects the three areas of the reasoning process. This includes the nature of people's information search, how they think about the information they access, and then how they bring that information to bear on a decision.

Chapter 3

Research Design

3.1 Introduction

The focus of this chapter is providing an overview of my research design and some basic descriptive summaries of how participants behave within my experimental environment. The first section of this chapter motivates and describes the large-scale study I designed and fielded to test how exposure to varying amounts of political disagreement and disagreeable information affects reasoning and judgment. The core feature of this study is that I create information environments containing varying levels of political disagreement and disagreeable information and then embed people in those environments with the task of making a judgment. This procedure allows me to draw strong causal inferences about how varying levels of disagreement affects the nature and quality of participants' judgments. The overview of my design includes an outline of the various portions of the study, a description of my stimuli and manipulations (with an emphasis on my approach to manipulating disagreement), and a discussion of the robustness checks I ran on my data and experimental manipulations. I also spend a portion of this section discussing my use of the dynamic process tracing environment (DPTE) (Lau and

Redlawsk 2006; Redlawsk and Lau 2009) to create my information environments.

The latter half of this chapter is devoted to summarizing and describing some of the basic patterns of information search that characterize participants' behaviors when exploring their information environments. As a reminder, I examine multiple stages of the reasoning process. This includes the search for information, how people process and integrate information, and then how they bring that information to bear when making decisions. Because of this, it is valuable to describe some of the basic features of people's searches for information. This is accomplished by examining three measures of behavior in the information environments: how much information participants collect, how much total time they spend viewing information vs. navigating their information environment, and the average amount of time they spend viewing a given piece of information they collected.

As these analyses show, the first and third variables are largely mirror images of each other, with each providing a different way to think about how people collect information in the environment. The second variable provides me with a way to examine how much time people spend looking for information vs. viewing (and presumably processing) that information. After engaging in this first cut of the data, I turn to a more in-depth discussion of the relationship between participants' characteristics, like political interest and sophistication, and these measures of information search. Both analyses provide face validity that people actively engage with their artificial information environments.

3.2   Research Design

As I highlighted in Chapters 1 and 2, existing work on political reasoning falls short in a few ways. The most significant is that it does little to probe the conditions under which people will engage in an open-minded, accuracy motivated

approach to judgment rather than a closed-minded, directional motivation approach. To overcome this shortcoming, my study design must attempt to create situations that could make it more or less likely for people to rely on accuracy vs. directional motives and then provide sufficient ways to distinguish between these approaches to reasoning. As I also argue, one situation that can lead people to rely more heavily on accuracy motives is when they encounter high levels of political disagreement and disagreeable information.

To test my expectations about disagreement and reasoning, I developed an original experimental framework that simulates debate surrounding an important political issue. The core feature of the design is that I experimentally vary the amount of available information about an issue that a participant finds disagreeable. I accomplish this by embedding people in information environments containing different amounts of disagreeable and agreeable political information. I rely on a freely available software program called the dynamic process tracing environment (DPTE) (Lau and Redlawsk 2006; Redlawsk and Lau 2009) to create my simulated environments and to measure the judgment process. I go into detail about my use of the DPTE in a later section.

The first step in designing this study was to identify an issue around which to center the disagreeable information. My objective was to pick an issue that is relevant to contemporary politics. This ensures that the findings from my study speak to an important issue while also maximizing the likelihood that people have strong prior opinions. The issue must also have a partisan component because I am also interested in how party cues shape people's reactions to disagreeable information. Ideally, the partisan nature of the issue will allow me to credibly attribute either side of the debate to Republicans or Democrats. These requirements led me to focus on the issue of immigration reform.[1]

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[1]It is important to acknowledge the contentious nature of the language used in the debate

Public opinion polls administered a few months before the initial portions of this study were fielded reveal a great deal of variation in citizens' views about immigration reform. For example, a Fox News Poll from December 5-7, 2011 finds that most citizens favored allowing illegal immigrants to stay in the country if certain requirements, such as paying back taxes, were met.[2] Similarly, a CNN/ORC Poll from November 18-20, 2011 shows that almost 70% of Americans feel sympathy toward immigrants. Despite this, the same poll also shows that Americans favor, 53% to 45%, building a 700 mile fence along the border with Mexico. These polls document two important features of the debate surrounding immigration reform. The first is that a large proportion of Americans have attitudes on the issue. This is good because it makes it likely that I will find a large number of study participants who disagree with at least one side of the issue I present. Further, while these opinions are not necessarily in opposition to one another, the responses do suggest that Americans have some inner conflict about immigration reform, as indicated by the overlapping proportions who felt sympathy toward undocumented immigrants while also supporting more restrictive border security policies. This adds credibility to my manipulations because there is room for citizens to latch on to either side of the information.

Also relevant is that immigration reform is consistently an important issue to the American public. It was an important issue during the 2008 Presidential election and again during the 2012 Republican Primary. As Republicans contemplating a run for the White House in 2016 begin jockeying for position, the issue

about immigration reform. In particular, the term "illegal immigration" and "illegal immigrant" is increasingly criticized as being dehumanizing and racialized (Demby 2013). Despite this, I rely extensively on the term illegal immigration and illegal immigrant in my survey questions and experimental stimuli. My use of the term illegal immigration/immigrant, rather than an alternative like undocumented immigrant, is intentional and intended to map onto how the issue is discussed by politicians and the popular press.

[2]See http://www.pollingreport.com/immigration.htm for an overview of the polls.

many of these candidates focus on is immigration reform.[3] Additionally, elites within both the Democratic and Republican parties are again seeking to reach a bipartisan compromise on immigration reform (Preston 2013), with at least one 2016 presidential hopeful, Republican Senator Marco Rubio (FL), serving a key role in the bipartisan group (Preston and Parker 2013). All of this is to say that not only do members of the mass public have beliefs and attitudes about immigration reform, but that the issue is also centrally important to on-going elite debates and is quite likely to play a significant role in the upcoming 2014 and 2016 elections.[4]

I center my simulated debate on one important dimension of the debate over immigration reform: the supposed danger undocumented immigrants pose to public safety in the United States. I focus on this dimension of the issue for a few reasons. The first is that by highlighting potential concerns with public safety, I hope to tap a more "gut level" aspect of the issue than I would by focusing on relatively abstract features of the debate, like jobs and the economy. Again, this will help to ensure that people have opinions about the issue. The second is that focusing on the impact of immigration reform on public safety allows me to utilize a relevant task for participants to engage in while participating in my study. All participants are tasked with casting a vote for a ballot initiative aimed at curtailing potential threats to public safety posed by undocumented immigrants. The language of the initiative was adapted from recently passed reforms aimed at restricting immigration in Arizona (see the appendix for the language used).[5] Given the recent legislative activity surrounding the issue, it seemed advanta-

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[3]For example, see a recent interview Florida Gov. Jeb Bush gave to discuss his new book *Immigration Wars* (Dann 2013).

[4]My use of a salient issue is an important departure from most studies of information processing and decision-making (Druckman, Fein and Leeper 2012), which tend to focus on more obscure and/or highly technical issues, such as urban growth (Chong and Druckman 2007).

[5]See here for the text of the bill: http://www.azleg.gov/legtext/49leg/2r/bills/sb1070s.pdf

geous to task participants with learning about and voting on an initiative aimed at addressing concerns that are actively subject to legislative activity.

Study Overview

I fielded two experiments to examine the relationship between exposure to political disagreement and decision-making. Study 1 was administered during January of 2012 and the second study was in the field from April-May of 2012. Participants in the first study were coded as being in an information environment containing either a low, moderate, or high level of political disagreement. Thus, there are three experimental conditions for Study 1. Participants in Study 2 were assigned to the same low, moderate, or high disagreement conditions; however, these conditions were fully crossed by a party cue manipulation that attributed a given piece of information to either a Republican source, a Democratic source, or sources that were not partisan. This results in 9 experimental conditions from a 3 (Disagreement: Low, Moderate, High) x 3 (Partisanship: Non-Partisan, Disagreeable Democrat - Agreeable Republican, Disagreeable Republican - Agreeable Democrat) design. The manipulations in Study 1 and the non-partisan conditions in Study 2 are identical, which allows me to combine them for the non-partisan disagreement analyses in Chapters 4 and 5.

I will return to a more detailed discussion about my strategy for manipulating and coding disagreement in a later section. For now what is important is to reinforce that my approach for understanding how disagreement affects the nature and quality of citizens' political judgments is to vary the amount of disagreement they encounter while learning about immigration reform and determining their support or opposition to the ballot initiative.

The procedure and materials are the same for both studies so I will discuss

them together. There are three phases to the study.[6]   Phase 1 consists of recruitment, completion of informed consent, and responding to a pre-treatment survey. The pre-survey included a variety of questions about immigration reform, including ones specifically aimed at tapping people's attitudes about public safety and immigration. I also administered a series of questions to measure partisan ambivalence, a concept that is relevant to my chapter on partisan disagreement (Lavine, Johnston and Steenbergen 2012). This section also included questions about political interest, party identification, and ideological self-identification.

Phase 2 of my study contained two parts, a practice session and the experiment. Prior to engaging in the experiment, all participants completed a practice session in which they were told how the DPTE functions, including that the environment is timed, that information changes over time, and that once a piece of information leaves the screen it may no longer be available for them to access.[7] During the practice session participants were able to familiarize themselves with how to interact with the DPTE by participating in a 1 minute practice session during which participants navigated an information environment containing non-political information.[8]

After completing the practice session, all participants read a general description of the ballot initiative (including that it restricts the rights of illegal immigrants) and received instructions about completing the main experiment in the study (which I also refer to as the argument portion of the study). The argument portion of the study is where participants are exposed to the simulated political debate. This section of the study is timed and lasts for a little under 5 minutes. After the allotted time has elapsed, participants are automatically taken to the

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[6]All survey materials are contained in the appendix.

[7]Each piece of information was available twice during the study. Participants did not know that this was the case.

[8]The practice session information was about new computer technology.

third, and final, phase of the study.[9]

Phase 3 began with participants casting a "Yes" or "No" vote on the ballot initiative. I also administered a manipulation check, a cognitive response task, the immigration attitude questions (to measure attitude change), political knowledge items, and a host of individual difference batteries.[10] After completing this portion of the study participants were debriefed and their participation in the study was complete.

For both experiments all participants were recruited from Amazon.com's Mechanical Turk (MTurk) (Buhrmester, Kwang and Gosling 2011; Berinsky, Huber and Lenz 2012). MTurk is a relatively new tool social scientists are using to recruit participants for studies that require human participants. The MTurk service brings together two groups of people, "Requesters" and "Workers." Through a web-based platform, Requesters post a Human Intelligence Task (HIT) describing the nature of the task and the financial compensation Workers will receive if they accept and successfully complete the task. My HITs were described as a "Political Information Survey" (a full text description is contained in the appendix). The description said that my study would take workers approximately 20 minutes to complete and that they would receive $1 for successfully completing the study.

A key advantage of MTurk is that the Requester can place requirements on who is eligible to accept their HIT. To participate in my study, I required all participants to be US citizens and to have at least a 95% MTurk rating.[11] All Workers were compensated for their participation in my studies as long as they completed the HIT.[12] Because potential participants are given the opportunity to

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[9]Participants could not advance to the next portion of the study prior to this time elapsing.

[10]I included questions to measure need for cognition, need to evaluate, need for closure, and Big 5 personality characteristics.

[11]MTurk Workers have an approval rating based on how often their work is accepted or rejected by Requesters. A 95% approval rating means that all of my participants had to have successfully completed their work and had it accepted 95% of the time.

[12]Thus, people were paid regardless of the perceived quality of their responses. Even if some-

read a more detailed description of my study prior to accepting the HIT, I am also able to outline additional requirements for successful study participation, the most important of which is having a web browser capable of displaying Adobe Flash Player for use of the DPTE.

Combining both studies yields a total sample size of 1,323 participants, though in practice this number is smaller in most analyses because I only examine some of my experimental conditions at a given time and because of missing data. While participants who complete studies on MTurk do not mirror a national random sample in the United States, they do look closer to the demographic composition of the United States than do convenience samples typically used for experimental work (Berinsky, Huber and Lenz 2012).

The most significant demographic difference between these participants and a nationally representative sample is the distribution of party identification. For both studies, roughly 60 percent of participants are self-reported Democrats.[13] While large, this difference should not be concerning for two reasons. First, my goal is not to generalize my results to a representative sample but rather to isolate the causal effect of disagreement on decision-making. Second, I do not have reason to believe that partisanship influences the link between disagreement and decision-making; specifically, I do not expect Democrats and Republicans to react differently to exposure to disagreement.[14]

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one clicked through every survey question and did not give an answer they would have been compensated for their work. However if they did not finish the survey, such as by closing their screen before the debriefing statement, I was unable to provide them with compensation.

[13]This percentage includes coding partisan leaners as partisans.

[14]Including controls for participant party identification does not change any of the results discussed in my analyses.

Manipulating Disagreement

As discussed earlier, the experimental conditions I analyze differ with respect to the level of disagreement they contain. The level of disagreement is determined by the amount of available disagreeable information available contained in the environment. Participants are randomly assigned to one of three conditions, each of which contains a series of arguments in support of or opposition to implementing the restrictive immigration initiative. What varies across each of the three experimental conditions is the proportion of available arguments in support or opposition to the initiative restricting illegal immigration. The first condition contains a large proportion, 80%, of arguments in favor of the initiative with the remaining 20% in opposition. The second condition contains an even split of arguments in support and opposition to the initiative. The third condition contains 80% of arguments opposed to the initiative and 20% in support of it. All of the information in a participant's information environment either supports or opposes the initiative. Each piece of information has a headline that clearly conveys the substance of the argument. Each environment contains 10 unique arguments, each of which is available twice during the study.

The average argument is about 150 words long and contains a thesis statement, supporting information from a fictional source, and a conclusion. While the sources of information are not real (but are made to appear real), the content of each argument is based on real statements or concerns that exist about immigration and public safety. I gathered a universe of these arguments by reading newspaper articles, editorials, and government reports about illegal immigration. All of the arguments were pilot tested for their strength and understandability.[15] The argu-

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[15]I initially pilot tested 30 arguments, 15 pro-initiative and 15 anti-initiative, for use in this study. Of those arguments, 16 (8 pro, 8 anti) were comparable in terms of perceived argument strength. I restricted the arguments used in these experiments to those 16 arguments. This means that in the asymmetric conditions, e.g., the high anti-initiative condition, all 8 anti-

ments used for the experiments are those that received the highest strength and comprehension ratings in the pilot study (results from the pilot test on argument strength are included in the appendix). Of the arguments used in my study there are no difference in perceived argument strength or comprehension across the pro- and anti-initiative arguments.

While my randomized treatment is assignment to an information environment with different proportions of information on one side of the ballot initiative or the other, my actual interest is in the amount of attitude disagreement a given treatment creates for a participant. I identify disagreement based on participants' prior attitudes about immigration reform and the content of the information in the environment to which they were assigned. To measure these attitudes I use a battery of agree-disagree questions about participants' views of illegal immigration, illegal immigrants, and public safety. Responses fall on a 6 point scale ranging from Strongly Disagree to Strongly Agree. There is no midpoint. Participants answered 6 of these questions. I rely on the item asking participants if they agree or disagree with the statement, "Illegal immigrants pose a threat to public safety in the United States" to code the level of disagreeable information contained in a participant's information environment. I dichotomize responses to the question so that a 1 corresponds to pro-initiative/anti-immigration attitudes (thus, endorsement of the statement) and 0 captures anti-initiative/pro-immigration views.

I then combine the dichotomous measure of attitudes with my knowledge of the amount and content of pro- and anti-initiative information in the environment to code the level of disagreement a participant encountered. The result of this combination is participants being in an environment with one of three levels of disagreement I referenced earlier: high disagreement, neutral disagreement, or

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immigration arguments are used. This requirement is what determined the total number of arguments I used in each study.

low disagreement. For example, someone coded 0 on the dummy variable (anti-initiative/pro-immigration reform attitude) and assigned to the treatment with 80% of information in support of the initiative is in a high disagreement information environment. Had the environment instead contained a majority (80%) anti-initiative information (pro-immigration reform), the participant would be coded as being in a low disagreement environment.[16] Table 3.1 displays the percentage of participants in each environment for both studies.[17]

Table 3.1: Distribution of Participants by Information Environment

Environment	Study 1	Study 2
High Disagreement	32% (n = 61)	32% (n = 128)
Neutral	40% (n = 75)	38% (n = 152)
Low Disagreement	28% (n = 53)	30% (n = 117)
Total	189	397

In sum, the amount of disagreement to which someone is exposed is a function of their prior attitudes and the content of the information in their information environment. Varying the amount of available disagreeable information - information that is counterattitudinal, or in opposition to people's prior attitudes - vs. agreeable information is the core of my approach to studying how political disagreement affects reasoning. Varying the presence of different amounts of disagreeable information is what allows me to draw inferences about how disagreement affects reasoning. Manipulating disagreement in this way allows me to test my expectation that disagreeable information can change the way in which people

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[16]A similar approach to coding disagreement with information in a DPTE environment is used by (Redlawsk, Civettini and Emmerson 2010). A key difference between our approaches is that their work examines disagreement with information about artificial candidates whereas my studies relies on disagreement with real information about a salient political issue. The valence of information with respect to a participant's attitudes is less clear in their study because headlines do not indicate information content. My headlines, on the other hand, explicitly indicate the content of information, thus providing participants with a general idea of if they will agree or disagree with the information prior to accessing it.

[17]For Study 1 the table displays results for all participants. For the second study only participants who were assigned to the non-partisan conditions are included.

approach making political judgments.

Dynamic Process Tracing Environment

I rely on the dynamic process tracing environment (DPTE) to create the information environments to which I assign participants (Lau and Redlawsk 2006; Redlawsk and Lau 2009). Like a static information board, the DPTE presents information to participants as text boxes with headlines describing their content. Participants who click on a text box are taken to a new screen where they are shown an argument that corresponds to the headline they saw on the previous screen. They can spend as much or as little time as they want reading that argument. The software tracks which pieces of information participants access, how much time they spend with the information, and the order in which they access the information. This allows me to study many features of participants' information searches, including those of which I argue map onto open- vs closed-minded searches for information.

While the DPTE shares many features with a traditional information board there is a key difference. The information that is available to participants changes over the course of the study. Thus, the key difference between my study and those using traditional (static) information boards is how information is presented to participants. The DPTE interjects dynamics into the presentation of information in two ways. First, the text boxes in the DPTE change throughout the course of the study (they scroll from the top to the bottom of the computer screen). For my study, all participants are initially presented with a single text box (corresponding to a single argument). Every 10 seconds one additional text box appears on the screen, with a maximum of 6 text boxes displayed on the screen at a given time. The second way my study is dynamic is that participants are given a lim-

ited amount of time, approximately five minutes, in which to access information. After this time has elapsed they proceed to the portion of the study where they cast a vote on the initiative. A timer is displayed throughout the study so that participants know how much time is remaining in the study.

The shifting nature of information and the limited amount of time in which participants can access that information are critical features of my study and an important advantage my study has over research which relies on a static board or no participant control over information exposure. Dynamics constrain the amount and types of information participants can access, requiring them to pick and choose carefully which pieces of information they most want to access. Once a piece of information is gone, the participant has no guarantee that they will see it again. As a result, participants should engage in more selective searches for information, which maps more closely onto how people consume information in the real-world (Druckman, Fein and Leeper 2012). Figure 3.1 contains a screen shot of the DPTE during the argument portion of a non-partisan condition in the study

Checks

Prior to engaging in data analysis I first verified that relevant covariates were balanced across the three disagreement information environments. Suggestions are mixed regarding whether or not checking for balance is necessary before proceeding to analyze experimental data (Bowers 2011; Mutz 2011, 2012). However, because I rely on pre-treatment covariates to partially define the amount of disagreement in participants' information environments, it seemed prudent to assess whether covariates are balanced across environments.

To assess balance I relied on the balance assessment techniques provided in the **R Matching** package (Sekhon 2011).[18] Rather than matching on covariates,

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[18]I performed similar analyses for treatment assignment. Results are similar and do not suggest

Figure 3.1: An Example of the DPTE
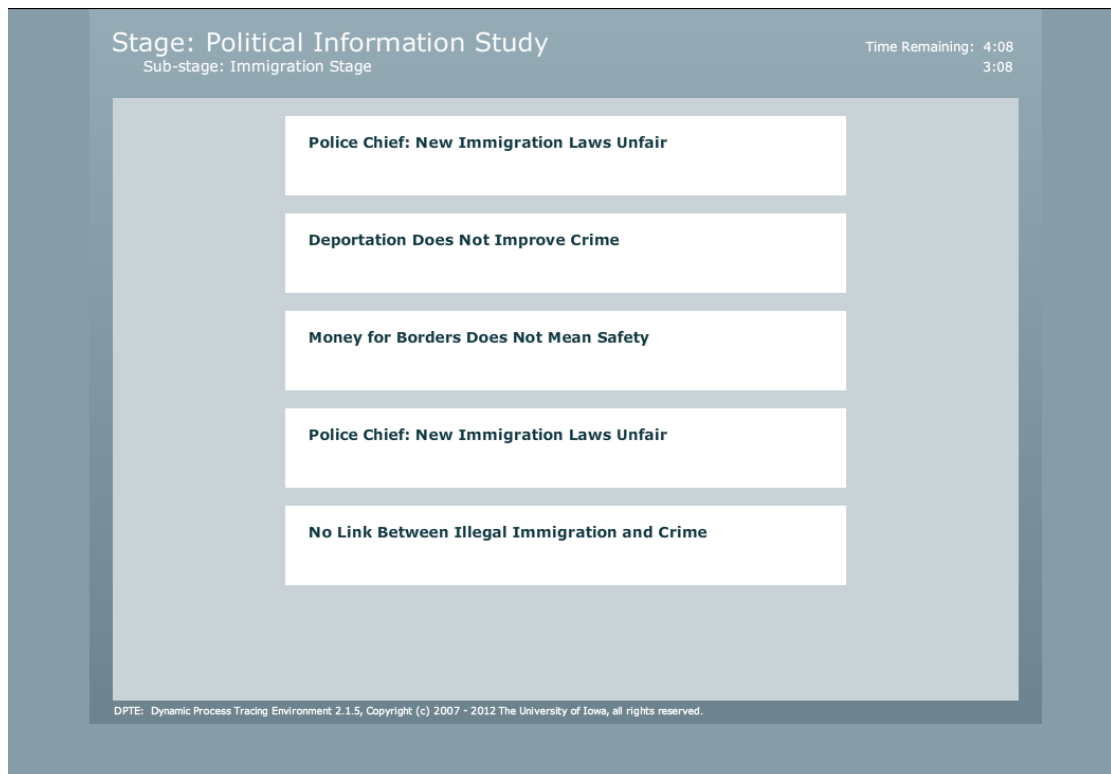
I specified a model predicting presence or absence of a participant in each of the three disagreement conditions: high disagreement, neutral disagreement, and low disagreement as a function of a variety of covariates. The covariates I used in this test were age, education, political interest, openness to experience, need for closure, the immigration battery, and party identification. Across both studies, the only consistent covariate imbalance is age (in 3 of the 6 tests). All subsequently reported models have been run with and without adjustments for age and the results are unchanged. Reported results are not adjusted for age unless explicitly reported in the text and/or my output.

It is also important to verify that the experimental manipulations have their intended effect. For my manipulation check, I ask participants to describe their

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that there are important covariate imbalances across the information treatments.

perceptions of the total proportion of pro and anti-ballot initiative arguments that was contained in their information environment. Specifically, they are instructed to:

> "Think back to the headlines you saw about arguments concerning illegal immigration. Some were supportive of the ballot initiative to restrict illegal immigration. Others were opposed to the initiative to restrict illegal immigration.
>
> Including those that you did and did not read, do you recall seeing more headlines that were supportive of the initiative, more headlines that were opposed to the initiative, or an even number of arguments in support and opposition to the initiative?"

Participants then responded by saying they saw, "More headlines in support of restricting illegal immigration than in opposition," "More headlines opposed to restricting illegal immigration than in support," or an "Even number of headlines in support or opposition."

The point of this check is to see if people correctly identify the different proportions of pro- and anti-initiative arguments in their information environment. Presumably people in the environment with 80% of the arguments opposed to the initiative should perceive that there were more headlines opposed to restricting immigration than there were supporting the restriction. Table 3.2 displays a crosstab between the three possible responses participants could give to this question and a categorical variable coding which of the three information environments to which they were assigned.

Comparing the observed vs. expected frequencies reveals that there are systematic relationships between the information in participants' information environments and their responses to the manipulation check. The chi-square test of no relationship between the two variables is rejected at p < 0.001 ($X^2_{df=4} = 119.49$). The observed frequencies indicate that people accurately perceive the nature of the

Table 3.2: Relationship Between Information Environment Treatment and
Perceived Content of Information in the Environment

	Environment		
	High Pro-Initiative	Neutral Pro & Anti	High Anti-Initiative
More Anti than Pro	27 (55)	56 (74)	106 (60)
Even	35 (43)	84 (58)	29 (47)
More Pro than Anti	82 (46)	53 (61)	22 (50)
Total	144	193	157

Table displays observed frequencies with expected frequencies in parentheses.

information in their environment. For each of the three information environments, the majority of participants report seeing an amount of information that corresponds to their treatment assignment. For the asymmetric conditions (high pro- or high anti-initiative information), the second most common response is to say there was an even split. Even for the balanced environment, the majority of participants accurately perceived the nature of the information, while the remaining participants were evenly divided between perceiving more pro - vs. anti-initiative information. This analysis also reveals that there are not systematic misperceptions in a given environment favoring one kind of information over the other (i.e., people in the neutral environment do not systematically perceive there to be more anti- than pro-initiative information).

3.3   General Information Search Patterns

Descriptive Statistics

The remaining sections of this chapter are devoted to describing participants' basic information search patterns during the argument phase of my study. As I discussed at the end of the previous chapter, many of the variables I focus on in my analyses capture processes, like information search. Because of this, it is

of the utmost importance that people in my studies actually engage and interact with the information to which they have access. Before moving on to substantive tests of my hypotheses, I focus on three basic features of people's behavior in the DPTE: the amount of information they collected, the total amount of time they spent viewing information vs. navigating the information environment, and the average amount of time they spent processing a given piece of information.

All of these summaries and analyses ignore the content of the information, i.e., whether participants find it agreeable or disagreeable, because I explore those patterns in subsequent chapters. The final portion of this section is devoted to summarizing the relationship between these basic search variables, demographics, and predispositions, like political ideology, typically examined by political scientists. These analyses are conducted on all participants from my studies (thus, for Study 2, participants assigned to the partisan and non-partisan conditions).

My approach to measuring how much information people collected in their information environment is straight forward. For each participant, I add together the total number of arguments they accessed during the argument portion of the study. Because of the timed nature of my information environment, the number of arguments participants accessed and the average amount of time they spent with that information are closely, but inversely, related to one another. This indicates that there is a clear tradeoff between accessing more information and spending more time with a given piece of information. Because participants also spend time navigating their environment, such as when they spend time waiting for a piece of information they want to access to appear on the screen, there is not a perfect relationship between these two outcomes. Nor is there a perfect correspondence between the total amount of time spent navigating the environment variable and the average amount of time spent viewing a given argument variable.

I begin by summarizing the amount of information participants accessed, with

a possible maximum of 20 arguments accessed. One factor that complicates these summaries is that participants in Study 2 accessed significantly more information than did participants in the first study. The average number of arguments accessed in Study 1 is 9.78 (SD = 4.0) while in Study 2 the average number accessed is 11.34 (SD = 4.7). While this difference is statistically significantly (t = 3.6, p < 0.001), I combine responses from both studies because the patterns of information access are similar across both studies and do not impact the results I report in this chapter.

Figure 3.2: Histogram of Total Pieces of Information Accessed - All Participants
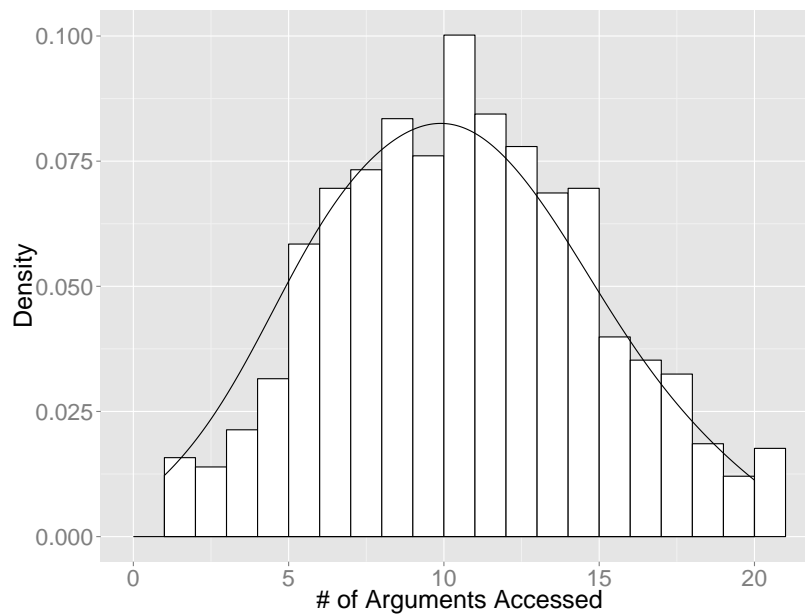
Figure 3.2 is a histogram of the distribution of the average number of arguments accessed by participants. Two features are apparent. First, the distribution is approximately normal, albeit with some positive skew. Second, the center of the distribution, 10.9, indicates that, on average, participants accessed a little over half of the available information in the environment. Combined, these features indicate that participants in the study are engaging in structured searches for information. While they are actively accessing information, which is clearly important for my

study, the graphs also indicate that they are doing so in a structured way and are not simply randomly accessing all of the information they can.

The other way to examine participants' search behavior is to summarize the various ways in which they allocate their time viewing the information in the environment. I do so with two variables. The first is the total amount of time participants spent viewing arguments during the study. This variable is created by totaling the amount of time participants spent with an argument open on their computer screen. Essentially this variable captures how much time people devoted to examining information vs. how much time they spent navigating their information environment. The second variable I rely on is the *average* amount of time participants spent viewing a given piece of information. This variable is created by dividing the total amount of time participants spent looking at information by the number of arguments they collected.[19]

Figure 3.3: Total Time Spent Viewing Information (Panel 1) & Average Time Spent Viewing A Single Piece of Information (Panel 2) - All Participants
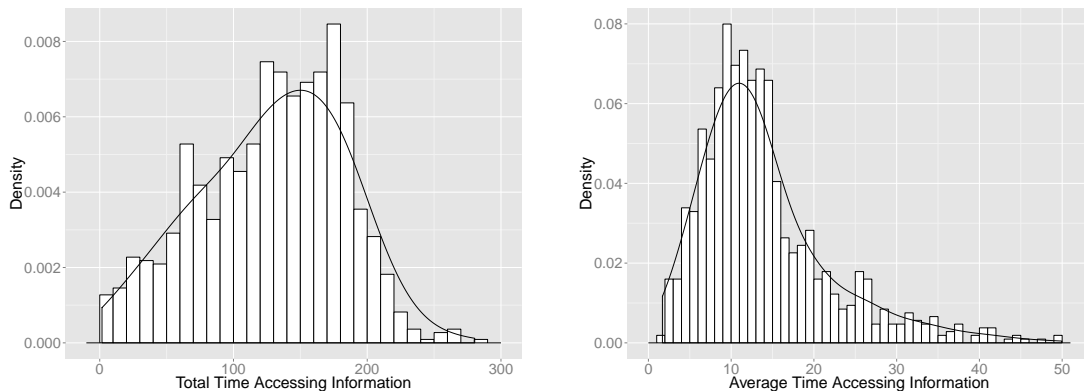
Figure 3.3 displays histograms for both time variables. On average, participants spent 128 seconds (SD = 54) viewing information in their environments.

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[19]There is no difference between Studies 1 and 2 in terms of the total amount of time a participant spent viewing information. There is a difference between the studies in terms of the average amount of time participants viewing a single piece of information, which is unsurprising given the difference in total number of arguments participants accessed across the studies.

Given that each participant could have spent a maximum of a little under 5 minutes (300 seconds) looking at information, this indicates that participants spent around 40% of available time actually looking at information. Their remaining time was spent navigating the DPTE. That participants did not spend all of their time accessing information suggests that they spent a great deal of time navigating the information environment and selecting which pieces of information to consume. This means that it is likely that participants engaged in strategic choices about which pieces of information they should access.

The final variable capturing behavior in the environment is the average amount of time participants spent accessing a given piece of information (the second panel in Figure 3.3). The average amount of time is 16 seconds (SD = 7). The most interesting feature of this distribution is its right skew, which indicates that some participants spent significantly more time accessing a given piece of information than did most participants in the study.

To summarize, participants dedicated a little less than half of their available time in the environment to accessing information and, in turn, accessed roughly half of the information available to them. While the substantive impact of accessing more or less information is not yet evident, what is clear from these data is that participants are exploring their information environments and making choices about which pieces of information they read. In the next section I address the relationship between traditional measures of political behavior, such as demographics and political predispositions, and the search variables.

Predicting Search Variables

All three of the previously discussed variables have a great deal of variation in their distributions. While the average number of arguments accessed by par-

ticipants in the studies was around 10, a standard deviation of 4 indicates that two-thirds of participants accessed between 6 and 14 arguments. To take a first cut at explaining this variation, I focus on three classes of predictors of behavior: demographics, motivation, and political predispositions. For demographics, I focus on age, gender, education, and race. To assess motivation I focus on political interest, issue importance (how personally important a participant finds the issue of illegal immigration), and participants' prior attitude about immigration. Finally, I also explore the effect of predispositions in the form of party and ideological self-identification, openness to experience, and need for closure. The appendix includes a full description of question wording, coding, and summary statistics for the variables.

To study the relationships between these variables and my search outcomes, I first calculated uncontrolled comparisons between each of the independent variables and the three dependent variables. I then ran a multiple regression for each dependent variable and included as predictors those variables that were significant in the bivariate comparisons. The results from these models are displayed in graphical form in Figures 3.4, 3.5, and 3.6. Each bar corresponds to a *standardized* regression coefficient. Stars above/below a given bar correspond to statistical significance. The predictors included in a given model differ depending on the dependent variable and which variables were significant in the bivariate comparisons. For each model I report the coefficients on all of the variables regardless of their statistical significance.

For the first dependent variable, the total number of arguments a participant collected, five variables were statistically significant in bivariate comparisons. In the multiple regression, a respondent's age, prior attitude about immigration reform, and openness to experience were significantly associated with accessing more information.

Figure 3.4: Regression - Total Amount of Information Accessed

$** p < 0.01, * p < 0.05, + p < 0.10$
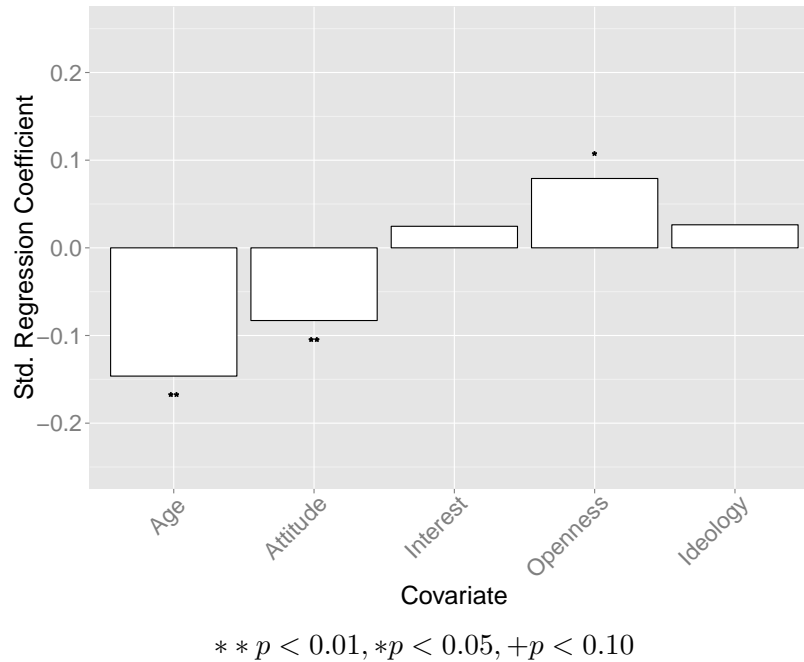
Consistent with existing work using the DPTE (Lau and Redlawsk 2006), age is negatively related to the amount of information consumed during the study. The simplest explanation for this is that older participants are less comfortable with the environment, and perhaps using computers in general, and therefore had less time available to devote to seeking information. Prior attitudes are coded such that higher values correspond to a more negative view of immigration, thus a negative coefficient means that people with a negative view about immigration access significantly less information. Finally, the coefficient on openness, which is coded so that higher values indicates being more open, indicates that those who are high in openness access significantly more information than do those who are low in the trait. This relationship is consistent with past work showing a positive association between openness and information search (Mondak 2010). Finally, while ideology (coded so that higher values indicate conservative views) and interest (coded so

that higher values correspond to more interest in politics) were both significant in bivariate analyses, neither retained a statistically significant relationship in the multiple regression.

The second dependent variable is the average amount of time spent by a participant accessing a given piece of information. As a reminder, this variable essentially acts as the inverse of the total number of arguments accessed variable because there is a natural tradeoff between how much time is spent accessing information and the amount of time available to read the information. Because of this, many of the predictors of information access also predict, though in the opposite direction, the average amount of time someone spent processing a piece of information. The results are presented in Figure 3.5.

Figure 3.5: Regression - Average Time Spent Viewing A Single Piece of Information

$**p < 0.01, *p < 0.05, +p < 0.10$
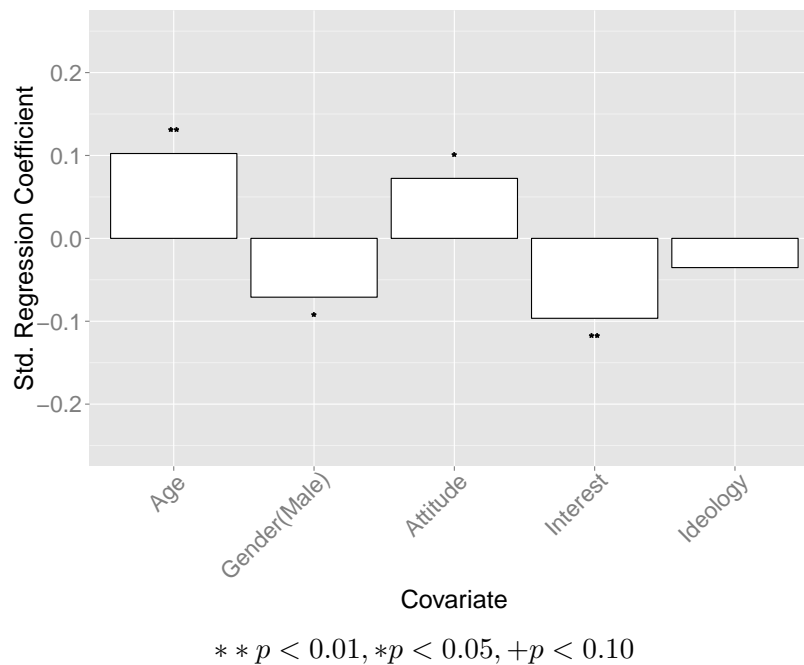
Age, gender, prior attitude, and political interest are statistically significant and, when included in both models, signed in the opposite direction as they were

in the model displayed in Figure 3.4. Gender is significant, with males (coded 1) spending significantly less time on average viewing the arguments. In general, the results from these models confirm my assertion that, at least when restricting my analysis to the overall amount of information searched for and the average time spent processing a piece of that information, there is a trade-off between time spent viewing information and how much information people sought out. Those attributes associated with looking for more information are also related to people spending less average time processing that information.

Figure 3.6: Regression - Total Time Spent Viewing Information

$** p < 0.01, * p < 0.05, + p < 0.10$
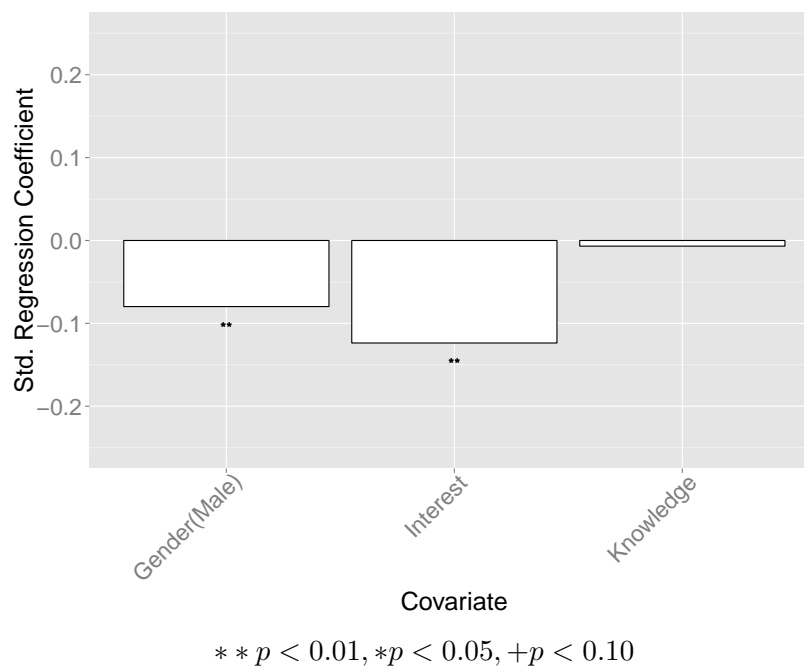
The final dependent variable for which I analyzed these relationships is the total amount of time a participant spent accessing information in the environment. Figure 3.6 displays the standardized coefficients from this model. Relatively few variables are significant in this model, with only gender and political interest being related to the total amount of time people spent viewing information. The

negative sign on political interest is initially curious, as one may assume that interested people are more motivated to evaluate information. However, what it indicates instead is that people who are high in political interest are motivated to spend more time navigating their environment, potentially because they are looking for certain kinds of information.

3.4 Conclusion

The previous chapter gave an overview of my argument for why and how exposure to political disagreement can affect how people think and reason about politics. This chapter has been devoted to explaining my research design for testing these expectations and providing initial summaries of some of the behaviors people engaged in while navigating the information environments I created. The core of the research design centers on manipulating the amount of political disagreement participants encounter about an important political issue. My approach to varying political disagreement is to change the amount of disagreeable information participants have access to. Some participants have access to very little disagreeable information and a large amount of agreeable information. These participants are coded as being exposed to low disagreement. Other participants encounter the converse while a third group encounters a balance of agreeable and disagreeable information. These participants are coded as being in a high disagreement and neutral disagreement environment, respectively.

The latter half of this chapter focused on describing some of the basic behaviors in which people engaged while navigating these information environments. Part of my argument about disagreement and decision-making centers on how research should do more to unpack the reasoning process. I contend that there is value beyond focusing only on final outcomes. Understanding behaviors leading to the

final outcome, like how people seek information, provides additional insight into the nature and quality of final judgments.

Because of the central role information search plays in my future chapters, it was important to demonstrate that people do engage in structured behavior while navigating the simulated information environments. The results reported in this chapter provide a first-cut at these behaviors. In doing so, they provide good reason to believe that people are engaging in structured information searches and that there is a good chance that there is systematic variation in these searches that can be used to test hypotheses in later chapters.

Having given an overview of my research design, how I intend to manipulate political disagreement, and a basic description of how participants behave in the simulated information environment, in Chapter 4 I will begin testing the theoretical expectations outlined in Chapter 2. Specifically Chapter 4 will examine how exposure to varying levels of political disagreement in participants' information environments affects the degree to which they engage in open- vs. closed-minded behaviors at each stage of the reasoning process.

Chapter 4

Disagreement & Judgment

4.1 Introduction

As discussed in Chapters 1 and 2, much of the existing work on political decision-making takes a narrow view of how people think and reason about politics. This includes focusing heavily on outcomes, like vote choice, while ignoring other decision-making behaviors, like information search, that can speak to judgment quality. Most existing work also argues that people approach decision-making in a homogenous fashion. For example, people are always motivated reasoners or they expend little to no mental effort when making judgments. The empirical results I present in this chapter push back on both notions. By drawing from research on psychological motivations, information processing, and decision-making, I argue that different amounts and kinds of information, specifically disagreeable information, can change the tendency people have to rely on particular motivations when making judgments. The result is that exposure to disagreeable information changes the character of people's political judgments by leading them to engage in relatively more open-minded decision-making behaviors.

This chapter broadly explores whether and how exposure to different amounts

of disagreeable information (information that is inconsistent with and challenging to people's existing political attitudes) directly affects how citizens make political judgments. As I argued in Chapter 2, people have a variety of psychological motivations they rely on when engaging in political behaviors and making judgments. Two that are especially relevant to decision-making in political contexts are 1) the motivation to maintain and reinforce existing attitudes (directional motives) and 2) the desire to hold correct and accurate beliefs (accuracy motives). At times, perhaps even most of the time, these objectives operate in tandem, with people reinforcing and protecting existing attitudes because they believe them to be correct and accurate. Yet these motivations do not always go hand in hand. As I show in this chapter, exposure to disagreeable information can place these motivations in opposition to one another. How people resolve the tension stemming from these motives being in conflict has important implications for the nature and quality of their political judgments.

There is good reason to believe that people can resolve a tension between attitude-defensive motivations and the desire to hold correct attitudes by being open to reconsidering their existing political beliefs and exposing themselves to new, challenging points of view. In other words, information contexts can motivate people to be more open-minded. This stands in contrast to the types of behaviors that many scholars view as typically defining political decision-making - closed-minded 'motivated reasoning' (Lodge and Taber 2000). The substantive focus of this chapter is identifying if and when disagreement leads to an open- vs. closed-minded resolution to this tension.

In the sections that follow, I articulate a series of hypotheses based on the argument outlined in Chapter 2 and the research design discussed in Chapter 3. I then provide a brief overview of my strategy for coding disagreement. I also discuss the various stages of the reasoning process I examine and my strategy for

operationalizing variables at each stage. I then report my results and discuss what they imply about the link between disagreement and political decision-making. A brief concluding section is also devoted to discussing my research design and findings in light of the work on motivated reasoning in political science (Lodge and Taber 2000; Taber and Lodge 2006).

4.2   Hypotheses & Measures

Hypotheses

I have three groups of hypotheses, each corresponding to a portion of the judgment process outlined in Chapter 2. In the domain of information search, I expect that higher levels of political disagreement will motivate citizens to engage in more extensive searches for information and be more willing to access information that is counterattitudinal (disagreeable). This should manifest as people collecting more information as they are exposed to greater levels of disagreement and being more willing to collect disagreeable information.

This expectation flows from the tension disagreement should produce between the desire to maintain prior/existing attitudes and to hold correct beliefs. This tension needs to be resolved (Ditto and Lopez 1992; Petty and Wegener 1998) and one way to do so is to collect more information and to be willing to access disagreeable information. If this tension is resolved by using directional (biased) motivates, then people should actively avoid exposure to disagreeable perspectives. But, if people rely on a more open-minded approach to judgment, then their behaviors at this stage of the reasoning process should reflect being willing to consider oppositional points of view.

H1 - Information Engagement: Exposure to high levels of dis-

agreement will motivate people to collect more political information.

H2 - Information Type: Exposure to high levels of disagreement will make people more open to collecting counterattitudinal/disagreeable information.

The second set of hypotheses map onto the second stage of the judgment process, how people process information once they are exposed to it. If they are engaged in processes of motivated reasoning, then exposure to disagreeable information should result in the production of attitude-protective/bolstering thoughts. Thoughts along these lines provide an effective way to insulate one's self from disagreeable points of view (Taber and Lodge 2006). However if disagreement motivates the use of accuracy goals then people should be more likely to be cognitively engaged and to be open to thinking about perspectives that diverge from their own (Kam 2006).

H3 - Cognitive Engagement: Exposure to high levels of disagreement will motivate people to have more thoughts (cognitions).

H4 - Cognitive Type: Exposure to high levels of disagreement will make people more open to thinking about counterattitudinal/disagreeable perspectives.

The final hypothesis corresponds to how people use information when making a judgment. By relying on information I mean the use of information when determining the content of a decision. If people engage in motivated reasoning then they should dismiss and ignore disagreeable information when rendering a judgment, and instead rely heavily, if not exclusively, on their prior beliefs. However, people who are open-minded and deploying accuracy goals should, in turn, be more willing to use information, even if that information is inconsistent with

their existing political beliefs (i.e., it is disagreeable). If this is the case then their final judgment should reflect the content of the information they accessed.

> **H5 - Information Use**: Exposure to high levels of disagreement will motivate people to rely on disagreeable information when making a judgment.

Study Overview

To test my expectations about disagreement and information search, I rely on a portion of the experiments I outlined in Chapter 3. Most relevant to the analyses in this chapter is that the experiment exposes people to varying levels of political disagreement and disagreeable information. This gives me leverage over questions of how exposure to different amounts of political disagreement affects each phase of the judgment process. To accomplish this I experimentally vary the amount of available information about an issue that a participant finds disagreeable. I then examine how being embedded in information environments with varying levels of political disagreement and disagreeable information influences 1) information search, 2) how people think about the issue being debated, and 3) how people use information when making a judgment.[1]

I rely on a different dependent variable to test each of my five hypotheses. The first dependent variables capture characteristics of participants' *information searches.* The link between my conceptual definition and operational measure of depth of search is straight forward. The depth of search variable is simply the sum of total number of arguments a participant accessed during the argument

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[1]As a reminder, I administered two studies. All data from Study 1 are included here. The full design for Study 2 contains 9 experimental conditions, 6 of which have partisan content and 3 of which do not. The results reported here combined data from the first study and the non-partisan portion of the second study.

portion of the study.[2] Capturing the content of participants' information searches is less straightforward. My operational measure must capture the type of information participants accessed in their information search. The challenge is that I cannot simply create a variable summing the total number of disagreeable (counterattitudinal) pieces of information participants accessed because the amount of disagreeable information available depends on if they are in a low, moderate, or high disagreement environment. Because of this inconsistency, I created a variable that captures the total proportion of available disagreeable information a participant accessed. This was created by summing the total number of disagreeable pieces of information a participant accessed and dividing it by the total amount of available disagreeable information in their environment.

My next two dependent variables correspond to what people *think* about during the study. I rely on a cognitive response task to record the measurements for both variables. This task allows participants to freely list their thoughts after completing the information board portion of my study (for a general overview of the procedure see Petty, Ostrom and Brock 1981). Cognitive response tasks have been employed successfully in a variety of political science studies to measure what people think about information (Mutz 1998; Taber and Lodge 2006; Taber, Cann and Kucsova 2009). This task is an ideal way for me to answer questions related to how disagreement shapes the content of people's thoughts.

Like other studies that examine the effect of exposure to multiple stimuli on thought listings, I administer my task after people have been exposed to all stim-

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[2]A relatively small number of participants, approximately 5%, were discarded from my analyses because the amount of information they searched for were extreme compared to what the typical participant in my study searched for. Around half of discarded participants were eliminated because they accessed almost no information (2 or fewer arguments) while the other half accessed too many (21 or more arguments, which would occur if participants repeatedly clicked on every text box in the environment at least 2 times). The decision to eliminate these participants was made using a combination of examining the studentized residuals and Cooks Distance calculations from models fit with and without these participants. Similar discarding of cases is used by other work based on the DPTE (Redlawsk, Civettini and Emmerson 2010).

uli in my study (Sawyer 1981).[3] The language used for the initial thought listing task is, "I would now like you to list some of your thoughts about illegal immigration that occurred to you while you were reading arguments in the previous section...Think back to the portion of the study during which you read arguments about illegal immigration. As you were reading those arguments and thinking about your vote on the ballot initiative, what kind of thoughts occurred to you?" Participants could list up to ten thoughts, though nobody listed more than six. When asked to code each thought, participants were told that, "I would now like you to tell me if the thoughts you just listed are positive, neutral, or negative."

I rely on answers to the cognitive response task to create variables that capture cognitive engagement and the content of people's thoughts (for testing H3 and H4). To capture the degree of cognitive engagement upon exposure to disagreement I created a depth of thought measure by totaling the number of separate a thoughts a participant listed during the task. Again, operationalization becomes more difficult when it comes to measuring the content of people's thoughts. People who engage in motivated reasoning generate substantially more attitude-bolstering cognition than do people who are not engaged in biased processes along these lines (Taber and Lodge 2006). Because of this, my variable needs to capture the relative balance of pro- and counterattitudinal thoughts participants had, which leads me to examine the balance of positive and negative thoughts they listed. This measure is based on how participants self-coded their own individual cognitions after listing them (Cacioppo, Harkins and Petty 1981). I define (self-coded) positive cognitions as pro-attitudinal (agreeable) thoughts and negative cognitions as

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[3]This is potentially an important difference between how I administer cognitive response tasks and how they are administered in studies of motivated reasoning (Taber and Lodge 2006; Taber, Cann and Kucsova 2009). In those studies, participants rate a single argument whereas in my study participants are asked to list what they think about all of the arguments they accessed. Thus, existing work uses cognitive response to measure precisely what people think about pro- and counterattitudinal arguments, whereas I rely on this technique to capture more generally the kinds of thoughts people have after exposure to a large number of messages.

counterattitudinal (disagreeable). I then take the difference between the number of pro- and counterattitudinal thoughts.

As an example, consider two responses from one of the participants in my study. This person has a prior attitude that is supportive of immigration and in opposition to the restrictive ballot initiative. The first thought this person listed was, "Illegal immigrants are people with families, hopes and dreams." This response was self-coded by the participant as positive and defined by me to be a pro-attitudinal (agreeable) thought. The other response was, "There is a real cost to the country resulting from people being here illegally, such as medical care and education." The participant coded this listing as negative and I, in turn, coded it as counterattitudinal (disagreeable).[4] A procedure along these lines is commonly used to code responses to thought listing questions (Cacioppo, Harkins and Petty 1981).

The dependent variable I rely on to test H5 is how people voted on the ballot initiative after completing the information portion of the study. This is a binary variable, with a 1 corresponding to voting "Yes" on the initiative (thus supporting the restrictive policy) and 0 corresponding to someone voting "No." All participants in the study were required to cast a vote on the initiative.

The primary independent measures I rely on in this chapter are dummy variables corresponding to whether someone was in a high, neutral, or low disagreement environment.[5] Additionally, when predicting someone's support for the bal-

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[4]One concern with this approach could be that positive and negative self-codings simply capture the valence of cognitions and not the content of those cognitions as either agreeable or disagreeable with respect to participants' prior attitudes. If this is the case then a better predictor of the number of positive and negative thoughts participants have could be their prior attitude about immigration reform. Perhaps people with attitudes predisposing them to be supportive of immigrants have more positive thoughts and/or those with attitudes that lead them dislike immigrants and support the restrictive ballot initiative have negative thoughts. To test this I ran two negative binomial regressions with the number of positive or negative thoughts, respectively, as the dependent variable and a continuous measure of their prior attitudes as the independent variable. For both models the coefficient for prior attitude is insignificant.

[5]See Chapter 3 for the distribution of participants across each environment.

lot initiative I also rely on a variable coding the type of information they accessed during the study and another variable that captures their prior attitude about immigration reform. I discuss my coding of these variables and how they relate to tests for open- vs. closed-minded reasoning in the corresponding portion of my results section.

4.3 Results

Information Search

My first hypotheses correspond to the link between exposure to varying levels of political disagreement and information search, specifically the amount and type of information people looked for. To test H1, that participants who are exposed to higher levels of disagreement will access more information, I examine the effect of the level of disagreement in the information environment on how much information participants seek out. Figure 4.1 displays the distribution of the total number of arguments accessed by each participant.

Figure 4.1: Histogram of Total Number of Arguments Accessed
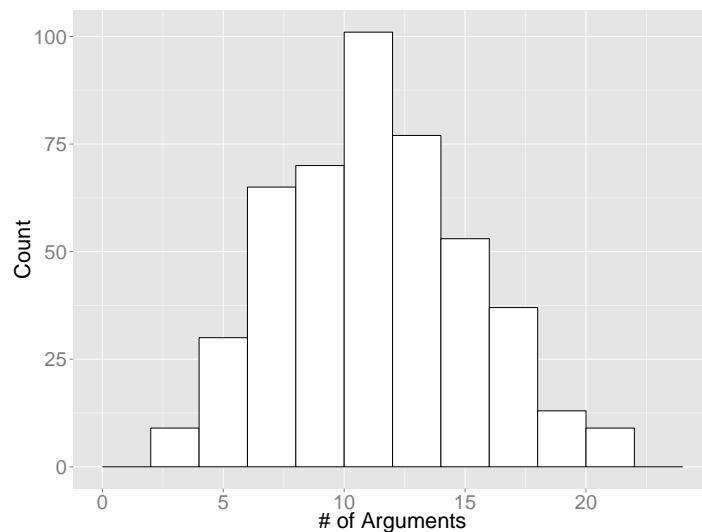
The mean number of arguments accessed by all participants is 10.7 (SD = 3.78).[6] I test my fist hypothesis by comparing the mean number of arguments accessed across levels of political disagreement. There is evidence that people exposed to both High and Neutral levels of disagreement accessed more information than did people who were exposed to low levels of disagreement. Participants in the high disagreement condition accessed 10.9 pieces of information, compared to participants in the low disagreement environment who accessed 10.1 (diff = 0.8, p = 0.07). A similar pattern exists for participants in the neutral disagreement environment, who accessed 11 pieces of information (diff = 0.9, p = 0.05). This shows that as people are exposed to higher levels of political disagreement they become more motivated to collect information.

The amount of information people collect, however, only tells part of the story. While information collection indicates some level of interest in information, the kind of information people access speaks more directly to their use of accuracy vs. directional goals (Ditto and Lopez 1992; Taber and Lodge 2006). If exposure to disagreement motivates people to protect their existing beliefs, this approach should manifest as people avoiding exposure to disagreeable information. Conversely, if people are relying on accuracy motives then they should be willing to access information regardless of its content. This should manifest as a positive relationship between exposure to higher levels of disagreement and the amount of disagreeable information participants access.

To examine the content of participants' information searches I created a variable that measures the amount of disagreeable information participants accessed in their information search. Because the total number of disagreeable pieces of information varies across the disagreement conditions, the variable I construct is

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[6]This number is marginally different from what I reported in Chapter 3 because those analyses are based on all participants from Studies 1 and 2 whereas these analyses omit participants who were assigned to the partisan cue treatments in Study 2.

the number of pieces of disagreeable information a participant accessed divided by the total number of available pieces of disagreeable information. Figure 4.2 displays the distribution of this variable.

Figure 4.2: Histogram of Proportion of Available Disagreeable Arguments Accessed
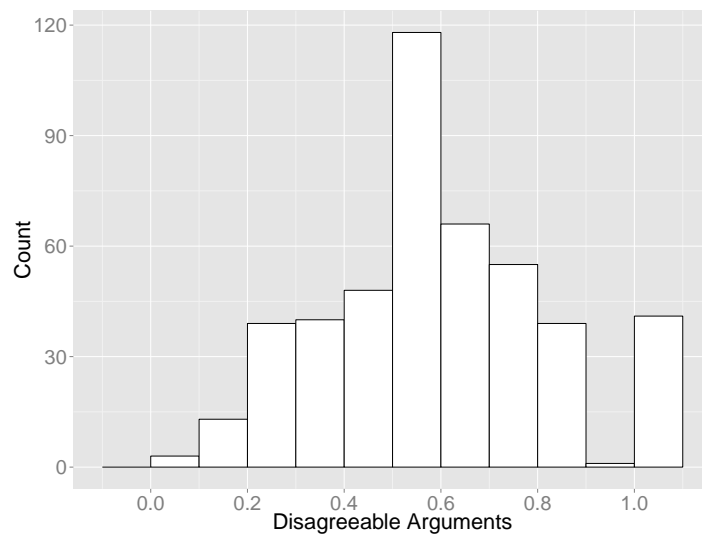
I test H2 by comparing the mean levels of the DV across the different disagreement information environments. Far and away the largest amount of disagreeable information is accessed by people in a high disagreement environment. Participants in the high disagreement environment accessed 67% of available disagreeable information, compared to only 62% in the Neutral and 58% in the low disagreement environments. Both the high vs. low (diff = 0.09, p = 0.002) and neutral vs. low (diff = 0.05, p = 0.05) conditions are significantly different from one another. There is no significant difference between the high and neutral disagreement conditions, although the difference between these groups is in the expected direction (diff = 0.04, p = 0.15).

Substantively this shows that people who are exposed to high and moderate levels of disagreement are significantly more willing to access disagreeable infor-

mation than are people exposed to low levels of disagreement. Thus, in addition to motivating people to look for more information, higher levels of disagreement can also make people more willing to access disagreeable information. This is a key contrast to previous work on motivated reasoning, which finds that people consistently prefer to collect information that conforms to their existing political views and perspectives (Ditto and Lopez 1992; Taber and Lodge 2006).

Cognitive Engagement

The results from H1 and H2 indicate that people who are exposed to higher levels of political disagreement are motivated to engage in a deeper search for information and to be more open to looking for disagreeable points of views. An open question, however, is whether and to what degree greater involvement and openness during the information search stage manifests substantively on what people think about the disagreeable information that they accessed.[7]

H3 and H4 are derived from prior work on motivated reasoning which indicates that people who rely on directional goals should avoid thinking about attitude-challenging (disagreeable) perspectives (Taber and Lodge 2006). The first dependent variable I rely on to test this argument is the total number of thoughts (cognitions) participants listed during the cognitive response portion of the study. Conceptually this variable captures the degree of mental engagement people had during my study. If they devoted more mental effort to thinking about and processing information they encountered this should correspond to a greater number of cognitions. The converse is also true; people who mentally disengaged

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[7]It is plausible to argue that there is a link between information search and cognitions, with information search mediating the effect of political disagreement on cognitions (Baron and Kenny 1986). Because I did not design my study with the explicit intent of manipulating mediators I do not engage in formal tests of mediation in my dissertation. However, future research in this area would benefit from applying some of the recent suggestions for conducting rigorous mediation analyses (Bullock, Green and Ha 2010; Imai, Keele and Tingley 2010).

from the information environment should have comparatively few thoughts (Petty and Cacioppo 1986). If people react to exposure to disagreement by disengaging from their environments, this could indicate that they are avoiding thinking about challenging points of view. Figure 4.3 displays the distribution of the number of thoughts participants listed during the cognitive response task. The mean number of thoughts listed was 2.9 (SD = 1.4).

Figure 4.3: Histogram of Total Number of Cognitions
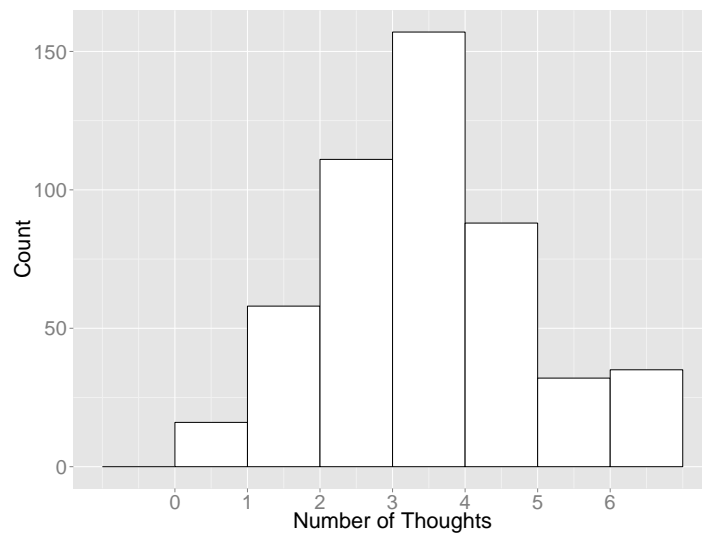
What is relevant to testing H3, that exposure to disagreement should lead people to be more cognitively engaged, is how the number of thoughts participants had differs by their exposure to levels of disagreement. Consistent with H3, participants who were exposed to a high level of political disagreement had significantly more thoughts than did people who were exposed to a low level of disagreement. Those in the high disagreement condition had an average of 3.30 cognitions while those in the low disagreement condition had 2.86 (diff = 0.43, p = 0.01). While the level of cognitive engagement in the neutral condition is between those in the high and low disagreement conditions, it is not significantly different from either

condition.[8]

These results show that as people were exposed to higher levels of political disagreement they became more mentally engaged. However, while mental disengagement is one way people could react in a closed-minded manner to political disagreement, they could also generate attitude-bolstering thoughts. I use the cognitive responses to test if this is the case by examining directly what kinds of thoughts people have. If people are engaging with the information such that they are protecting and bolstering their existing attitudes through processes of motivated reasoning, then the result should be more pro-attitude (agreeable) thoughts. However, if people who are exposed to disagreement rely on accuracy goals and are open to considering alternative points of view, then they should have relatively more counterattitudinal thoughts.

Creating a variable to answer this question requires two steps. The first is coding the kind of thought someone had. I relied on participants' self-coding of their listed thought as either positive or negative to code the kind of thought it was. My rational is that people who coded an attitude as positive indicate that thought as pro-attitudinal and that negative attitudes are counterattitudinal.[9] I then create a difference score by subtracting participants' total number of counterattitudinal thoughts from the total number of their pro-attitudinal thoughts. A negative value on this variable indicates that someone had more counter than pro-attitude thoughts and a positive number indicates the opposite. The distribution of this variable is displayed in Figure 4.4.

I test H4 by exploring the effect of the different disagreement environments on the balance of pro- and counterattitudinal thoughts participants had. Participants

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[8]Difference between high and neutral is 0.20, p = 0.20. Difference between neutral and low is 0.22, p = 0.15.

[9]This assumption is consistent with how self-codes have been used for cognitive response tasks in other studies (Cacioppo, Harkins and Petty 1981).

Figure 4.4: Histogram of the Difference Between Disagreeable and Agreeable Cognitions
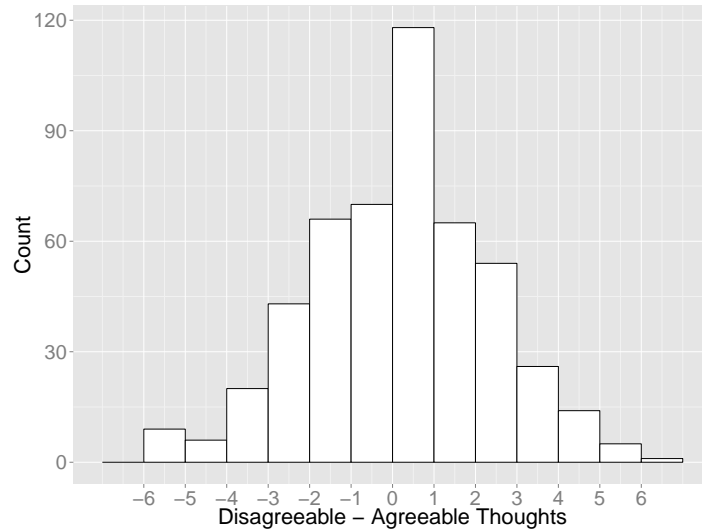
in the high disagreement environment were much more likely to have counteratti- tudinal thoughts, with the average participant in this condition having a difference score of -0.7. This is a statistically significant difference compared to the average participant in the low disagreement condition, whose difference score was -0.1 (diff = 0.58, p = 0.02). Yet again there is no discernible difference between the neutral condition and either the high or low disagreement conditions. Substantively, this shows that people who are exposed to higher levels of political disagreement have, on balance, more counter than pro-attitudinal thoughts.

In sum, these analyses provide support for H3 and H4. Exposure to political disagreement affects how much and in what way people think about this political issue and the ballot initiative. People who are exposed to high levels of disagree- ment are motivated to think more deeply about a political issue. They are also more likely to have thoughts that do not conform to their existing political beliefs. In other words, rather than engaging in motivated, attitude-defensive, behaviors, people who are exposed to high levels of political disagreement are more likely to

think about perspectives that are inconsistent with their political beliefs, which is indicates that they are engaging in open-minded thinking.

Judgment

Hypothesis 5, that exposure to higher levels of political disagreement should make people more willing to rely on counterattitudinal information when making a judgment, also corresponds to the final stage of the judgment process. My approach to testing this question is to rely on my knowledge of the kinds of information someone accessed during the study to help identify the criteria on which they rely when making a judgment. On the one hand, theories of motivated reasoning indicate that people should make judgments that are consistent with their existing political attitudes. In contrast, research on open-minded thinking and accuracy goals suggests that people who are relying on a more accurate and open approach to reasoning should be willing to use criteria, like information, other than existing beliefs, even if those criteria are inconsistent with their prior attitudes.

In the case of my study, if people are relying on directional goals and motivated reasoning to determine their judgments then they should 1) rely heavily on their existing political views and 2) ignore decision-relevant information if that information challenges this perspective. People engaged in open-minded thinking, on the other hand, 1) may or may not rely on their existing beliefs but 2) should be willing to rely on relevant information, even if that information is inconsistent with their political attitudes.

My approach to this analysis is to compare the effect of people's prior attitudes about immigration reform and the information they accessed in the DPTE. This will allow me to examine the degree to which each predicts participants' support

or opposition to the ballot initiative. The argument is that participants who rely solely on existing attitudes, even when they access relevant, albeit counterattitudinal, information are engaging in motivated reasoning. People who rely on relevant information despite it being inconsistent with their beliefs are engaging in a more accurate, open-minded approach to judgment.

The dependent variable for this analysis is a binary indicator coded 1 if someone voted in favor of the ballot initiative that restricts the rights of immigrations and 0 if they voted against the initiative. The first independent variable is a dummy variable coded 1 for people who have a prior attitude that favors the ballot initiative and 0 for those with an attitude that leads them to oppose the measure. The second independent variable is a measure of the proportion of available anti-initiative information a participant accessed in their information environment. As I did when examining the amount of disagreeable information people accessed, this variable is created by summing the number of anti-initiative arguments a participant accessed and then dividing that number by the total to which they had access.[10] The result is a continuous variable running from 0 to 1. On average, participants accessed 46% of available anti-initiative information in their environment (SD = 0.24). The appendix includes a histogram of the variable.

If people are relying on accuracy motives then they should use the information they access during the study to help them make a judgment. Because my measure of information corresponds to the amount of anti-initiative information participants access and my dependent variable is whether or not they vote yes, there should be a negative relationship between the amount of anti-initiative information they accessed and their ballot support. If people are relying on prior attitudes

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[10]As a reminder, disagreeable information is any information that is inconsistent with a participant's prior beliefs (measured pre-treatment). Anti-initiative information is any information that contains arguments the ballot initiative. I rely on anti-initiative information in this analysis because my dependent variable is support for the ballot initiative.

alone then the link between attitudes and ballot support should be positive.

In order to estimate the relationship between prior attitudes and information on support for the initiative, I fit the following logistic regression:

$$V_i = \beta_0 + \beta_1 A_i + \beta_2 I_i + \epsilon_i \tag{4.1}$$

where i indexes the respondent, V_i represents a participants vote on the initiative, A_i is their prior attitude and I_i is the amount of anti-initiative information collected. Table 4.1 contains the results from running this model on the entire sample and then re-estimating it among subgroups defined by exposure to political disagreement.

Table 4.1: Ballot Support by Prior Attitudes and Information - Separate Models

	(1) Full Sample	(2) Low Disagreement	(3) Neutral Disagreement	(4) High Disagreement
β_1: Prior Attitude	2.59**	4.10**	2.45**	2.55**
	(0.33)	(1.07)	(0.54)	(0.58)
β_2: Information	-0.84	0.56	0.0058	-3.41*
	(0.69)	(1.40)	(1.08)	(1.57)
β_0: Constant	-1.14**	-1.67*	-1.30*	-0.48
	(0.37)	(0.71)	(0.60)	(0.77)
ll	-150.885	-41.631	-62.191	-39.577
Observations	312	93	118	101

Standard errors in parentheses
$^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$

Model 1 in Table 4.1 fits the logistic regression using all participants in the study while ignoring the amount of disagreement in a given participant's information environment. This analysis reveals strong evidence that prior attitudes are linked to initiative support and provides no evidence that information exposure matters (as evidenced by the insignificant coefficient on information access).

A different pattern emerges when breaking out the results conditional on the

level of disagreement someone was exposed to (Models 2-4 in Table 4.1). While all of these models still show that prior attitudes are significant predictors of initiative support, what is more important is that the effect of information varies depending on the level of disagreement in a participant's environment. Specifically, the effect of accessing more anti-initiative information significantly depresses initiative support in only the high disagreement condition. This indicates that people who are exposed to high levels of political disagreement differ significantly in their use of information when determining their support for the initiative from those in the moderate and low disagreement conditions.

I formalize the effect of the different levels of disagreement in participants' information environments by expanding equation 4.1 to include dummy variables for high disagreement (HD) and neutral disagreement (ND) conditions and an interaction between the disagreement conditions and information use. To assess the moderating effect of disagreement on information use I estimated the following model:

$$
\begin{aligned}
V_i &= \beta_0 + \beta_1 A_i + \beta_2 I_i + \beta_3 HD_i + \beta_4 ND_i + \\
&\quad \beta_5 I * HD_i + \beta_6 I * ND_i + \epsilon_i
\end{aligned}
\tag{4.2}
$$

The quantity of interest from this equation is β_5, the coefficient representing the interaction between the high disagreement condition and the amount of anti-initiative information a participant accessed. This coefficient captures the differential effect of information between participants in the high and low disagreement conditions. Results are displayed in Table 4.2.

As Table 4.2 indicates, the statistical significance of β_5 reveals that the marginal effect of information differs greatly between the high vs. low disagreement condi-

tions. Moreover the effect of information is in the expected (negative) direction in the high disagreement condition. Consistent with the results in Table 4.1, there is no evidence of a differential effect of anti-initiative information between the low and neutral disagreement environments.

Table 4.2: Ballot Support by Prior Attitudes and Information - Interaction Model

	(1)
β_1: Prior Attitude	2.80**
	(0.36)
β_2: Information	0.65
	(1.28)
β_3: High Disagree	1.05
	(1.02)
β_4: Neutral	0.13
	(0.87)
β_5: Information*High Disagree	-4.19*
	(2.06)
β_6: Information*Neutral	-0.51
	(1.69)
β_0: Constant	-1.57*
	(0.65)
ll	-144.707
Observations	312

Standard errors in parentheses
$^+$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$

I turn to predicted probabilities to better illustrate the differential effect of information on initiative support across the disagreement environments. Figure 4.5 shows the effect of accessing more anti-initiative information within the high and low disagreement conditions on the probability of voting "Yes" for the initiative.[11] The shaded regions correspond to 95 percent confidence intervals around the probability. Importantly, I simulate these probabilities for someone who has a prior attitude that supports the initiative. The result is that in the case presented all

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[11]The effect of information in neutral disagreement condition is the same as in the low disagreement condition so I have omitted it from the graph.

anti-initiative information this participant accesses is *disagreeable*, and therefore the x-axis is a measure of the proportion of disagreeable information accessed.

Figure 4.5: Predicted Probability of Voting 'Yes' On Initiative
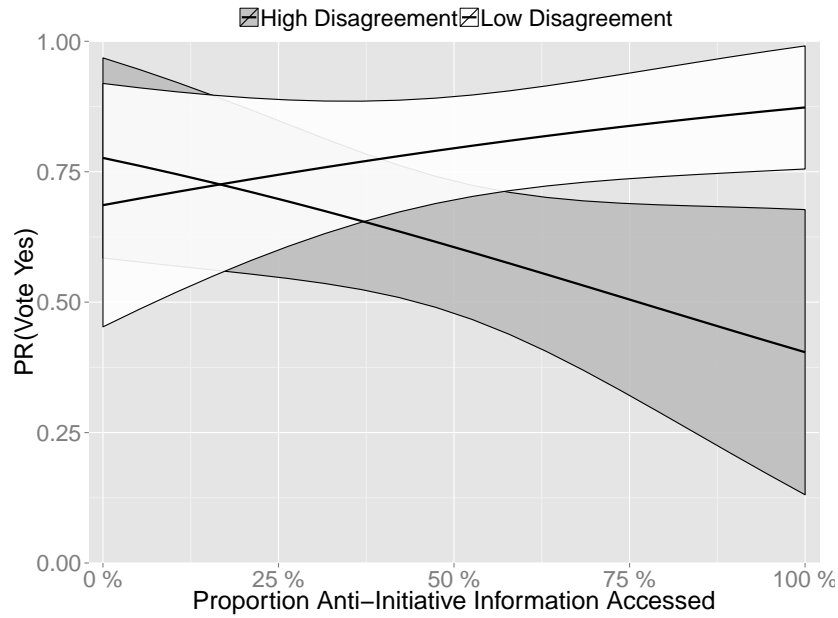
As Figure 4.5 shows, the amount of anti-initiative information accessed has no effect on initiative support for participants who are exposed to a low level of political disagreement. However, information has a large effect on ballot support when people are exposed to a high level of disagreement. This shows that exposure to a higher level of disagreement changes how people rely on information.

As people in the high disagreement environment access more anti-initiative (disagreeable) information, they become significantly *less* supportive of the initiative. In other words, exposure to a high level of political disagreement leads people to rely on the content of the information they access, even though that information is disagreeable in nature. Figure 4.6 shows the difference between the high and low disagreement probabilities, indicating that once people access a little over 33% of available anti-initiative information in their environment, a statistically significant difference (at $\alpha = 0.05$) between conditions emerges.

Figure 4.6: Difference in Probability
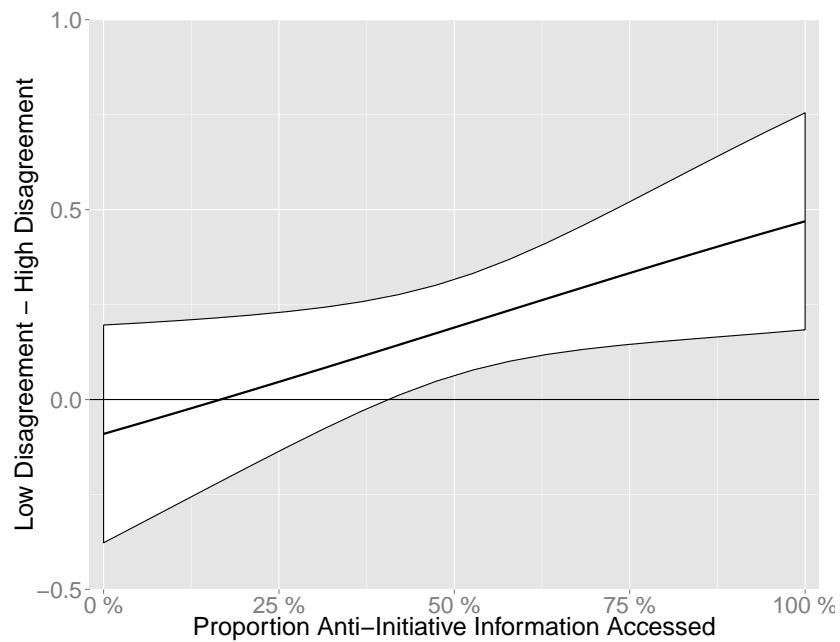
One immediate concern is whether or not participants actually access high levels of anti-initiative information, especially when that information is disagreeable. In short, are the simulated probabilities simply serving as out of sample forecasts? The answer is no. In the full sample, 81% participants with pro-initiative attitudes accessed at least 30% of available anti-initiative information (the threshold at which the significant difference between the groups emerges). Within the low disagreement condition, 52% of participants accessed at least this level of information while in the high disagreement condition this proportion increases to 85%. The absolute differences between the conditions are not central to my argument. What is important is that, regardless of the level of disagreement, participants still accessed enough anti-initiative information to justify my inferences from these simulations.

Overall, these results provide robust support for H5. People change how they use information depending on the level of political disagreement to which they are exposed. Most illustrative of this effect are the predicted probabilities, which

compare people who, save for their exposure to different levels of disagreement, are equivalent. The only difference between the high and low disagreement conditions is the amount of disagreeable information participants are faced with. These findings then provide good reason to believe that disagreement can lead people to make more open-minded and accurate political decisions.

4.4   Conclusion

This chapter explores the direct effect of exposure to differing levels of political disagreement on multiple stages of the reasoning process. In doing so, it provides the first test of my theory that exposure to political disagreement, especially high levels of political disagreement, can lead people to take a more accurate, open-minded approach to political judgment. Relying on an experiment varying the amount of disagreement people are exposed to, I find direct evidence that exposure to high levels of disagreement leads people to engage in a host of behaviors consistent with an open-minded approach to reasoning.

First, I find that high levels of disagreement affect how much and what kinds of information people seek. Increasing the level of disagreement to which people are exposed leads them to look for more information and to be more open to collecting information that does not conform to their existing views about politics. It is important that exposure to disagreement affects both dimensions of information search because it is the concurrence of greater engagement in information search and openness to divergent points of views that characterizes an open-minded approach to reasoning.

I also find that high levels of disagreement change how people process information. Disagreement leads people to expend more effort as they think about information, as evidenced by the greater number of cognitions they have in high

compared to low disagreement conditions. High levels of disagreement motivate people to think about counterattitudinal (disagreeable) perspectives. People who are exposed to high levels of disagreement are much more likely to have counterattitudinal thoughts compared to those who are exposed to a lower level of disagreement.

Finally, exposure to disagreement changes how people make judgments, specifically leading them to place greater weight on judgment-relevant information. Importantly, they rely on this information even when it is *disagreeable* and inconsistent with their political views. This is an important finding because it demonstrates the relevance of disagreement in not only affecting how people seek and think about information, but how they choose to bring it to bear in a relevant situation.

Given that previous work does little to probe the motivation people have to render directionally-motivated, closed-minded judgments, this collection of findings provides an important contribution to the study of reasoning and judgment in American politics. These findings suggest that people can rely on both accuracy and directional reasoning when making judgments, and that the degree to which they approach judgment with an open- vs. closed-mind is at least partially determined by the amount of disagreeable information to which they are exposed.

It is a common refrain in political science that citizens are routinely biased when they make decisions. They consistently try to bolster their prior beliefs, often by avoiding and counterarguing disagreeable points of view. These processes typically result in people making poor political decisions. This leads scholars to conclusions along the lines of the following: "Democracy give[s] ordinary citizens almost no incentive to think carefully about politics" (Kuklinski, Quirk, Jerit, Schwieder and Rich 2000, p. 168). This chapter raises the possibility that structures of contemporary democracy can provide people with ample opportunities

and motivations to be biased reasoners.

Politics is, in large part, defined by argumentation and disagreement, two features of democracy which could provide people with strong incentives to make biased, closed-minded political judgments. My findings push back on this baseline expectation for how citizens make decisions. Rather than assuming that the contentious, disagreeable, and challenging nature of American politics leads people toward bias and makes them entrenched partisans (Lodge and Taber 2000, 2005; Taber and Lodge 2006), I contend that the structures of American democracy can motivate better citizenship.

This chapter provides evidence supportive of this argument and, in doing so, provides a new way in which to think about how information affects reasoning. In addition to directly affecting people's attitudes and mediating the effect of their predispositions and attitudes, the availability of certain kinds of information can shape how people choose to approach reasoning and judgment in the first place. Specifically, disagreeable information can motivate people to approach decision-making in a relatively open- rather than closed-minded fashion.

In my next chapter I explore if and how characteristics of individuals (what I refer to as individual differences) shape their reactions to political disagreement. To do so, I focus on a subset of the outcomes studied in this chapter: information search and information use. Understanding the complex interaction between individual-level characteristics and situational features of a decision context, such as the amount of available disagreeable information, leads to a better understanding of the conditions under which disagreement leads to different forms of political reasoning.

A Coda on Motivated Reasoning Research in Political Science

At this point it is valuable to address why the results from my analyses depart from the bevy of findings on motivated reasoning and bias in political judgments (Lodge and Taber 2000, 2005; Taber and Lodge 2006). On the surface our studies are quite similar. Both our works rely on presenting people with information, measuring the kinds of information they access, including whether that information is consistent or inconsistent with prior attitudes, and what the consequences are for accessing different kinds of information. However, where the work motivated political reasoning finds strong evidence of people accessing pro-attitudinal information over counterattitudinal information, generating attitude-defensive thoughts, and these attitude-protective processes resulting in problematic outcomes like attitude polarization, I find evidence of what I characterize as open-minded reasoning. This includes people being willing to consider information from attitude-challenging perspectives, thinking about that information in a deeper and more open-minded fashion, and being willing to rely on the substance of that information, even when it is disagreeable, to draw an inference. This begs the question, what explains these differences?

There are important differences between my work and that of the scholarship on motivated reasoning that I see as responsible for driving the differences in our conclusions. The most important difference is that of research design. Motivated reasoning research in political science employs information boards to *measure* patterns of behavior and then relies on these patterns to determine if participants are engaging in motivated reasoning. My strategy is to employ information boards to create different kinds of situations that I expect will *change* the tendency people have to engage in biased processes of motivated reasoning. Who is to say what

would happen if studies of motivated reasoning manipulated the kinds of information people could access while navigating information boards in their studies. Perhaps they would have found variation in the degree to which people engaged in biased information searches.

There are also a number of discrete differences which likely contribute to the different conclusions reached in our respective research. My information is presented in a timed, dynamic fashion whereas most research on motivated reasoning presents information in static, untimed manner. One potential criticism of my work vis-à-vis research on motivated reasoning could be that the DPTE itself may lead to a more accurate approach to judgment. I would disagree with this assertion as I expect that having the information change throughout the course of the study and limiting the amount of time available to access that information should lead participants to prioritize to a greater degree the information they access. If this is the case and directional motives truly are paramount, then I would think that using the DPTE should increase, not inhibit, motivated reasoning. That said, perhaps it is the case that constraining information search in this way leads people to lean more heavily on accuracy motivations. This is an important question that future work would benefit from taking up.

Another important differences exists between the way I present information in my studies and how it is presented in studies of motivated reasoning. In Taber and Lodge's examination of motivated reasoning, participants are given the ability to access a number or arguments sourced to a particular group, such as the Democratic party. Prior to the start of the study, participants were informed about the nature of the positions advocated by those groups (Taber and Lodge 2006, p. 759). For example, if I had taken this approach in my study I could have informed participants that the United States Census Bureau opposes the ballot

initiative while the American Governor's Association supports it.[12] When given the ability to access information about the initiative, participants would only be told that it was sourced from one of these groups.

In short, participants in their studies are given less information about the content of arguments than they are those in my studies, in which they are able to read a headline that describes the substance of an argument before they access it. In essence, participants in their studies must rely on a heuristic (attribution of information to a group) to infer information content while in my study participants are explicitly provided with substantive information about each piece of information before they access it. Having more individuating information about the arguments, as is the case in my studies, could make people more open to considering alternative, even disagreeable, points of view.

Ultimately our research designs were created with expressly different purposes in mind. Research on motivated reasoning intends to test for the existence of motivated reasoning and not the factors that lead people to be relatively more or less open-minded. My research, on the other hand, is interested in isolating the factors that lead people to give different weight to accuracy vs. directional motives and, ultimately, to shed light on how disagreement affects political judgment. That I generate findings that diverge from those of the motivated reasoning scholarship should be viewed as a positive contribution to the study of judgment and decision-making. Not simply because my findings indicate that there are ways in which people can be motivated to be more open-minded, but because it highlights that important decisions about research design can lead to distinct substantive conclusions.

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[12]These are both fictional groups to whom I attribute some of the arguments in my study.

Chapter 5

Individual Differences, Disagreement, and Judgment

5.1 Introduction

In my fifth chapter, I extend analyses from Chapter 4 and examine how individual differences shape people's reactions to political disagreement. Perhaps one of the most significant and enduring conclusions of modern political psychology research is that political behavior stems from a variety of sources. On the one hand, many studies focus on the importance of *short-term*, or situational, features of political contexts in shaping how people behave, including how they think and reason about political issues. For example, the presence of certain kinds of frames can change people's beliefs about political issues (Nelson, Clawson and Oxley 1997; Druckman 2001). At the same time, an emerging body of scholarship demonstrates the importance of *long-term*, stable features of individuals and how these characteristics shape behavior. These antecedent considerations, or individual-differences, (Marcus et al. 1995) have long-lasting, enduring influences on behavior, both on their own and by shaping the influence of short-term factors.

Increasingly scholars contend that it is the intersection of short- and long-term forces where the strongest explanations for political behavior are located. Perhaps the best example of work combining both traditions is research on political tolerance. This research shows that people's tolerance for political groups is a function of short-term events like political threat and long-term forces, like political sophistication and personality characteristics (Marcus et al. 1995). Individually both threat and personality shape tolerance for particular groups, however there are important dynamics between these forces that explain when and to what degree people respond to threat by extending or retracting tolerance at a given moment.

One way to view Chapter 4 is as an examination of how short-term factors in the form of varying amounts of disagreeable information surrounding an issue can shape how people think and reason about politics. In this chapter I extend this argument by exploring how people's long-term predispositions shape the connection between political disagreement and judgment. To accomplish this I focus on how two individual differences shape reactions to disagreement: the Big 5 personality characteristic *openness to experience* (OE) and the predisposition *need for closure* (NC). I find evidence that both openness to experience and the need for closure shape how people react to political disagreement. While at times these individual differences directly affect behaviors at the various stages of the reasoning process, more importantly I offer evidence that they shape how people react to political disagreement. In other words, my analyses demonstrate that the link between political disagreement and reasoning is moderated by openness and closure.

The findings in this chapter have important implications for research on judgment and decision-making. I identify important features of individuals that shape their reactions to disagreement and disagreeable information. At times these features lead people to react to disagreeable information in a normatively positive way, specifically by being more willing to access and rely on disagreeable infor-

mation when making judgments. At the same time, I show that these dynamics only exist when people are exposed to increasingly high levels of political disagreement. Thus, it is not simply the case that people at varying levels of OE or NC chronically approach judgment and decision-making in certain ways. Rather, these individual differences matter only in particular political situations.

This remainder of this chapter proceeds as follows. First, I discuss my theoretical rational for focusing on openness and closure. I then discuss my specific hypotheses for how these individual differences will shape reactions to disagreement. This is followed by an outline of how I measure these differences. I conclude with a summary of my results and discussion of their implications for understanding disagreement and judgment.

5.2   Individual Differences

Openness to Experience

Recently political science has experienced a renaissance in the study of how personality shapes political behavior (Mondak and Halperin 2008; Mondak 2010; Gerber et al. 2010, 2011). Many of these works draw from prior scholarship in psychology on the Big 5 personality traits, which shows that personality traits typically separate into five dimensions (McCrae and John 1992; Barrick and Mount 2006). While relatively new to political science, works to date show that these traits affect a variety of political behaviors, including participation, tolerance, and, most relevant to my work, how people process information.

I focus on a single dimension of the Big 5, openness to experience. While the specific qualities of the OE trait dimension are subject to some disagreement among personality scholars (see Mondak 2010, p. 48), typically OE refers to indi-

viduals' intellect and their desire to be cognitively engaged and curious. People who are high in openness often seek out intellectual stimulation and tend to be more interested and engaged in politics (Gerber et al. 2010). As Mondak (2010, p. 50) writes, "People high in openness to experience especially crave experiences that will be cognitively engaging...[high openness] individuals will willingly seek information of virtually all sorts." Openness not only leads people to seek more information, but consistently results in a greater breadth of information search (Mondak 2010; Gerber et al. 2011). It is this connection that leads me to theorize that openness will moderate the effect of political disagreement on judgment.

Openness to experience may shape how people react to disagreement because people who enjoy mental stimulation may react favorably, or at least significantly less *un*favorably, when they are exposed to disagreeable information. In other words, openness could moderate the relationship between disagreement and judgment because people who are high in OE are curious about new perspectives while those who are low in OE are not. It may also be the case that people who are high in OE are dispositionally less likely to engage in motivated reasoning because they are more open to new ideas, potentially treating any form of information, disagreeable or otherwise, more even-handedly.

Need for Closure

A key insight gleaned from research in social psychology is that people do not enjoy, and often actively avoid, uncertainty and mental ambiguity (Festinger 1957). Recent work indicates that not only is this a general tendency shared by many, but that it is also an individual difference which varies systematically *across* individuals. This difference, the need for closure, refers to the stable epistemic need people have to reach clear, unambiguous decisions and to hold unambiguous

attitudes (Dijksterhuis et al. 1996). Need for closure determines "...the degree to which one is motivated to seek out, process, and rely on knowledge that is clear, unambiguous, and stable" (Federico, Golec and Dial 2005). In other words, need for closure is a disposition that determines people's tolerance for mental ambiguity and acceptance of attitude-divergent points of view.

In the domain of judgment and information processing, people who are high in NC are mentally rigid, especially in the face of information that challenges existing, crystallized attitudes (Kruglanski 2004; Federico, Golec and Dial 2005). The result is a tendency to react negatively to counterattitudinal information and to cope with challenges by engaging in motivated reasoning and selective information processing (Kardes, Cronley, Kellaris and Posavac 2004; Hart, Adams, Alex Burton, Shreves and Hamilton 2012). In general, people who are high in need for closure attempt to reach a decision quickly (they "seize" on a judgment or decision) and then they are strongly motivated to maintain and defend that judgment (they "freeze" on the decision) (Kruglanski 2004; Kardes et al. 2004).

Thinking about this individual difference alongside disagreeable information identifies two general ways in which NC could affect judgment behaviors. Because people who are high in NC derive mental satisfaction from holding and maintaining unambiguous attitudes and beliefs, it is likely that they will not favorably react to political disagreement. In particular, people who are high in NC and have their attitudes threatened by counterattitudinal (disagreeable) information should be more likely to deploy directional motives and strategies of motivated reasoning than are people low in NC.

Given the different predictions generated by OE and NC, it is logical to ask if these individual differences are simply two sides of the same coin. While almost certainly (negatively) correlated, a close reading of both bodies of research indicates important substantive differences between them. For one, people who are

low in OE are not necessarily high in NC. There is a difference between someone
enjoying mental stimulation (high in OE) and someone who derives satisfaction
from actively avoiding particular kinds of counterattitudinal information (high in
NC).

Within the domain of politics, the best example of work examining the simul-
taneous effect of OE and NC on outcomes is that of John Jost and colleagues on
political conservatism (Jost, Glaser, Kruglanski and Sulloway 2003; Jost, Federico
and Napier 2009). Their research shows that while OE and NC affect ideology in
opposite ways, both individual differences are simultaneously important to ideol-
ogy. While it may be the case that this holds true only in the domain of political
ideology and not when examining disagreement and judgment, there is no reason
to believe that OE and NC are equivalent in the domain of information processing
and judgment.

There are two ways in which these individual differences could affect judgment.
The first is by directly influencing the behaviors people engage in at the different
stages of the judgment process. Regardless of the particular information people
encounter and contexts in which they are embedded, people who are high vs. low
in OE or NC may engage in distinct behaviors. For example, high OE people could
access more disagreeable information compared to those low in OE. In and of itself
findings about the direct link between OE and NC and judgment are important
because they would illuminate stable individual-level predictors of more open- vs.
closed-minded approaches to judgment.

More central to my research is the potential for these individual differences to
condition the effect of political disagreement on judgment. Specifically, high vs.
low openness or closure could moderate the effect of exposure to disagreement on
judgment and decision-making, such that people at different levels of OE and/or
NC may be predisposed to be more open- or closed-minded in reaction to different

levels of disagreement. It could even be the case that certain levels of disagreement are necessary to "pull apart" these differences. While there may be little to no difference in high vs. low NC when exposed to low levels of disagreement, exposure to high levels of disagreement may lead to differences across these groups. I articulate my specific expectations for how NC and OE will affect judgment in the face of disagreement in the next section.

5.3 Hypotheses & Measures

My focus in this chapter is on two stages of the reasoning process: the search for information and how people use that information when making a judgment.[1] I have separate expectations for how openness and closure shape reactions to disagreement for each area. Because of this, for each outcome I articulate different openness and closure expectations.

My first set of hypotheses correspond to the information search phase of judgment. Because people who are high in OE are intellectually curious and enjoy learning about new perspectives, I expect these individuals to be more receptive to disagreeable information than are those low in OE. This leads me to my first hypothesis:

> **H1 - Depth of Search & Openness**: Openness to experience will moderate the effect of disagreement on depth of search. When exposed to high levels of political disagreement, people who are high in openness will engage in especially extensive information searches, compared to those who are low in openness.

[1] I restrict my analyses to information search (and exclude examining the cognitive response outcomes from Chapter 4) because existing research on closure and, in particular, openness focuses most clearly on how these individual differences affect people's searches for political information. Focusing only on information search allows me to directly speak to this research. The other reason is one of space. Focusing on both individual differences and only the information search outcomes results in 6 separate hypotheses. Were I also to examine changes in cognitions this would introduce 4 additional hypotheses and sets of analyses.

My second hypothesis pertains to the link between NC, disagreement, and this aspect of information search. My expectation is that people who are high in NC should react negatively to exposure to disagreeable information due to their lack of tolerance for ambiguity and attitude uncertainty. Formally:

> **H2 - Depth of Search & Closure**: Need for closure will moderate the effect of disagreement on depth of search. When exposed to high levels of political disagreement, people who are high in need for closure will engage in especially shallow information searches, compared to those who are low in closure.

As I argued in Chapter 4, while the depth of search is important when studying motivated reasoning, so too are the kinds of information people access. To that end, I expect that people will prefer pro-attitudinal (agreeable) information, but that as people are exposed to higher levels of disagreement, they will become increasingly likely to access counterattitudinal information. I expect OE and NC to moderate the link between disagreement and content of information search such that:

> **H3 - Content of Search & Openness**: Openness to experience will moderate the effect of disagreement on the content of information search. When exposed to high levels of political disagreement, people who are high in openness will be especially willing to access counterattitudinal (disagreeable) information.

> **H4 - Content of Search & Closure**: Need for closure will moderate the effect of disagreement on the content of information search. When exposed to high levels of political disagreement, people who are high in closure will be especially likely to avoid counterattitudinal information.

My final set of hypotheses relate to the final stage of the reasoning process I examined in Chapter 4: how people rely on information to make judgments. Because people who are high in OE tend to be curious and open to alternative

perspectives, I also expect that it is people high in OE who are willing to rely on disagreeable information when making a judgment.

> **H5 - Information Use & Openness**: Openness to experience will moderate the effect of disagreement on information use in judgment. When exposed to high levels of political disagreement, people who are high in openness to experience will be more willing to rely on disagreeable information than people who are low in openness.

Finally, because people high in NC desire to maintain and protect existing attitudes, I expect them to be much less receptive to disagreeable information when making judgments. This leads me to my final expectation:

> **H6 - Information Use & Closure**: Need for closure will moderate the effect of disagreement on information use in judgment. When exposed to high levels of political disagreement, people who are high in need for closure will be less willing to rely on disagreeable information than people who are low in closure.

Individual Difference Measures

I rely on a series of questions to measure openness to experience and need for closure. I adapt the lexical approach used by Mondak (2010) to measure the Big 5. For each trait dimension, participants ranked themselves on a 0 to 10 scale anchored on each side by an adjective. One of the openness items, for instance, is anchored on one side by 'Curious' and on the other by 'Uncurious.' I use six items to measure openness and average across all six to create the scale. The final variable is scaled to run from 0 (low openness) to 1 (high openness).

I use 12 questions to tap participants' need for closure. The closure items are presented as agree-disagree questions (ranging from 1 = strongly agree to 6 = strongly disagree), each asking participants to endorse a particular statement. For example, one NC item asks participants if they agree or disagree with the statement, "When I find myself facing various, potentially valid, alternatives, I

decide in favor of one of them quickly and without hesitation." Again, I average responses to these questions to create the scale and code the final variable to run from 0 (low need for closure) to 1 (high need for closure).

Figure 5.1: Distributions of Individual Differences
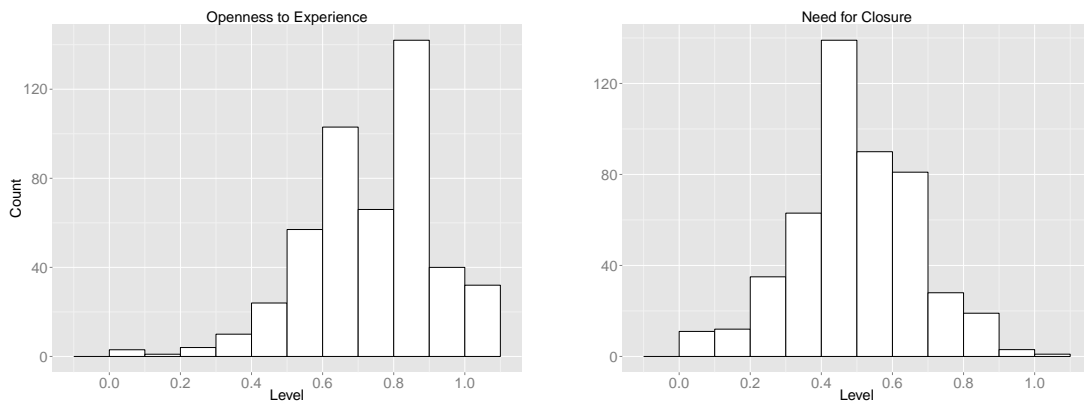
Figure 5.1 displays the distribution of both scales. The mean of OE is 0.73 (SD = 0.18) and the mean of NC is 0.50 (SD = 0.18). The scales are negatively related, with a correlation of -0.25. That the correlation is negative is to be expected given the tendencies they measure. However it is important to note that they are also not perfect substitutes for each other, which provides initial evidence for my argument that they capture distinct psychological tendencies and, because of this, may exert unique and different effects on disagreement and judgment.

5.4 Results

Depth of Information Search

My first expectation is that OE and NC will moderate the link between political disagreement and depth of information search. To test these expectations, I examine the effect of disagreement in the information environment on how much

information participants seek out by regressing the total number of arguments each participant accessed on indicators for exposure to disagreement. I then interacted measures of OE and NC, respectively, with indicators the amount of disagreement in participants' information environments. The final model specification includes controls for age, party identification, political ideology (higher values more liberal), and sophistication (higher values more sophisticated).[2] To assess the direct effect of disagreement and the moderating effect of NC and OE on disagreement I estimated the following model:

$$
\begin{aligned}
IA_i \;=\; & \beta_0 + \beta_1 HD_i + \beta_2 ND_i + \beta_3 OE_i + \beta_4 NC_i + \\
& \beta_5 HD*OE_i + \beta_6 ND*OE_i + \beta_7 HD*NC_i + \beta_8 ND*NC_i + \\
& \beta_9 Age_i + \beta_{10} Dem_i + \beta_{11} Ind_i + \beta_{12} Ideo_i + \beta_{13} Soph_i + \epsilon_i \qquad (5.1)
\end{aligned}
$$

where i indexes the respondent, IA_i is the total number of arguments a participant accessed during the study, HD_i represents a participant in high disagreement environment, ND_i represents a participant in the neutral disagreement environment, OE_i is the effect of openness in the low disagreement environment, NC_i is the effect of closure in the low disagreement environment, and the interaction terms capture the differential effect of disagreement among high and low openness/closure participants. Age_i is a continuous measure of a participant's age, Dem_i is coded 1 if a participant is a Democrat and 0 otherwise, Ind_i is coded 1 if a participant is an independent and 0 otherwise, $Ideo_i$ is a 7 point scale of ideology, running from strong liberal to strong conservative, and $Soph_i$ is a scale of political sophistication, with higher values indicating greater political sophistication. Table 5.1 displays the results from this model, as well as two lower-order models

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[2]I have also specified models with controls for education, income, and gender. These variables are insignificant and not theoretically relevant to my argument so I omit them from my final models.

without the interaction terms (Model 2) and without inclusion of the individual differences (Model 1).

Model 2 in Table 5.1 provides evidence that openness is positively related to collecting more information while the opposite is true for people who are high in need for closure. This column also reveals evidence that is consistent with my conclusions from Chapter 4 - a positive link between high and moderate levels of disagreement and depth of information search, although the effects are weaker. Focusing on Model 3 in this table reveals that individual differences also moderate the link between political disagreement and information search. In both cases, the significant interaction term between the individual difference and high disagreement environment indicator shows respectively that participants' levels of openness and closure shape their reactions to disagreement.

Openness to Experience

My first hypothesis argues that participants who are high in OE will react to disagreement differently than those who are low in OE, specifically high OE people who are exposed to high levels of disagreement will be motivated to seek more information, compared to those who are low in OE. While not necessarily clear by looking at the regression coefficients, there is strong evidence in support of the hypothesis. The significance of coefficient β_5 indicates that the effect of being exposed to a high level of disagreement compared to a low level of disagreement varies depending on participants' openness. People who are exposed to a high level of disagreement and who are high in OE access significantly more information than do people who are low in OE and are also exposed to a high level of political disagreement. This difference is assessed by combining $\beta_3 OE + \beta_5 HD * OE$, which reveals a difference of 6 additional arguments accessed by people high in OE vs. low in OE (p < 0.001). A similar pattern emerges for people in the neutral disagreement environment ($\beta_3 OE + \beta_6 ND * OE$), albeit with a smaller

Table 5.1: Information Access by Disagreement and Individual Differences

	(1)	(2)	(3)
β_1: High Disagreement	0.47	0.40	-4.26$^+$
	(0.45)	(0.44)	(2.22)
β_2: Neutral Disagreement	0.72$^+$	0.70$^+$	-1.18
	(0.42)	(0.41)	(1.98)
β_3: Openness		3.63**	1.36
		(1.02)	(1.67)
β_4: Closure		-1.84$^+$	-1.97$^+$
		(1.04)	(1.13)
β_5: High Disagreement*Openness			4.71$^+$
			(2.67)
β_6: Neutral Disagreement*Openness			3.11
			(2.33)
β_7: High Disagreement*Closure			3.93*
			(1.93)
β_8: Neutral Disagreement*Closure			-1.07
			(1.85)
β_9: Age	-0.048**	-0.049**	-0.049**
	(0.014)	(0.014)	(0.014)
β_{10}: Democrat	-1.51*	-1.56**	-1.72**
	(0.59)	(0.58)	(0.58)
β_{11}: Independent	-0.012	-0.16	-0.17
	(0.66)	(0.65)	(0.65)
β_{12}: Ideology	-0.88**	-0.75*	-0.83**
	(0.32)	(0.32)	(0.32)
β_{13}: Sophistication	0.26*	0.19	0.18
	(0.13)	(0.12)	(0.12)
β_0: Constant	13.5**	12.0**	14.0**
	(1.20)	(1.57)	(1.84)
Adjusted R^2	0.050	0.090	0.097
Observations	437	437	437

Standard errors in parentheses

$^+$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$

difference of 4 arguments between low and high openness (p = 0.007).[3] Finally, the insignificant effect of $\beta_3 OE$ indicates that there is no difference in depth of search between low and high OE within the low disagreement environment.

However these regression coefficients are ambiguous for two reasons. Due to the fact that I coded openness (and closure) to run from 0 to 1, the coefficients indicate the effect of going from the minimum to the maximum of each individual scale on information search. This may overstate the substantive effects I am examining. The second shortcoming with relying only on coefficients is that they zero out the effect of all other variables, most notably need for closure. While closure and openness are negatively related, it is unrealistic to assume that closure will be at its minimum when openness is at its maximum.

To overcome this limitation I use the regression equation to generate simulated linear predictions of total number of arguments accessed. To ensure that the predictions are substantively relevant, I compare those who are in the 95 percentile of openness (openness = 1) to those in the 5th percentile (openness = 0.40). I also set the value of closure to its mean level in the sample (0.50).[4] The results are plotted in the left panels of Figure 5.2. The upper left panel plots the predicted number of arguments accessed (with 95 percent confidence intervals) within each information environment while the bottom left panel displays the *difference* in predicted information access between high and low openness participants within each environment.

The plot is consistent with my initial discussion of how openness moderates the effect of disagreement on information search. Participants who are high in openness access significantly more information than do people who are low in openness in both the high and neutral disagreement environments. However, there is no

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[3]There is no evidence of a difference in the number of arguments accessed by openness between the high and neutral environments (diff = 1.48, p = 0.13).

[4]Other variables are set to their mean or mode.

Figure 5.2: Predicted Depth of Search by OE and NC
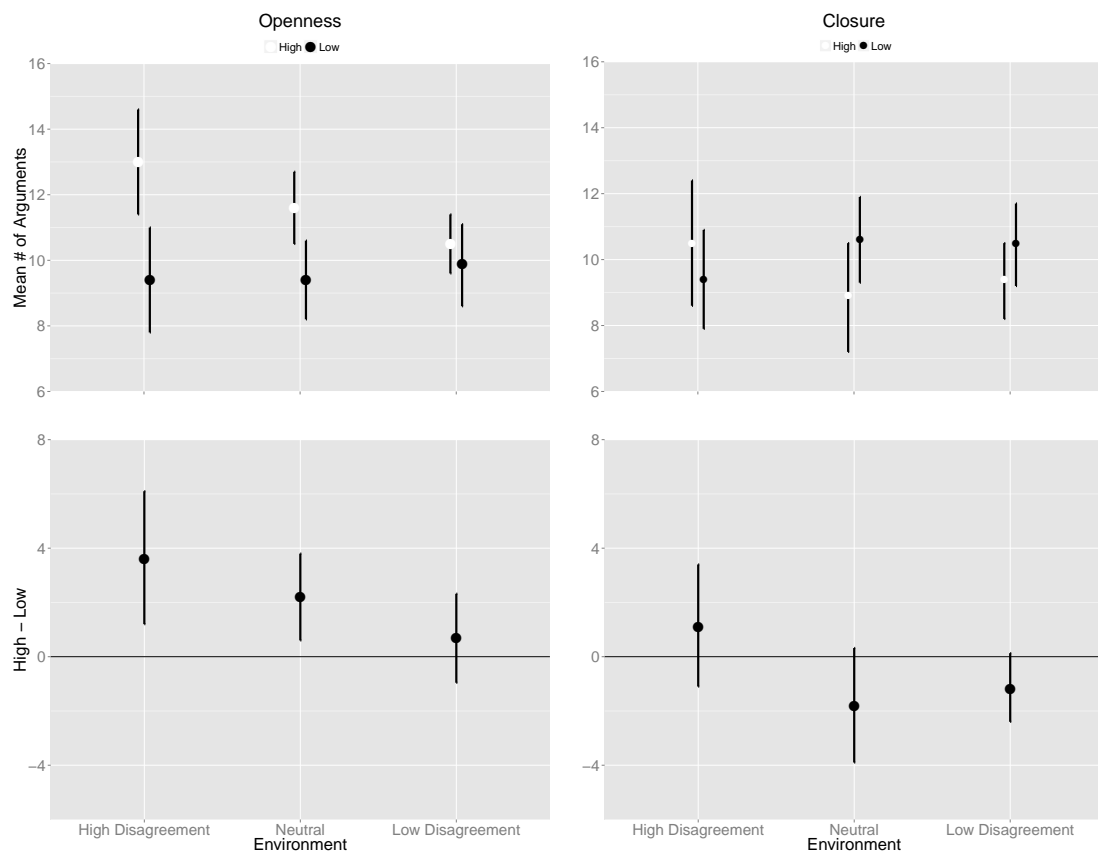
difference in search patterns by openness in the low disagreement condition. This latter finding is key because it shows that openness does motivate people to seek more information, but it also highlights that the level of disagreement to which someone is exposed is also important. Openness promotes greater information search, but only when people are exposed to a moderate or high level of disagreement.

Closure

I take a similar approach to testing H2, which argues that NC will moderate the effect of disagreement on the depth of information search. While the significant product term between high disagreement and closure (β_7) indicates that the effect of the high disagreement treatment depends on an individuals' NC, as the two

right panels in Figure 5.2 show, when examining this effect at relevant values of NC and the other independent variables, the results are quite different from those of openness. The biggest difference for closure compared to openness is that within each of the information environments there is no statistically significant difference in the depth of information search between people in the 5th (0.22) and 95 percentile (0.80) of NC (with openness held at its mean level of 0.73). This is inconsistent with H2, which holds that a high need for closure should lead people to access *less* information when they are exposed to a high level of disagreement. I will return to this point momentarily.

In sum, when examining individuals' depth of information search, there is strong evidence that OE moderates the influence of disagreement on depth of search, with people who are high in OE accessing significantly more information when exposed to both high and moderate amounts of disagreement, compared to those who are low in OE. As evidenced by the lack of a difference in depth of search between those who are high and low in OE within the low disagreement environment, it is not simply the case that OE motivates everybody to access more information. Rather, OE predisposes people to engage in a deeper information searches only when they are faced with moderate and high levels of political disagreement.

The results with NC are decidedly less convincing. While I expected that people high in need for closure would engage in shallower information searches when faced with disagreeable information, my study provided no evidence that closure moderates the effect of disagreement on depth of search. In fact, while the differences are insignificant, the effect of NC is in the opposite direction from what I expected (this is most evident in the lower right panel of Figure 5.2). One possible explanation for the lack of an effect of NC is that OE is simply a more powerful predictor and/or moderator of disagreement on depth of search. Alternatively,

it may be the case that closure is not especially relevant to how people seek information, instead playing a larger role in later stages of the judgment process. I return to this point at the end of the next section.

Content of Information Search

Hypotheses 3 and 4 outline my expectations that OE and NC should moderate the link between disagreement and willingness to access counterattitudinal (disagreeable) information. As a reminder, in general I expect that exposure to disagreement will make people more willing to access disagreeable information, and that OE and NC specifically will moderate this relationship. For my DV, I rely on a variable coding how much disagreeable information a participant collected while navigating their information environment (see Chapter 4 for a detailed description).[5] I regressed this variable on the same independent variables and interactions used in Equation 5.1. To explore the differential effect of disagreement by OE and NC, I again interacted these measures with indicators for the level of disagreement in a participant's environment. The results from this model, as well as two lower order models are displayed in Table 5.2.

Replicating the analyses from Chapter 4, the first model in Table 5.2 indicates that there is a main effect of a participant being in the high disagreement environment on the proportion of available disagreeable information they accessed, compared to the low disagreement environment.[6] Model 2 reveals a significant and positive main effect for openness such that as people become more open they are more likely to access disagreeable information. There is no main effect for closure.

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[5]As a reminder, because the total number of disagreeable pieces of information participants could access varies across the disagreement conditions, this variable is created by adding together the total number of pieces of disagreeable information a participant accessed and then dividing that number by the total number of available pieces of disagreeable information.

[6]There is no difference between the neutral and low disagreement nor the high and neutral environments.

Table 5.2: Type of Information Accessed by Disagreement and Individual Differences

	(1)	(2)	(3)
β_1: High Disagreement	0.076**	0.073**	-0.21
	(0.027)	(0.027)	(0.14)
β_2: Neutral Disagreement	0.038	0.038	-0.11
	(0.025)	(0.025)	(0.12)
β_3: Openness		0.17**	0.023
		(0.061)	(0.10)
β_4: Closure		-0.047	-0.063
		(0.063)	(0.068)
β_5: High Disagreement*Openness			0.30+
			(0.16)
β_6: Neutral Disagreement*Openness			0.21
			(0.14)
β_7: High Disagreement*Closure			0.23+
			(0.12)
β_8: Neutral Disagreement*Closure			0.00015
			(0.11)
β_9: Age	-0.0019*	-0.0019*	-0.0019*
	(0.00086)	(0.00086)	(0.00086)
β_{10}: Democrat	-0.10**	-0.10**	-0.11**
	(0.035)	(0.035)	(0.035)
β_{11}: Independent	-0.032	-0.037	-0.037
	(0.040)	(0.039)	(0.039)
β_{12}: Ideology	-0.034+	-0.029	-0.033+
	(0.019)	(0.019)	(0.019)
β_{13}: Sophistication	0.014+	0.011	0.011
	(0.0075)	(0.0075)	(0.0075)
β_0: Constant	0.67**	0.58**	0.70**
	(0.071)	(0.095)	(0.11)
Adjusted R^2	0.042	0.059	0.065
Observations	436	436	436

Standard errors in parentheses

$^+$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$

Again my primary interest is in how these individual differences shape behaviors within the information environments. The significant nature of the interaction terms for Model 3 indicates that the information environments exert differential effects based on OE and NC. Because of the limitations I outlined in the previous section, I again turn to predicted values of the DV to examine the moderating effects of openness and closure on the amount of disagreeable information participants accessed. The results are displayed in Figure 5.3.

Figure 5.3: Predicted Content of Search by OE and NC
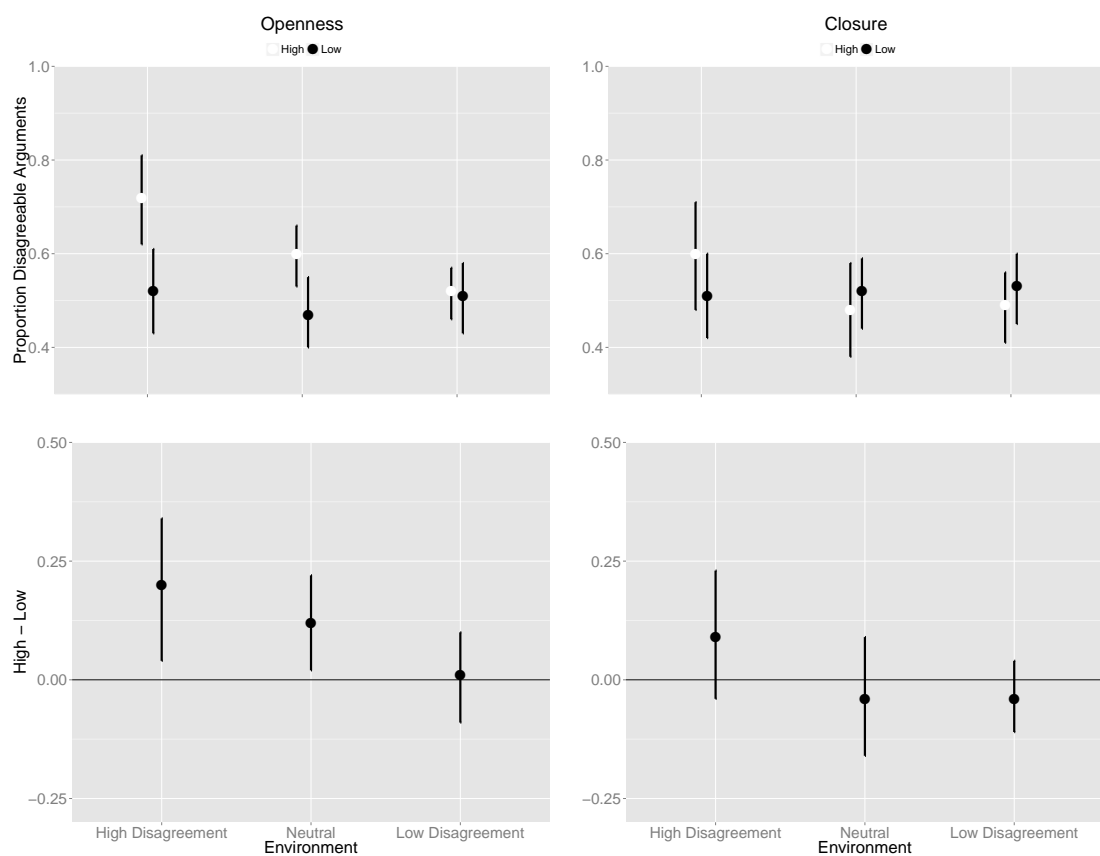
Openness

The tendency for people who are high in OE to be open to new perspectives is evident when looking at the predicted proportion of disagreeable information accessed by a respondent. High openness participants in the high disagreement

environment accessed a little over 70% of available disagreeable information, compared to those who are low in OE who accessed a little over 50%. Openness also drove a difference in access for participants in the neutral disagreement environment, albeit with a smaller difference (60% vs. 48%). Both differences are significant at $p < 0.05$. As was the case with the amount of information accessed, there is no difference between high and low openness for participants in the low disagreement environment. In short, OE makes people more receptive to accessing counterattitudinal perspectives. Again this pattern is not universal, existing only when people are exposed to moderate or high levels of disagreement.

Closure

In none of the disagreement environments is there a difference in the amount of disagreeable information accessed between those who are high vs. low in closure. As was the case with total information collected, the closure by disagreement interaction manifests in a different way. Where there is a difference is in the amount of disagreeable information accessed between those who are high in NC and in the high disagreement environment vs. those who are high in NC and in the neutral disagreement environment (diff = 0.12, p-value = 0.05). This is inconsistent with my expectation that a high NC should motivate people to avoid challenging information, especially when faced with a large amount of disagreeable information.

A possible explanation for this difference is that being exposed to a high level of political disagreement is sufficiently challenging to people's existing attitudes that avoiding challenging information is not an effective way to obtain closure. If this is the case, desiring closure could result in an extensive information search, even if the information searched for is inconsistent with existing attitudes. This would explain why the pattern between high and low openness differs for the high disagreement environment compared to the neutral and low disagreement

environments.

In sum, there is strong support for H3 and little support for H4. Openness makes people more receptive to disagreeable information. The lack of support for my NC by disagreement hypotheses (that people who are high in need for closure should be less prone to access disagreeable information) could be interpreted in a few ways. The first is that OE and NC are simply too close conceptually to be distinguished statistically. I do not think this is the case largely because NC is not only insignificant, but the coefficients and predictions consistently move in the opposite direction than I outline in my closure hypotheses. I believe the more likely explanation is that the disagreement treatment is so strong that those who seek closure cannot obtain it by modifying their information search. Instead, they may have to engage in behaviors at a different stage of the reasoning process to obtain closure. I explore just such a stage in my final set of analyses.

Information Use

My approach to testing the final two hypotheses, H5 and H6, is to explore the ingredients of people's support or opposition to the ballot initiative. Specifically, I leverage my knowledge of the kinds of information people accessed during the study to help understand the criteria they are relying on when making a judgment. In Chapter 4 I argued that participants who rely solely on existing attitudes, despite the fact that they accessed relevant, albeit counterattitudinal, information, are engaging in motivated reasoning. In contrast, people who rely on relevant information *despite* it being inconsistent with their beliefs are engaging in a more accurate, open-minded approach to judgment. For this analysis, I continue this expectation and add an additional set of analyses to see if openness and/or closure moderate these dynamics.

My approach with this analysis is to replicate the approach from Chapter 4 by comparing the effect of prior attitudes about immigration reform and the information participants accessed in the DPTE on initiative support and how being exposed to differing levels of disagreement shapes this relationship. Now I add an additional step: how levels of NC and OE, in turn, moderate the link between disagreement, information use, and judgment. The dependent variable for this analysis is a binary indicator coded 1 if someone voted in favor of the ballot initiative that restricts the rights of immigrants and 0 if they voted against the initiative. The first independent variable is a dummy variable coded 1 for people who have a prior attitude that favors the ballot initiative and 0 for those with an attitude that leads them to oppose the initiative. The second independent variable is a measure of the proportion of available anti-initiative information a participant accessed in their environment.[7] As I did in Chapter 4, I also include indicators of exposure to disagreement and interaction terms between disagreement and information access. Including controls for party identification, political ideology, and political sophistication, the result is the following logistic regression:

$$
\begin{aligned}
V_i \;=\; & \beta_0 + \beta_1 A_i + \beta_2 I_i + \beta_3 HD_i + \beta_4 ND_i + \\
& \beta_5 I * HD_i + \beta_6 I * ND_i + \\
& \beta_7 Dem_i + \beta_8 Ind_i + \beta_9 Ideo_i + \beta_{10} Soph_i + \epsilon_i
\end{aligned}
\tag{5.2}
$$

To examine the effect of OE and NC on these relationships I separately estimated Equation 5.2 among participants who are high in NC, low in NC, high in OE, and low in OE.[8] The result is 4 models which separately assess the link

[7]As I did when studying the type of information people accessed, this variable is created by summing the number of anti-initiative arguments a participant accessed and then dividing that number by the total to which they had access. The result is a continuous variable running from 0 to 1, with higher values corresponding to accessing more anti-initiative information. See Chapter 4 for a more complete description

[8]For both sets of indicators, high is defined as above the mean of the scale and low is less

between disagreement, information access, and initiative support depending on levels of OE and NC. I also fit a lower-order model replicating the final model from Chapter 4, but this time I include regressors for openness and closure. The results from these models are displayed in Table 5.3.

Model 1 from Table 5.3 expands the equivalent information use analysis from Chapter 4 by including controls for openness and closure. The negative sign on β_5 in Model 1 indicates conclusions that are broadly consistent with my inferences from Chapter 4 (that disagreement moderates the effect of information use on ballot support), although the lack of statistical significance indicates that the strength of my conclusions from that chapter are attenuated by including controls for openness and closure. Even with the weaker effects after including these controls, there is still evidence of important substantive differences in the effect of information across the disagreement conditions.

As was the case in Chapter 4, people in the high disagreement environment are more likely to attend to the substance of the information they accessed than are those in the low disagreement environment. For example, somebody with a prior attitude favoring the initiative and who accessed all of the available anti-initiative information in the environment had a predicted probability of 0.31 of voting for the initiative.[9] The equivalent individual who was instead embedded in the low disagreement environment had a predicted probability of 0.78 of voting for the initiative. The difference in these probabilities is 0.46 and statistically significant at $p < 0.05$. In short, even with weaker effects due to the inclusion of openness and closure into the model, there are still substantively and statistically significant difference between the information environments in terms of how people rely on information.

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than or equal to the mean.

[9]Other values set at their means or modes.

Table 5.3: Initiative Support By Information, Disagreement, and Individual Differences

	(1) Replication	(2) Low OE	(3) High OE	(4) Low NC	(5) High NC
β_1: Imm. Attitude	2.38**	2.25**	2.55**	2.16**	3.16**
	(0.39)	(0.49)	(0.65)	(0.49)	(0.73)
β_2: Information	0.56	-0.095	1.20	3.90*	-4.08$^+$
	(1.36)	(1.90)	(2.04)	(1.95)	(2.44)
β_3: High Disagreement	0.49	1.24	-0.71	1.18	-0.51
	(1.06)	(1.37)	(1.82)	(1.57)	(1.77)
β_4: Neutral Disagreement	-0.19	0.60	-2.66	2.14	-3.39*
	(0.94)	(1.20)	(1.93)	(1.36)	(1.62)
β_5: Info*High Dis.	-2.52	-3.69	-0.81	-5.07$^+$	-0.0039
	(2.05)	(2.81)	(3.15)	(2.84)	(3.72)
β_6: Info*Neutral Dis.	0.57	-0.34	3.52	-4.89*	7.88*
	(1.75)	(2.35)	(3.10)	(2.48)	(3.18)
β_7: Democrat	-0.26	-0.73	0.26	-0.72	0.087
	(0.49)	(0.61)	(0.92)	(0.70)	(0.74)
β_8: Independent	-0.28	-0.93	0.34	-0.17	-0.29
	(0.52)	(0.69)	(0.90)	(0.75)	(0.79)
β_9: Ideology	0.66*	0.46	1.06*	0.52	0.84*
	(0.27)	(0.34)	(0.45)	(0.39)	(0.40)
β_{10}: Sophistication	-0.23*	-0.15	-0.34	-0.30$^+$	-0.33$^+$
	(0.11)	(0.14)	(0.21)	(0.16)	(0.18)
β_{11}: Openness	-1.22				
	(0.93)				
β_{12}: Closure	2.09*				
	(0.99)				
β_0: Constant	-1.79	-0.90	-2.66	-2.43	0.51
	(1.36)	(1.45)	(2.04)	(1.55)	(1.79)
ll	-133.186	-81.264	-49.597	-69.234	-58.152
Observations	311	172	139	179	132

Standard errors in parentheses
$^+$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$

Most relevant to the analyses in this chapter is whether and how openness and/or closure shape the links between information, disagreement, and the vote on the ballot initiative. An interesting pattern emerges when examining the link between disagreement, information, and initiative support broken out by participants who are high vs. low in OE and NC. The magnitude of β_5 changes in the direction outlined by H5, with participants who are high in OE relying to a greater degree on information than participants who are low in OE. While the effect is in the direction I outlined in H5 (that people who are high in openness should be the ones who rely most heavily on information when exposed to higher levels of disagreement), within equations 3 and 4 β_5 is not statistically different from zero. While the results from Models 3 and 4 are consistent with H5, they do not provide especially strong evidence that openness shapes the link between information access, disagreement, and initiative support.

Breaking out respondents by their level of NC, however, provides evidence supportive of H6. Model 5 demonstrates that participants who are low in NC and who are exposed to a high (β_5) or neutral (β_6) level of political disagreement, rely to a greater degree accessed anti-initiative information than do participants in the low disagreement environment to determine their support for or opposition to the ballot initiative. Further, the negative signs on β_5 and β_6 in Model 5 indicate that accessing more anti-initiative information depresses initiative support. Model 6 shows that these effects do not extend to participants who are high in need for closure. In short, people who are high vs. low in need for closure react to political disagreement in distinct ways, with those who are low in need for closure being much more willing to rely on anti-initiative information to determine their vote on the initiative.

To illustrate these relationships in a more transparent way, I simulated the predicted probability of voting 'Yes' on the initiative across the amount of anti-

initiative information a participant accessed, for each level of political disagreement, and by whether they were low or high in NC. I then took the *difference* in the predicted probability for those who were high in NC from those who were low in NC. At a given level of anti-initiative information accessed, a positive difference between these probabilities indicates that people low in NC are more supportive of the initiative than are people high in NC. A negative difference indicates the opposite: that people low in NC are less supportive than are people high in NC. No difference indicates that low and high NC participants rely on information to the same degree when determining initiative support.

Figure 5.4 displays the differences for each information environment. The simulated probabilities are for a conservative Republican who has a prior attitude that predisposes them to support the initiative and who has an average level of political sophistication. Importantly, the information they are accessing is *disagreeable* given their prior attitude. Shaded regions correspond to 95 percent confidence intervals around the probability.

Figure 5.4: Difference in Probability of Voting Yes on the Initiative Between High vs. Low Need For Closure Across Levels of Disagreement
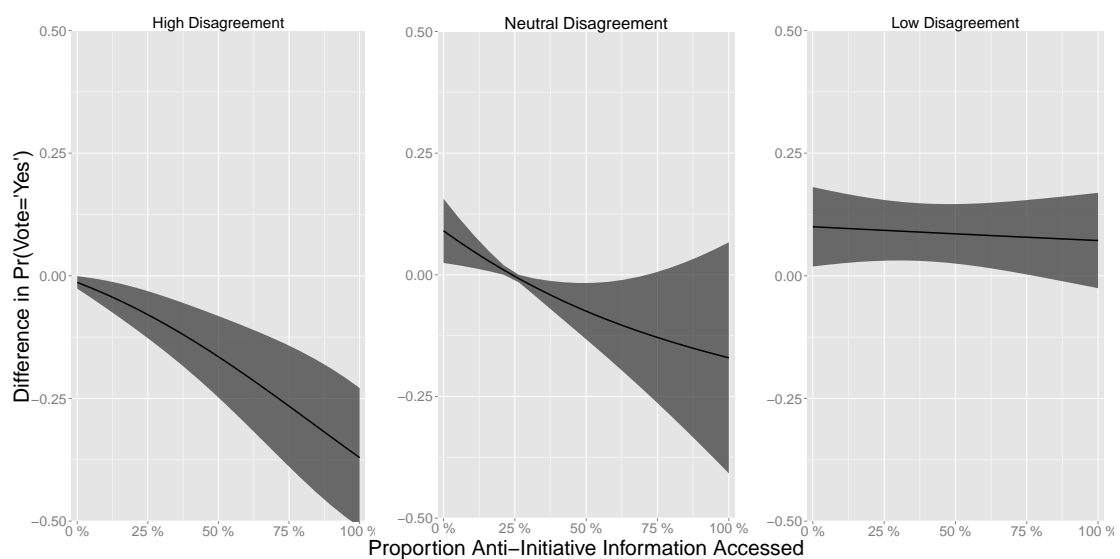
There are important patterns within and across the three panels in Figure 5.4. The first panel shows that within the high disagreement environment there are large differences in initiative support across levels of information for participants who were high vs. low in NC. Participants who are low in NC are much more likely to vote against the initiative at high levels of anti-initiative information than are participants high in NC. At low levels of anti-initiative information (which, as a reminder, is also disagreeable information for the simulated participant) this difference is negligible. At moderate (50%) to high (100%) levels of anti-initiative information, however, the differences are stark, with people who are low in NC having a probability of voting 'Yes' between 0.15 to 0.35 lower than people high in NC. When exposed to high levels of disagreement, people who are low in NC rely on disagreeable anti-initiative information to determine their views on the initiative while those who are highs in NC do not. This is consistent with my expectation that people who are high in need for closure will be less likely to rely on relevant information and, instead, make a decision based largely on their prior beliefs.

The pattern in the neutral disagreement environment is broadly consistent with that of the high disagreement environment. The largest difference between panels one and two being that at low levels of anti-initiative information consumption, people who are in the neutral environment and who are low in NC are actually more likely to support the initiative than are people high in closure. In the area between 25% to 100% of anti-initiative information consumed, however, the relationship is similar to that of high disagreement, with people who are low in NC relying on the relevant (disagreeable) anti-initiative information to determine support while those high in NC do not. This effect is weaker, with the difference in probability ranging from 0.10 to 0.20, and more uncertain. This latter point is highlighted by the wider confidence interval around the difference, and the inclusion of 0 in

this interval at high levels of consumed anti-initiative information. In both the neutral and high disagreement environments, people who are low in NC rely on the substance of the information they access to drive their support (or opposition) to the initiative, although the effect is stronger in the high disagreement environment.

Finally, the low disagreement panel shows that there are no substantive differences across information consumption between those who are high vs. low in NC. There is some evidence of a main effect of NC, with people who are low in NC being marginally more supportive of the initiative, but this effect does not vary across levels of consumed anti-initiative information. In other words, in this environment information is not brought to bear on evaluations and, given the results presented in Chapter 4, we know that people ignore relevant, albeit disagreeable, information in the low disagreement environment.

Examining the patterns across panels reveals the complex nature of the interaction between NC, disagreement, and information. Closure affects how people rely on information, but the nature of this relationship is contingent on the amount of disagreement to which a participant is exposed and the kinds of information they consume. Given that closure captures a psychological need to make decisions and to protect existing attitudes, that its effect on judgment is determined by the level of disagreement to which someone is exposed should not be surprising. The low disagreement environment should provide little, if any, threat to prior attitudes. Presumably there is no reason for high vs. low NC participants to react in distinct ways within this environment. The high disagreement environment is on the other end of the spectrum. By presenting people with large amounts of explicitly counterattitudinal information, this environment directly threatens people's prior beliefs. Conditional on this threat, people who are predisposed to be more tolerant and open to revising existing beliefs, such as those who are low in NC, should be more open to relying on divergent points of view. That is exactly what I find, with

people who are low in NC being the ones who rely on the content of information to drive their views on the initiative.

5.5   Conclusion

This chapter explores the link between exposure to political disagreement, the individual differences openness to experience and need for closure, and multiple aspects of political judgment. In Chapter 4 I demonstrate that political disagreement directly affects how people reason about politics. This chapter moves beyond this short-term explanation of behavior and shows that the effect of disagreement is moderated by individuals' OE and NC. While there is evidence that disagreement can affect how people reason about politics, taking into account individual differences highlights the conditional nature of this effect and, in the process, paints a more accurate picture of for whom and under what conditions disagreement can motivate more open-minded thinking vs. motivated reasoning.

In the domain of information search, I find that exposure to disagreement motivates people to engage in *deeper* searches and to be more open to counterattitudinal (disagreeable) information. I also show consistent evidence that openness to experience moderates the effect of disagreement on information search, with people high in OE engaging in especially deep searches for information while also being more open to counterattitudinal information. The effect of need for closure on these outcomes is muted, with the only form of moderation appearing to be that people high in need for closure access more counterattitudinal information in the high disagreement condition than those who are high in closure and exposed to a moderate amount of political disagreement.

This finding is inconsistent with my expectation that NC would lead people to be more closed-minded in the face of increased political disagreement. A plausible

explanation for this pattern is that exposure to a high level of disagreement makes people, regardless of their level of NC, confront counterattitudinal perspectives. If this is the case, then a high level of NC could motivate them to eliminate the cognitive imbalance created by disagreement, even if the only way to eliminate that imbalance is by accessing disagreeable points of view. The inconsistent findings I offer with respect to closure and information search warrant a more detailed examination, which would require a study designed explicitly to test how the nature of available information affects people's ability to reach closure.

The second domain of judgment I examine in this chapter is the ingredients of decisions, specifically the criteria people rely on when making judgments. Extending the analyses in Chapter 4, I show that the need for closure shapes people's willingness to rely on information when making judgments. People high in NC consistently ignore information when exposed to increasing levels of political disagreement while those who are low in need for closure rely on the substance of the information they collected, even though it is disagreeable, to help them render a judgment.

An important general finding from both sets of analyses is that individual differences are *situationally* important. While OE and NC are both important moderators of the link between disagreement and judgment, their influence depends on how much disagreement someone encounters and the stage of the reasoning process being studied. Openness is relevant at the information search stage. Closure, on the other hand, exerts relatively little influence at the search stage, instead turning up as important when people are deciding which criteria to bring to bear on their decision.

My study is not without shortcomings. Due to limitations with sample size, I am unable to look at the intersection of OE and NC. While I argue that these are distinct constructs, in practice I am not able to tease apart if people who are, for

example, high on NC can also be high on OE, and how this would influence my results. Future work would benefit from explicitly designing a study to examine the concurrence of individual differences to see if there are meaningful subgroups within openness and closure.

My next chapter is a significant departure from Chapters 4 and 5. Chapter 6 expands my analysis of disagreement to examine how *partisan* disagreement can affect judgments. The change in my focus on disagreement results in a substantial shift in the outcomes I examine. Rather than focusing on how disagreement shapes information search, integration, and use, I instead align my research with a large body of scholarship that examines the links between citizens' partisan identities and their issue attitudes. I do so by exploring how encountering different forms of partisan disagreement can lead people to revise their views of the political parties with which they identify and what the downstream consequences of these revisions are on judgments.

Chapter 6

Partisan Disagreement

6.1 Introduction

In my final empirical chapter I extend my study of disagreement and political decision-making into the domain of partisanship. To do so I rely on a portion of my experiment in which, in addition to varying the amount of disagreement contained in a debate, I vary the presence or absence of partisan cues attached to the information. The question I ask in this chapter is, "How does encountering disagreeable information with partisan cues affect people's evaluations of the major political parties, and what effect, if any, does variation in these evaluations have on the degree to which people rely on their party identifications when making judgments?" I situate this question squarely in the middle of debates about the relationship between citizens' issue attitudes and their partisan identifications (e.g., Campbell et al. 1960; Carsey and Layman 2006; Dancey and Goren 2010). Are people devoted partisans, regardless of whether or not the particular issue positions staked out by those parties are out of step with their issue preferences and attitudes? Or are there times when people will be willing to revise their partisan identities?

The shift to focusing on partisan disagreement and the link between issue attitudes and partisan identities brings with it a new set of relevant independent and dependent variables to study. Foremost, I reorient how I think about disagreement. As in previous chapters, political disagreement is rooted in the (in)consistency between people's issue attitudes and the content of information in their environment. This form of disagreement is now more precisely defined as *issue* disagreement. Because some information environments now contain partisan cues, a second form of disagreement can also exist: partisan disagreement. This form of disagreement is based on the congruence (or disconnect) between the partisan information in someone's environment and their party identification. While I expand on this term more in a future section, what is important is that people can experience low, moderate, or high levels of partisan disagreement. Importantly, issue and partisan disagreement vary independently, so participants can experience any combination of low to high partisan disagreement and issue disagreement. For example, someone could be assigned to an environment in which the majority of the information is inconsistent with their existing attitudes (high issue disagreement) but which is attributed to the political party with which they identify (low party disagreement). It is environments that place people's issue attitudes and their partisan identities in opposition to one another that I leverage to understand how partisan disagreement shapes people's evaluations and use of their partisan identities.

The central concept of interest in this chapter is *partisan ambivalence*, the disconnect between people's long-term, stable partisan identities and their short-term evaluations of the political parties (Lavine, Johnston and Steenbergen 2012). For some analyses partisan ambivalence serves as my dependent measure while in others it is a predictor and a moderator. In the former case, I theorize that exposure to partisan disagreement can lead to variation in the degree to which people experience partisan ambivalence. A key way in which partisan disagreement

can affect levels of ambivalence is by exposing people to information that heightens their awareness of differences between their own political issue attitudes and the positions held by the major political parties. If my expectations are correct, an individual who disagrees with the positions adopted by co-party elites and who is exposed to information that makes them aware of this disconnect may experience heightened partisan ambivalence. Alternatively, because of how strongly people hold their partisan identities, a situation along these lines may have little to no effect on partisan ambivalence.

In addition to examining if partisan ambivalence can be induced by certain kinds and/or amounts of disagreeable partisan information, I also examine the downstream consequence of variation in partisan ambivalence on the linkages between people's party identifications, issue attitudes, and support for a major piece of immigration reform legislation. Traditionally party is viewed as the central ingredient to people's evaluations and votes. Yet increasingly situations are identified that lead people away from relying on their partisan identities and toward favoring other decision criteria, like information and issue attitudes (Bullock 2011). One such situation is when people have high levels of partisan ambivalence (Lavine, Johnston and Steenbergen 2012). It follows that if some people have higher levels of partisan ambivalence upon exposure to different kinds of partisan disagreement, then it should be the case that these individuals rely on distinct criteria when making a decision.

The evidence I present in this chapter is consistent with my expectation that some forms of partisan disagreement will lead people to be more ambivalent. I show that exposure to information that heightens the salience of disagreement between individuals' issue positions and the positions held by co-partisan elites makes them more ambivalent about their party identification. Changes in partisan ambivalence also have important downstream consequences for how people

render political judgments. Ambivalent partisans are less likely to rely on their partisan identities and are more likely to rely on their issue attitudes when making decisions (Lavine, Johnston and Steenbergen 2012). Both sets of findings are important because they show that partisan blinders do not unconditionally shape people's perceptions and use of information about political issues. Rather, their issue attitudes can and do shape their partisan leanings, which has important consequences for how people make political judgments.

The remaining sections of the chapter are structured as follows. The next section focuses on theories of party identification and issue preferences, paying special attention to the role of party identification in motivating biased perceptions of political information and in shaping people's issue attitudes. I then outline my theoretical expectations for how exposure to disagreeable partisan information, especially information highlighting disconnects between people's partisan identities and issue preferences, may shape their feelings about those parties (i.e., their levels of partisan ambivalence). I then return to a discussion of my experimental design, paying particular attention to my approach to manipulating party cues. I end with a discussion of my results, a recap of my findings, and suggestions for future research.

6.2   Literature Review

Party Identification → Issue Attitudes

A great deal of research demonstrates that citizens' party identifications serve as central anchors of their political beliefs and attitudes. People ground their perceptions of political events (Bartels 2002; Gaines et al. 2007), views on political issues (Dancey and Goren 2010), and even their core political values (Goren

2005; Goren, Federico and Kittilson 2009) in their party identifications. The explanations for the strength and direction of these relationships are rooted in two related features of the psychology of party identification. First, party ID is a social identity; it is a long-term stable predisposition socialized during childhood that endures in power over the course of one's life (Campbell et al. 1960; Green, Palmquist and Schickler 2004). Second, the centrality of partisan identities to people's self-concepts creates incentives for people to engage in behaviors aimed at protecting and reinforcing those identities. The result is that, "Identification with a party raises a perceptual screen through which the individual tends to see what is favorable to his partisan orientation" (Campbell et al. 1960, p. 133).

The result of strong and personally-central partisan identities in the domain of issue attitudes is that people tend to align their policy preferences with the positions advocated by the political party with which they identify. In practice, Democratic identifiers take up the positions staked out by Democratic elites while Republicans at the mass level follow the lead of Republican elites (Zaller 1992; Dancey and Goren 2010). The rise of elite polarization only serves to amplify this dynamic. By providing clearer and more unified signals to the mass public about the positions adopted by party elites, polarization increases the correspondence between party identification and mass-level issue preferences (Hetherington 2001; McCarty, Poole, Rosenthal and Knoedler 2006; Levendusky 2009; Sniderman and Stiglitz 2012; Druckman, Peterson and Slothuus 2013).

Contemporary politics is often defined by a clear correspondence between mass-level preferences on political issues and the positions adopted by partisan political elites. When there is a disconnect between mass-level issue attitudes and the positions adopted by elites, the incentives political parties give voters to align their political preferences with those of party leaders typically results in individuals modifying their issue preferences to align with those of elites. For example, Dancey

and Goren (2010) find that people change their issue attitudes to be consistent with their party identifications on a host of issues, including health care and welfare reform.

In sum, party identification serves as a powerful determinant of people's issue attitudes, and elite polarization makes it all the more likely that people will link their partisan identities and issue attitudes. However there is also an appreciable amount of evidence that issue attitudes feed into people's partisan identities, especially when those issue attitudes are held strongly. In the next section I discuss the conditions under which issue attitudes may be brought to bear on partisan identities and how this dynamic could manifest itself in the domain of disagreeable partisan information.

Issue Attitudes → Party Identification

While partisan identities often shape issue attitudes, existing work also finds evidence of times when the converse is true and issue attitudes shape partisan identities. For the most part, when these patterns are observed they are explained by focusing on attributes of the individual. In particular, if citizens find an issue to be personally important and the political party with which they identify holds a position that differs from their own, this can result in a modification of their party ID rather than their issue attitude (Carsey and Layman 2006). While understanding how features of individuals shape their willingness to favor issues over party (or vice-versa) is important, a second potential influence is also present: the nature of the information surrounding the issue.

One condition that may lead people to revise the link between their partisan identity and issue attitudes is the presence of information that heightens the salience of a disconnect between their party ID and the positions held by the

party with which they identify. Much of the existing work on party identification and issue attitudes implicitly assumes the presence of information conveying the link between elite behavior and positions, on the one hand, and mass issue attitudes and partisan identifications on the other (Zaller 1992; Carsey and Layman 2006).[1] The assumption being that media coverage of political issues and debates in Washington inevitably ties the behaviors and positions adopted by party elites to particular positions on the issue. As Dancey and Goren (2010, p. 686) write, "...heightened partisan elite debate on a given issue...cues citizens that the issue divides the parties, prompting them to update their policy and party preferences accordingly."

It stands to reason that when this information conveys consistent attitude-party cues (such as when party elites share issue positions with co-partisan identifiers), the result is a strengthening of the link between issue attitudes and party identification. However, when this information is out of sync with the issue positions of mass identifiers, such as when Republican elites adopt positions that are out of step with those held by Republican identifiers in the mass public, it will be more likely that people reevaluate their partisan identities in light of their issue attitudes. Information, in other words, is a critical mediator of the link between elite behavior and the attitudes of members of the mass public. Yet, save for some key exceptions (Dancey and Goren 2010), very few works even attempt to account for this link by measuring the presence (or absence) of information. No research examines how the variation in the content of this information affects the linkages between people's issue attitudes and their partisan identities.

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[1]Zaller (1992), for example, assumes that people who are politically aware are more likely to receive information, although actual exposure to information is not observed in his research. Recent research does a better job of accounting for the role of information in shaping these dynamics. Dancey and Goren (2010) content analyze news stories covering elite debates, for instance. However the grounding of this research in observational data prevents the direct observation of information consumption on the part of citizens.

There seem to be two reasons for this omission. The first is that studies of issue attitudes and partisan identification examine constraint and change over relatively long time horizons, with studies often spanning several years. This is due in part to necessities of research design, with scholarship in this tradition often relying on panel data to observe changes over time in people's issue attitudes and partisan identities (Carsey and Layman 2006; Dancey and Goren 2010).[2] Causal inferences are difficult to draw from observational research designs, especially when research questions center on intertwined concepts like party identification and issue attitudes. Using panel data provides researchers with the ability to examine intra-individual changes in partisanship and issue attitudes while parsing out unobserved heterogeneity. This provides greater certainty about the causal nature of conclusions.

The second reason is wrapped up more directly in the concepts being studied. The durability of party ID means that employing a long time horizon is necessary to observe change. People are not prone to change their party ID very often, and, when they do, changes tend to be gradual (Carmines and Stimson 1989; Green, Palmquist and Schickler 2004). Finally, if information is necessary to connect elite positions to mass-level behavior (Dancey and Goren 2010), then there must also be variation in the level of media coverage of political issues.[3] Again, this requires examining changes over a relatively long period of time.

While these are laudable decisions to make from the perspective of conducting rigorous, causally-sound empirical research, they raise additional questions about the dynamics between issue attitudes and partisan identities. For one, are long time horizons like those examined in existing works necessary to observe varia-

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[2]Both of these works examine the period from 1992 to 1996 using a 3 wave NES panel administered every two years.

[3]These scholars operationalize exposure to information about elite debates by measuring the media coverage of the issues they study.

tion in the link between issue attitudes and partisanship? Or can debates that unfold over a shorter period of time also motivate people to question their partisan identities in light of certain kinds of information? Second, is change in party identification the best way to capture movement in people's feelings about their political party compared to their issue attitudes? Or is there a middle ground between people changing their long-term party identifications or modifying their issue attitudes to align with their partisan identities?

The concept of partisan ambivalence (Lavine, Johnston and Steenbergen 2012), the disconnect between people's long-term, stable party identifications and their short-term feelings and evaluations of the major political parties, serves as one such middle ground. This work shows that many partisans in the United States have a mix of negative feelings about their own party and/or positive feelings about the opposing party. Importantly, this mix exists regardless of the strength and stability of individuals' long-term party identifications. Thus, while in the short-term people may not revise their party identifications, it is quite likely that they could become more (or less) ambivalent about their political party given exposure to certain kinds of information. One way to study relatively short-term variation in people's evaluations of their political party due to exposure to different forms and amounts of disagreeable partisan information is to see if they become more or less ambivalent in light of that information.

Understanding the circumstances that lead to heightened partisan ambivalence is important for a host of reasons, not the least of which being the normative expectation that citizens bring their attitudes and preferences to bear when choosing politicians to represent them in office. If the political process is simply defined by people deriving issue attitudes and preferences from existing partisan attachments, this raises a number of concerns about whether or not people are competent enough to fulfill their duties in a democracy (Sniderman and Stiglitz 2012). Addi-

tionally, partisan ambivalence has important consequences for political behavior. Typically ambivalent partisans are less prone to rely on simple decision criteria, like party cues, choosing instead to rely on more complex decision-making criteria like issue attitudes. This is valuable because reliance on more complex criteria can help people avoid pitfalls, like misinformation and misconceptions, stemming from an overreliance on party cues in judgment (Dancey and Sheagley 2013; Lavine, Johnston and Steenbergen 2012).

For the reasons already mentioned - long time horizons, lack of explicit measures of information, and focus on changes in party identification - existing research is not well positioned to address how, if at all, short-term exposure to different kinds of information affects how people think about and rely on their partisan identities. To gain leverage on my research questions, I rely on an original experiment that controls people's exposure to different forms of partisan elite debate. In the next section I outline my theoretical expectations given previous literature and provide the details of the unique experiment I designed and implemented to test them.

6.3   Hypotheses

I have two general expectations. My first is that exposure to partisan disagreement, specifically information highlighting the disconnect between citizens' issue attitudes and the positions advocated by partisan political elites, will result in heightened partisan ambivalence. Specifically:

> **H1 - Disagreement & Ambivalence**: Exposure to information highlighting the disconnect between individuals' issue attitudes, their partisan identities, and the positions adopted by elites in their political party will lead to higher levels of partisan ambivalence.

I also expect there to be a downstream effect of changes in partisan ambivalence

on how people connect their issue attitudes and party identifications to evaluations. Specifically:

> **H2 - Ambivalence and Constraint**: Variation in partisan ambivalence will moderate citizens' use of party identification and issue attitudes when making political evaluations. Becoming more ambivalent will result in a weaker relationship between citizens' party identifications and their evaluations. Becoming more ambivalent will also result in a greater correspondence between issue attitudes and evaluations.

6.4   Methods and Measures

Study Design

Testing these expectations requires a research design that presents people with information containing a mixture of partisan cues and disagreeable issue information, and, in particular, information that places people's issue attitudes and partisan identifications in opposition to one another. I accomplish this by creating information environments that simulate elite debate about an important political issue. As I outline in Chapter 3, all participants are assigned to environments with varying levels of pro- and counterattitudinal information. By combining people's prior attitudes about an important political issue, immigration reform, with the content of information in their environment, I code whether they were embedded in an environment containing a low, neutral (moderate), or high level of disagreeable issue information.

Where the experimental design for the study in this chapter departs from those used in the prior two chapters is the introduction of party cues to the information environment. Specifically, I fully cross the information conditions with a manipulation that attaches party cues to each piece of information in the environment. This is accomplished in two ways. First, the content of each

argument is explicitly attributed to a partisan source. For example, in the non-partisan condition an argument was attributed to "Shaun Evans, a local business owner and resident of Tucson, Arizona...," while the equivalent argument in the partisan condition is attributed to "Shaun Evans, a local Democrat, business owner, and resident of Tucson, Arizona..." The headline displayed during the search phase of the DPTE is also modified to explicitly include an attribution of the information to a political party.

There are three party cue conditions. The first is Democrat party cues attached to the anti-initiative (pro-immigration) positions and Republican cues attached to the pro-initiative (anti-immigration) positions. The second is the reverse, Republicans advocating the anti-initiative side and Democrats taking up the pro-initiative cause. The third is a lack of party cues attached to either side. The result is 9 experimental conditions. As a matter of reference, it is the no party cues conditions that I rely on for the analyses in my fourth and fifth chapters (combined with participants from Study 1).

As was the case in my prior empirical chapters, my interest is not with the experimental conditions *per se*, but rather on the intersection of the treatments with people's prior attitudes and, in this case, party identifications. Disagreement now comes in two forms: attitude disagreement with the majority of information in the environment and/or partisan disagreement with the majority of information in the environment. Whereas in the previous chapters someone with a prior attitude supportive of immigrants (opposing the initiative) and who was assigned to the environment containing a large amount of anti-immigrant (pro-initiative) information would be coded as being in the high disagreement environment, I must now account for the nature of the partisan cues attached to the information. This is done by coding, independent of the attitude agreement or disagreement of the information, if the party cues attached to the majority of the information in the

environment are consistent or inconsistent with participants' party identifications. Note, independents are not included in any of the analyses in this chapter because they cannot experience partisan ambivalence nor can they experience partisan disagreement with their information environments.

For example, self-identified Democrats who are assigned to an environment in which the majority of available information is sourced to Democrats are coded as being in an environment with party agreement. Conversely, were they assigned to an environment in which the majority of information is attributed to Republicans they would be coded as being in a party disagreement environment. For the environments containing a balanced set of pro- and anti-initiative information, I code whether a given participant's issue attitudes and party identifications were aligned or mismatched. There are two types of neutral environments to which participants could be assigned. Both contain an even balance of agreeable and disagreeable information. However, in one environment agreeable information would be attributed to members of their political party while disagreeable information would be linked to the opposition party. The converse is true in the other environment, which would result in participants being exposed to agreeable information being tied to the opposition party and disagreeable information being linked to the party with which they identify. Including the non-partisan conditions, the result is 9 combinations of party-attitude dis(agreement). Sample sizes for these groups are displayed in Table 6.1.

The first four groups in this table correspond to the conditions that include an asymmetry of agreeable and disagreeable information. Participants in the party agree - attitude agree group were in an environment with 80% attitude agreeable information, all of which was sourced from their political party. The remaining 20% of information was disagreeable and attributed to the opposition political party. Participants in the party agree - attitude disagree condition, encountered

Table 6.1: Sample Size in Information Environments

Information Environment	N
1. Party Agree - Attitude Agree	121
2. Party Agree - Attitude Disagree	107
3. Party Disagree - Attitude Agree	112
4. Party Disagree - Attitude Disagree	94
5. Neutral - Party & Attitude Agree	106
6. Neutral - Party & Attitude Disagree	99
7. Non-Partisan - High Disagree	168
8. Non-Partisan - Neutral Disagree	196
9. Non-Partisan - Low Disagree	149
Total	1,152

The non-partisan environments combine participants from Studies 1 and 2.

80% disagreeable information, however that information was attributed to the political party with which they identify. The remaining 20% of information was attributed to the political party they opposed, but was also agreeable in nature. The party disagree - attitude agree environment resulted in participants being exposed to 80% agreeable information, but that information was linked to the opposition party. Finally, the party disagree - attitude disagree environment resulted in participants being exposed to a great deal of attitude disagreeable information that was attributed to the opposition party and a relatively small amount of party and attitude agreeable information.

Participants in the fifth and sixth groups encountered an even split of agreeable and disagreeable information. However, for the first group this information was also consistent across issue attitudes and party identification. This was not the case for the second group, who saw inconsistencies between their party identifications and prior attitudes and the partisan nature of the information they encountered. The final three groups are the neutral conditions, which I use for analyses in Chapters 3 and 4. I include these groups of participants in this chapter because I can use them as a control against which I can more precisely estimate

the causal effect of party cues.

Groups two, three, and six are the most central to my hypotheses because these participants are exposed to information highlighting a mismatch, or inconsistency, between their prior attitudes, party identifications, and the positions adopted by party elites. This occurs for group two because they encounter a great deal of information that they disagree with but that is attributed to their political party. The process is different for group three, who encounter a great deal of information they agree with but that is advocated by the opposition party. Group six encounters a balanced mixed of attitude agreeable and disagreeable information. However, in this case agreeable information is attributed to the opposition party and disagreeable information to the party with which they identify.

Coding participants' information environments in this way gives me purchase on how encountering different amounts of pro (agreeable) and counterattitudinal (disagreeable) information along with agreeable or disagreeable partisan cues affects how people think of their partisan identities and the downstream effect of this thinking on their party-issue attitude constraint when making judgments. Similar cross-pressures exist for the neutral group assigned to conditions that result in their issue attitudes and partisan identities being placed in opposition to one another.

Measures

Measuring Partisan Ambivalence

The key measure throughout these analyses is partisan ambivalence. For the first portion of my analyses it serves as my dependent variable and for the second analysis it is an independent variable and moderator. Before discussing how I operationalize partisan ambivalence, it is important to discuss how I measure

it. Existing work approaches the measurement of partisan ambivalence in a variety of ways. The most common approach is to rely on a series of open-ended likes and dislikes questions about feelings toward the two major political parties (e.g., Basinger and Lavine 2005; Greene 2005). Ambivalence is then calculated by comparing the same-party dislikes and opposition-party likes. The advantage of operationalizing partisan ambivalence in this way is that it allows researchers to use questions that are commonly asked on nationally representative political surveys, like the ANES.

Relying on these items has important drawbacks however, the most significant of which is that a large number of respondents are unable (or unwilling) to report any likes or dislikes about either political party. Fortunately, Lavine and colleagues (Lavine, Johnston and Steenbergen 2012) offer a new approach that was created specifically to measure partisan ambivalence.[4] The new measure does not bring with it problems of non-response that plague the open-ended questions. It is this approach that I rely on to measure the levels of partisan ambivalence of my participants.

Partisan ambivalence is measured twice during the course of my study. The first battery of questions is administered immediately prior to participants beginning the treatment phase of my study. Partisan ambivalence was measured a second time after the treatment phase was over and participants had voted on the ballot measure. The first partisan ambivalence question begins with the following stem:

> You might have some favorable thoughts or feelings about the [**Democratic/ Republican] Party**. Or you might have unfavorable thoughts or feelings about the [Democratic/Republican] Party. Or you might have some of each.

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[4]This measure appears on the 2008 ANES panel study and is used extensively in their recent book on partisan ambivalence.

> I would like to ask you first about any **favorable** thoughts and feelings you might have about the [Democratic/Republican] Party. Then, in a moment, I will ask you some separate questions about any unfavorable thoughts and feelings you might have.

Participants are then asked, "First, do you have **any favorable thoughts or feelings** about the [**Democratic / Republican] Party** or do you not have any?" Participants who respond by saying that they do not have any favorable thoughts or feelings are coded as "0." The remaining participants receive the following branch, "How favorable are your thoughts and feelings about the [**Democratic / Republican] Party**?" They can respond that they are "extremely favorable", "very favorable", "moderately favorable", or "slightly favorable." Responses are scored from 4 (extremely favorable) to 1 (slightly favorable). Participants are then asked a question tapping their unfavorable thoughts or feelings about the same political party. The process then repeats for the other political party.[5]

Four variables emerge from this series of questions: in-party positivity, in-party negativity, out-party positivity, and out-party negativity. Lavine, Johnston and Steenbergen (2012) then subject these responses to a series of measurement techniques to identify the underlying structure of the response to these questions. These analyses reveal that in-party negativity and out-party positivity derive from the same latent dimension while in-party positivity and out-party negativity do the same. In-party positivity and out-party negativity are combined to create a score of "consistent evaluations." Out-party positivity and in-party negativity are combined to create a measure of "conflicting evaluations." Figure 6.1 displays the distributions of conflicting and consistent evaluations in the pre-survey and Figure 6.2 does the same for the post-survey.

Operationalizing Partisan Ambivalence

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[5]The order in which each party was asked about was randomized the first time the battery was administered. When the battery was administered a second time it maintained the same order as the first.

Figure 6.1: Distributions of Consistent and Conflict Evaluations in Pre-Survey
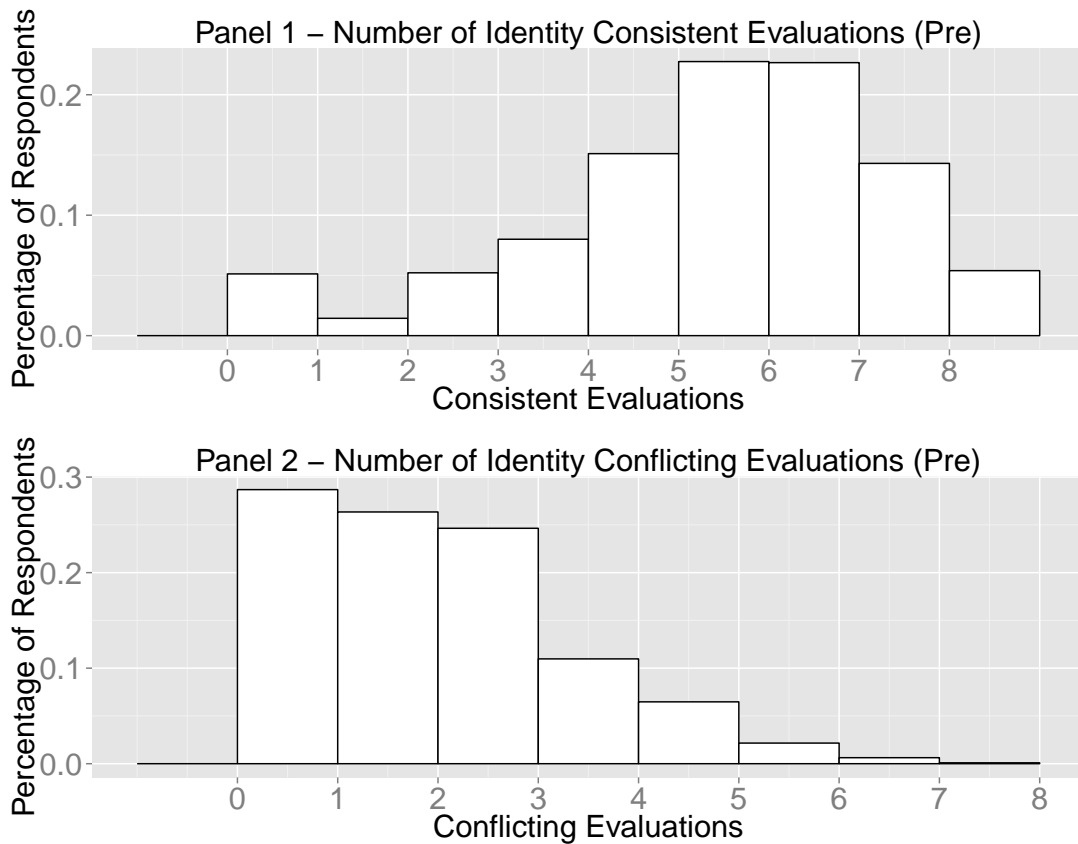
My approach to operationalizing partisan ambivalence is to rely on a strategy analogous to that used by Lavine, Johnston and Steenbergen (2012). In their chapter devoted to the measurement and operationalization of the concept, they argue that consistency and conflict evaluations simultaneously but independently constitute the degree of partisan ambivalence one feels. In other words, conflict and consistency evaluations are distinct but related determinants of partisan ambivalence. Because of this, relying on a single variable that somehow combines scores on both variables, such as by adding them together or taking the difference between each dimension, does not accurately define partisan ambivalence.[6] The approach taken by Lavine, Johnston and Steenbergen (2012) is to code whether

[6]As face validity for this argument, the correlation between the conflict and consistent evaluation variables in the pre-survey is $r = 0.08$ and in the post-survey is $r = 0.06$.

Figure 6.2: Distributions of Consistent and Conflict Evaluations in Post-Survey
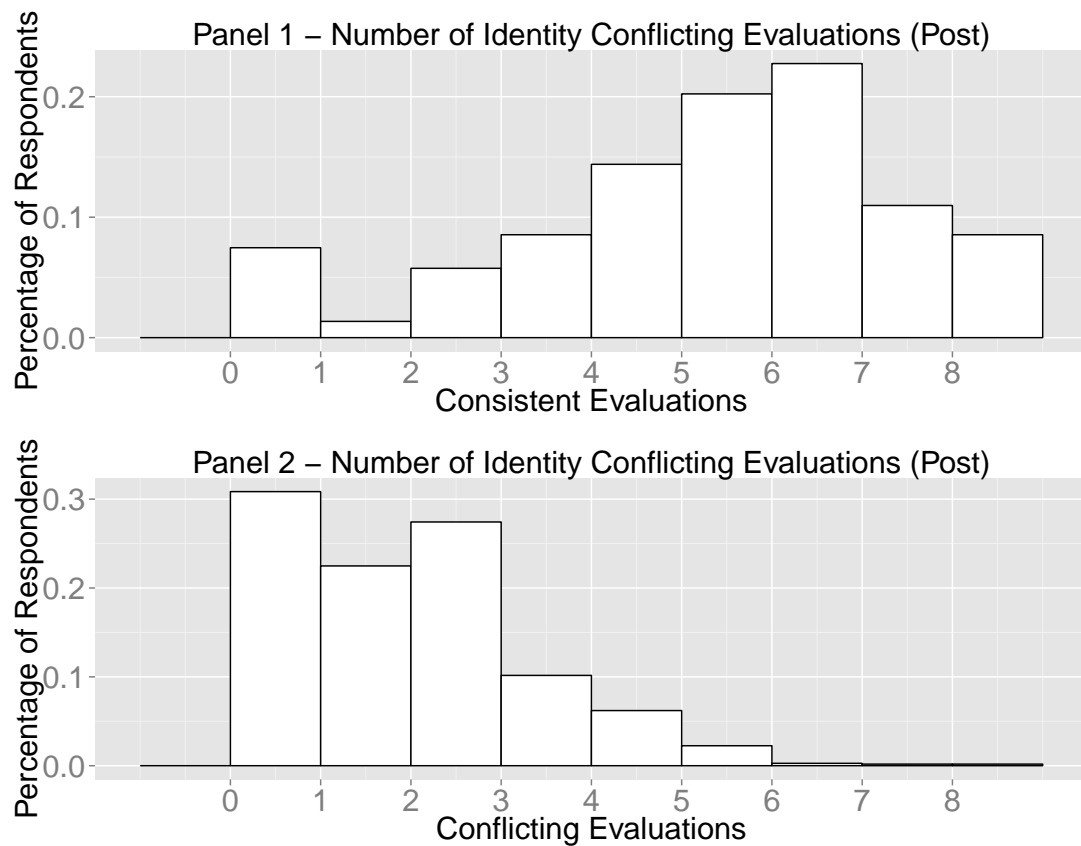
or not people are ambivalent partisans based simultaneously on their levels of consistent and conflict evaluations.[7]

Following their lead, I operationalize ambivalent partisanship based on each participant's concurrent levels of conflict and consistent evaluations. However, my focus in this chapter is on understanding how exposure to partisan disagreement leads to *changes* in ambivalence. This leads me to create a three category variable. The first category is people who became more ambivalent pre- to post-treatment, which is measured by looking at changes in conflict and consistent evaluations. Participants who had increases in conflict evaluations and/or decreases in con-

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[7]Ambivalent partisans are those participants who are in the 95th percentile of conflict evaluations and the 5th percentile of consistency evaluations. Univalent partisans are the converse, 95th percentile of consistency evaluations and 5th percentile of conflict evaluations. The remaining people are conflicted partisans (Lavine, Johnston and Steenbergen 2012, Ch. 3).

sistent evaluations are coded as becoming more ambivalent. People who had the same pre- to post-treatment conflict and consistency evaluations are coded as having no change. Finally, those participants who had higher consistency evaluations and/or lower conflict evaluations are categorized as less ambivalent. Table 6.2 displays the sample size for each of these categories.

Table 6.2: Variation in Ambivalent Partisanship

Type of Ambivalence	N (%)
More Ambivalent	136 (14)
No Change	734 (76)
Less Ambivalent	93 (10)
Total	963

As is clear in Table 6.2, the modal outcome is no change in ambivalence. Given the relatively short amount of time between each of the questions this is not necessarily surprising. Importantly, despite the short amount of time between questions, 24 percent of participants manifest some sort of change in partisan ambivalence. 14 percent of participants became more ambivalent while the remaining 10 percent became less ambivalent.

6.5   Results

Hypothesis 1

My first hypothesis is that exposure to partisan disagreement in the form of information that places people's issue attitudes and their partisan identities in opposition to the positions adopted by partisan elites, both within their own party and in the opposition party, will lead to heightened partisan ambivalence. My dependent variable for this analysis is a three category unordered variable capturing change (or lack thereof) in partisan ambivalence, specifically whether a participant

became more ambivalent, less ambivalent, or experiences no change in ambivalence from the pre- to post-treatment ambivalence battery. My primary independent variable(s) are a series of dummy variables corresponding to the partisan disagreement conditions listed in Table 6.1. The base (omitted) category is the partisan agreement - attitude agreement environment. The model also includes controls for age, ideology (higher values are more conservative), extremity of partisan identification (higher values more extreme), political sophistication (higher values more sophisticated), and how personally important the issue of immigration reform is to participants (higher values correspond to greater importance).

I rely on multinomial (unordered) logistic regression to estimate the relationship between my disagreement variables and the likelihood of changes in partisan ambivalence because of the unordered nature of my dependent variable. Table 6.3 displays the estimates from this model. Column 1 displays the log-likelihood of becoming less ambivalent vs. having no change in ambivalence for each variable. Column 2 contrasts becoming more ambivalent vs. no change. Due to the difficulty with interpreting coefficients from multinomial logistic regressions, which is only compounded because of my use of the dummy variables, I rely primarily on simulated predicted probabilities of a participant having one of the three different categorizations of ambivalence as my primary mode of inference. After reporting the results from the model I will turn from the coefficients to the predicted probabilities.

Column 1 in Table 6.3 reveals that there is very little difference between participants who became less ambivalent and those who experienced no change in ambivalence. In fact, there are no significant information environment predictors of a participant becoming less ambivalent vs. having no change in ambivalence. The direct tests of H1 are contained in column 2 of Table 6.3, the more ambivalent

Table 6.3: Ambivalence Type by Environment

	Less Amb. vs. No Change	More Amb. vs. No Change
β_1: Pty Agree-Attitude Disagree	-0.90	1.13*
	(0.68)	(0.46)
β_2: Pty Disagree-Attitude Agree	0.13	0.87[+]
	(0.47)	(0.46)
β_3: Pty Disagree-Attitude Disagree	0.54	1.45**
	(0.48)	(0.46)
β_4: Neutral-Pty & Attitude Agree	-0.30	0.52
	(0.55)	(0.50)
β_5: Neutral-Pty & Attitude Disagree	-0.59	1.41**
	(0.62)	(0.45)
β_6: NP-High Disagree	0.17	-0.58
	(0.44)	(0.56)
β_7: NP-Neutral Disagree	-0.030	-0.33
	(0.43)	(0.50)
β_8: NP-Low Disagree	0.023	0.29
	(0.45)	(0.47)
β_9: Importance	0.15	-0.012
	(0.11)	(0.098)
β_{10}: Party Extremity	-0.23	-0.099
	(0.15)	(0.13)
β_{11}: Ideology	-0.18	0.024
	(0.15)	(0.12)
β_{12}: Sophistication	-0.13[+]	-0.16*
	(0.080)	(0.071)
β_{13}: Age	-0.017	-0.0084
	(0.012)	(0.0096)
β_0: Constant	0.21	-1.24[+]
	(0.76)	(0.70)
ll	-619.840	
N	929	

Standard errors in parentheses

[+] $p < 0.10$, * $p < 0.05$, ** $p < 0.01$

vs. no change contrasts.[8] The significant positive coefficients on β_1, β_2, β_3, and β_5 indicate that these environments, compared to the environment containing 80% party and issue-attitude agreement information, increases the log-likelihood that someone becomes more ambivalent compared to having no change in their level of partisan ambivalence. Three out of these four information environments contain information that places people's issue attitudes and party identifications in opposition to one another, with the notable exception being the party disagreement - attitude disagreement environment (β_3). I will return to a discussion of this case later, but the coefficients for the three remaining environments show that encountering disagreeable information, placing, in one way or another, people's party and issue attitudes in opposition to one another, can increase partisan ambivalence.

I rely on predicted probabilities to better illustrate the substantive effect of being in a given information environment on changes in partisan ambivalence. The result is a predicted probability for each of the three outcomes for each information environment. The probabilities are simulated by setting all other variables in the model at the mean or the mode for the participants included in the analysis. Figure 6.3 displays the results from these simulations. Circles correspond to the predicted probability of no change in partisan ambivalence, squares represent the probability of becoming more ambivalent, and triangles of being less ambivalent (more univalent). The lines running through the points are 95 percent confidence intervals.

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[8]The contrast between the more ambivalent vs. less ambivalent groups are also important. While certain information environments may increase the probability that people become more ambivalent compared to having no change, if it is also the case that people are equally likely to become less ambivalent in these environments then this indicates that the environments simply lead to random changes in responses to the ambivalence questions. At first glance, the coefficients in Table 6.3 indicate that this is not the case. The negative signs on many of the information environment coefficients in column 1 compared to the significant positive signs on β_2 and the other substantively important coefficients in column 2 indicates that it is unlikely that all I am observing are random changes. This point will be even more clear when inspecting the simulated predicted probabilities.

Figure 6.3: Predicted Probability of Change In Ambivalence
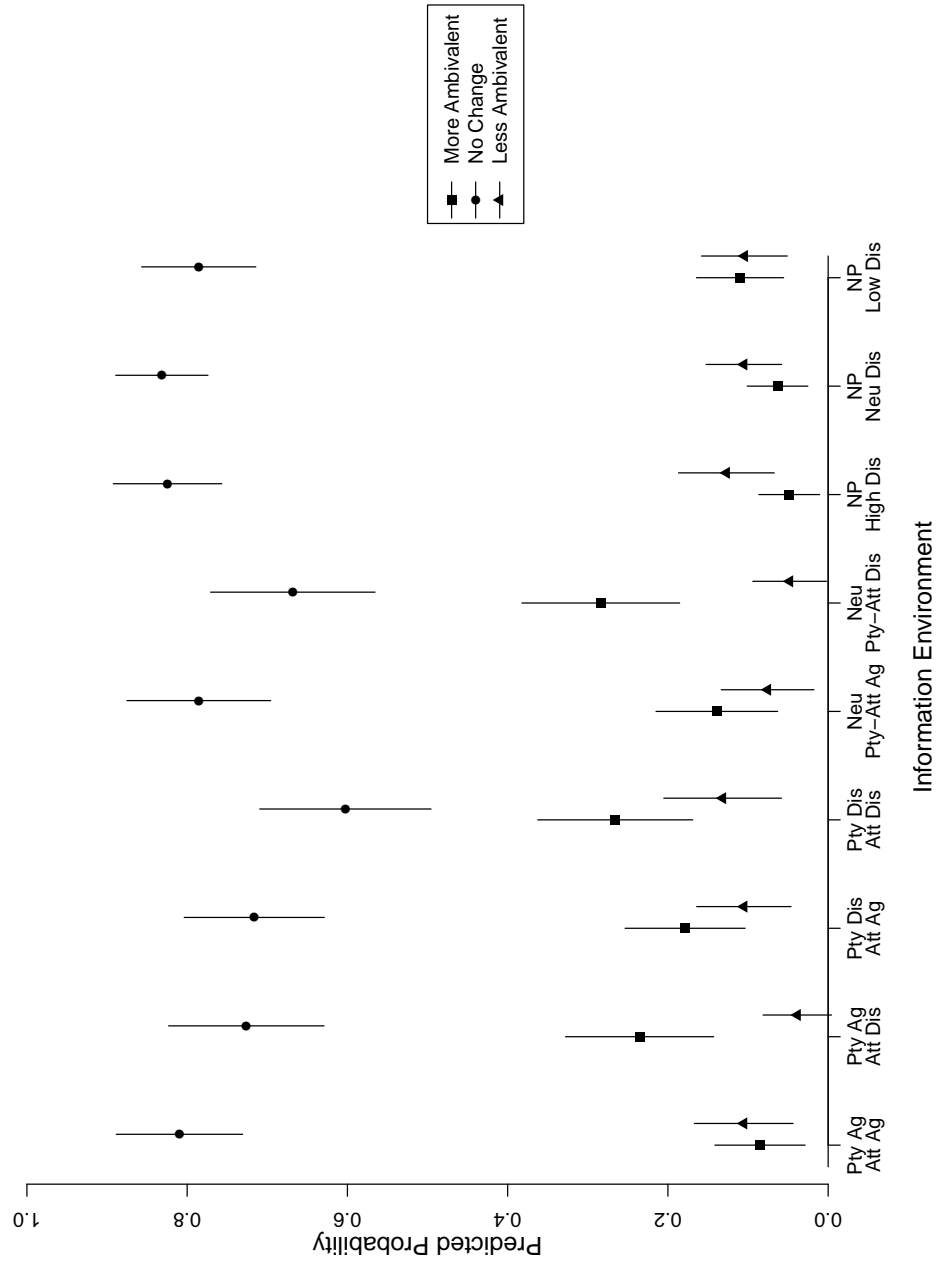
The clearest conclusion from this plot is that far and away the modal outcome in all environments is a high predicted probability of no change in partisan ambivalence. This is not surprising given the descriptive statistics in Table 6.2, which show that most participants experienced no change in partisan ambivalence. More importantly, what is also clear is that across environments there is a great deal of variation in the probability that someone becomes more ambivalent. At the same time, the lack of movement in the predicted probability of a participant becoming less ambivalent across environments demonstrates that it is not simply the case that certain environments cause people to randomly change their feelings about the parties, with equal proportions of people becoming more or less ambivalent.

For the three environments that place people's issue attitudes and party identifications in opposition to one another (party agree - attitude disagree; party disagree - attitude agree; neutral - party disagree and attitude disagree), Figure 6.3 shows that there is a significantly higher probability of becoming more ambivalent than there is of becoming less ambivalent. At the same time, participants assigned to environments that did not place their party and issue attitudes in opposition to one another (party agree - attitude agree; neutral - party agree and attitude agree; the three non-partisan environments) consistently had lower probabilities of becoming more ambivalent and higher probabilities of no change. Within many of these environments it is also the case that there is no significant difference in the probability of becoming more vs. less ambivalent.

The major challenge to my theoretical expectations is the party disagreement - attitude disagreement environment, which increased the probability that people became more ambivalent despite the fact that the available information did not place people's issue and partisan attitudes in opposition to one another. In this case, it seems that encountering a large amount of disagreeable issue information can also lead to greater levels of ambivalence. Contrasting these probabilities

with those of the non-partisan high disagreement environment reveals that it is not simply the case that encountering a great deal of disagreeable information absent party cues leads to higher levels of partisan ambivalence. Rather, it is making that information partisan that induces greater ambivalence.[9]

Figure 6.4: Predicted Probability of Change in Ambivalence

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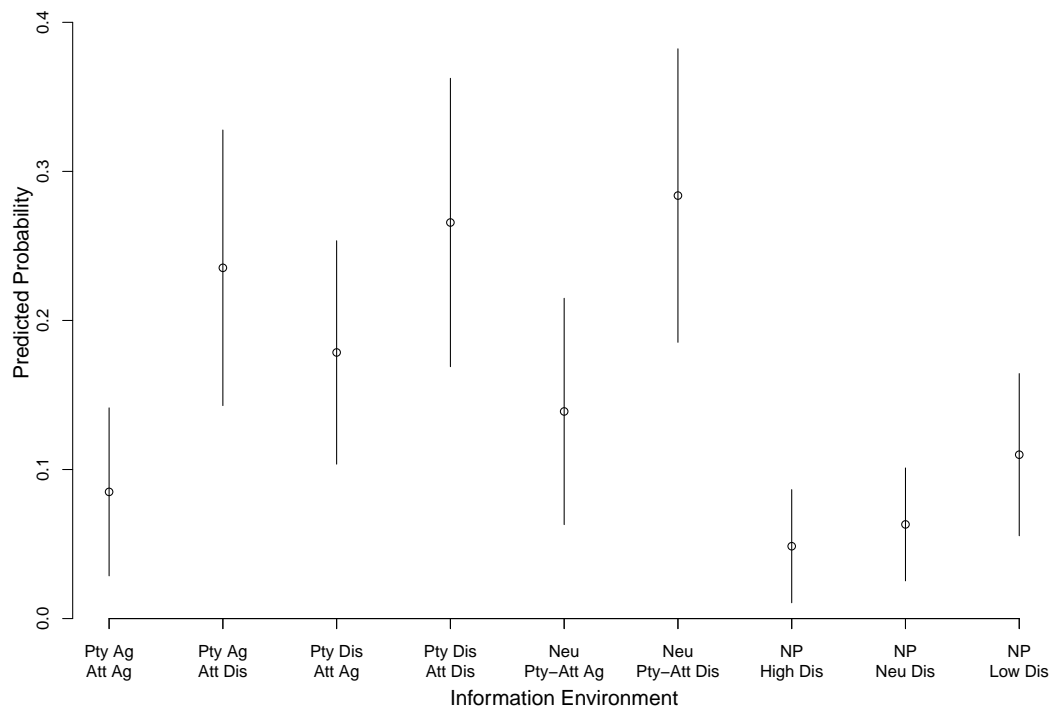
[9]One way to explore this finding is to examine if participants in this group differed at all from other participants in their responses to the partisan ambivalence questions. It turns out that they did. Participants in the party disagreement - attitude disagreement condition had changes in conflict evaluations on par with participants who were assigned to the environments that placed issue attitudes and party identities in opposition to one another (i.e., groups 2, 3, and 6 from Table 6.1. However, when I unpack this measure by examining the two variables used to sum conflict evaluations (in-party negativity and out-party positivity), I find that participants in this group have significantly more negative evaluations of their political party than any other group of participants in the study. This leads me to suspect that what drives partisan ambivalence for these participants is not the creation of tensions between party and issue positions, but rather being confronted with large amounts of information from the opposition party and comparatively little information from their own political party. Perhaps this is perceived as a weakness in their party which, in turn, leads them to evaluate it negatively.

Because my interest is primarily in understanding if exposure to partisan disagreement makes people more ambivalent, I conclude this section by focusing more directly on how the information environments cause people to become more ambivalent. Figure 6.4 displays only these probabilities, eliminating those for no change and less ambivalence. For the most part these probabilities correspond with my expectations outlined in H1. For example, participants in the party agreement - attitude disagreement environment (in which 80 percent of available information was disagreeable but attributed to party with which the participants identify) had a probability of roughly 0.25 of becoming more ambivalent. Participants in the neutral - party disagree and attitude disagree environment (in which half of all available information was attributed to their party but disagreed with their issue attitudes while the other half was attributed to the opposition party but agreed with their views on immigration) had a probability of almost 0.30 of becoming more ambivalent. In general, these analyses provide strong support for my expectation that encountering information highlighting a disconnect between people's issue attitudes and partisan identities can lead to increased levels of partisan ambivalence.

Hypothesis 2

To test H2, that becoming a more ambivalent partisan will affect the criteria people rely on when rendering a judgment, I shift from treating changes in partisan ambivalence as my outcome to instead using it as a predictor. For this test I analyze how changes in partisan ambivalence affect the tendency for people to rely on their issue attitudes and partisan identifications when rendering a vote on a hypothetical ballot initiative that restricts the rights of immigrants. This is the same ballot initiative used in Chapters 4 and 5. As a reminder, the variable is

coded 1 if a participant supported the initiative (thus, a 'Yes' vote for the initiative restricting the rights of immigrants) while a 0 corresponds to a vote against the initiative.

If becoming more ambivalent has a downstream effect on the criteria people use when rendering a judgment, it is most likely to influence the tendency for people to rely on party cues and/or their prior issue attitudes when making a decision. Greater partisan ambivalence should correspond to a decreased tendency for people to rely on their partisan identities when making a judgment, while most likely also leading people to lean more heavily on other criteria, like their issue attitudes. Alternatively, despite the fact that I successfully manipulated partisan ambivalence, it may be the case that the artificial nature of this manipulation means that there is little to no consequence of becoming more ambivalent.

I test these expectations by fitting a logistic regression predicting support for the ballot initiative based on participants' issue attitudes, partisan identifications, and a two-way interaction between each of the these characteristics and whether or not participants changed in partisan ambivalence. The interaction terms allow me to examine the direct effect of party identification and issue attitudes on ballot support and whether changes in partisan ambivalence condition the link between these factors and ballot support. The model includes controls for age, ideology, extremity of partisan identification, gender, political sophistication, and the personal importance variable (the same controls from the previous analysis).

For this analysis I combine participants who became less ambivalent (more univalent) with those who had no change in partisan ambivalence. I made this decision because the analyses reported for H1 indicate that there is no significant difference between participants who became more univalent and those who maintained their original level of partisan ambivalence. Specifically, none of the information environments nor any of the control variables, save for political so-

phistication, are significant predictors of participants being less ambivalent vs. having no change in ambivalence. This leads me to suspect that these groups would rely on party identification and issue attitudes in much the same way.[10] The variable constructed to capture changes in ambivalence is coded 1 if participants became more ambivalent and 0 if they became less ambivalent or had no change in ambivalence. Party identification is captured with a dummy variable coded 1 if participants are a Democrat and a 0 if they are a Republican. Independents are again omitted from these analyses due to the fact that they cannot experience partisan ambivalence. Issue attitudes are also captured with a dummy variable, coded 1 if a participant has a prior attitude favoring the ballot initiative and a 0 if they have a prior that should lead them to oppose the initiative.[11]

Table 6.4 contains the results from this analysis. One important feature about this model worth noting at the outset is that at N = 794 participants, the sample size is appreciably smaller than the 929 participants who were used in the model testing H1. This difference is due to the fact that participants' responses to the ballot question were not recorded for Study 1.[12] This should not be a problem for this analysis because participants in Study 1 were not exposed to the party cue manipulation in the first place so they are only used as a control for the analyses in this chapter.

The use of two interaction terms makes direct interpretation of the coefficients difficult. For example, β_1 captures the log-likelihood of voting for the initiative for someone with a prior attitude, which should lead them to support the initiative

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[10]When I do not combine participants who became less ambivalent with those who had no change in ambivalence the results are substantively the same for what I report in this section, although estimates based on participants who became less ambivalent are imprecise due to the relatively small sample size of this group.

[11]Results are substantively the same when I use continuous measures of party identification and issue attitudes, both of which capture strength as well as direction of these quantities. This model is included in the appendix.

[12]There was an error this piece of data being recording by the survey software.

Table 6.4: Ballot Initiaitve Support by Prior Attitudes, Party ID, and Changes in Partisan Ambivalence

β_1: Prior Attitude (Pro-Initiative)	1.83**
	(0.22)
β_2: Party ID (Democrat)	-0.69**
	(0.26)
β_3: Δ Partisan Ambivalence (More Ambivalent)	-0.28
	(0.66)
β_4: Δ Amb*Prior Attitude	1.03+
	(0.56)
β_5: Δ Amb*Party ID	0.40
	(0.63)
β_6: Importance	0.42**
	(0.10)
β_7: Party Extremity	-0.038
	(0.13)
β_8: Ideology	0.59**
	(0.14)
β_9: Sophistication	-0.24**
	(0.069)
β_{10}: Age	-0.0040
	(0.0090)
β_0: Constant	-0.081
	(0.65)
ll	-341.800
N	794

Standard errors in parentheses
$^+$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$

who is also a Democrat and did not have a change in partisan ambivalence while β_5 is the log-likelihood of initiative support for a Democrat with a prior attitude that leads to initiative opposition and who did experience changes in ambivalence. Because of this, I turn to simulated predicted probabilities of ballot support to draw substantive inferences about whether and how changes in partisan ambivalence moderate the effects of prior attitudes and party identification. The values I report are predicted probabilities of voting 'Yes' on the ballot initiative across discrete changes in party identification and issue attitudes. These probabilities are simulated at the sample means or modes for the remaining variables in the model. For the party identification simulations, issue attitudes are set as being anti-initiative (the modal response in the study). For the issue attitude simulations, party identification is set to Democrat (the modal response). Results are displayed in Table 6.5.

Table 6.5: Change in Predicted Probability of Voting 'Yes' by Ambivalence Type

Change	More Ambivalent	No Change
Republican → Democrat	-0.04	-0.09
	[-0.19, 0.12]	[-0.16, -0.02]
Anti → Pro Attitude	0.53	0.30
	[0.37, 0.70]	[0.23, 0.38]

95% CI in brackets.

Results from these simulations are consistent with H2 for both the party identification and issue attitude variables. The simulations reveal that participants who became more ambivalent were less likely to rely on their party identification to determine their ballot support than were participants who did not become more ambivalent. For ambivalent partisans, going from identifying as a Democrat to identifying as a Republican does not result in a meaningful change in the probability of ballot support. However, for participants who had no change in ambivalence, party does exert a significant effect. In this case, going from identifying

as a Republican to identifying as a Democrat results in a decline of 0.10 in the probability of voting for the initiative. In short, the effect of participants' party identifications is depressed when they become more ambivalent.

The results for how the effect of issue attitudes should change depending on partisan ambivalence also correspond to my expectations. In this case, ambivalent partisans rely much more heavily on their prior attitudes than do participants who experienced no change in ambivalence. Going from having a prior attitude that predisposes one to vote against the initiative to having a prior that should favor initiative support, results in an increased probability of 0.53 of supporting the initiative. While this change is also significant for people who experienced no change in partisan ambivalence, the effect is much smaller at 0.30.

In sum, changes in partisan ambivalence have important consequences for how people make decisions. Participants who become more ambivalent are less likely to rely on their party identifications, instead choosing to favor their issue attitudes when making a judgment. The patterns are different for those who did not become more ambivalent. While issue attitudes are still important for these participants, the degree to which they rely upon them is much smaller. At the same time, these participants had a much higher constraint between their party identification and support for the initiative.

6.6   Conclusion

The authors of *The American Voter* (Campbell et al. 1960) write that, "Party loyalty plays no small role in the formation of attitudes on specific policy matters...[o]n the other hand, if the individual has intense feelings about an issue before partisan alignments form, and his party's subsequent policy conflicts with such a belief, they may act as important forces toward partisan change." Since

offering this statement, public opinion scholars have devoted considerable time to testing its validity and identifying the conditions under which people will favor party over issue attitudes and vice-versa. To that end, scholars often find that people favor party over issues, but that there are also situations that can lead people to adjust their partisan leanings when their party is out of step with important political issues (Carsey and Layman 2006; Dancey and Goren 2010).

This research contributes to the debate about party identification and issue attitudes in three key ways. The first is by showing that adjustments in party identification are not restricted to long-term, multi-year, changes that much of the existing work focuses on. To the contrary, by showing that certain kinds of information can induce higher levels of partisan ambivalence, this research demonstrates that there are important short-term dynamics that undergird the link between people's issue attitudes and their partisan identities. This is a key finding because politics is often defined by short-term debates about important political issues. Thus, much like how long-term partisan (re)alignments can lead people to adjust how they link their party and issue attitudes (Carmines and Stimson 1989; Dancey and Goren 2010), this research shows that short-term variation in party-issue position taking is also critical.

By linking changes in partisan ambivalence to the nature of information to which people are exposed, this research also provides evidence for a logical mechanism connecting individual-level partisan identities and issue attitudes to elite level positions and partisan identities. While existing work acknowledges the central role information plays in motivating people to connect their attitudes and party identifications to those of elites, limitations of research design prevents it from unpacking how variation in the kinds of available information lead people to prioritize their issue attitudes over their party identifications or vice-versa. This research is well positioned to engage in just such an analysis. I find that exposing

people to information that places their issue attitudes and party identifications in opposition to the positions adopted by elites in their political party causes short-term changes in party identification by making people more likely to be ambivalent partisans.

A contemporary area to which this finding is relevant is how the recent debate over immigration reform has unfolded. After the 2012 election, Republican political elites scrambled to carve out positions on reform. As an issue that already lacked coherent partisan fault lines, voters on both side of the aisle struggle to place themselves vis-à-vis their political party on the issue (Dancey and Sheagley 2013). It is likely the case that this is especially true for Republican identifiers, who tend to hold relatively homogenous oppositional views about immigration reform but are faced by an increasingly diverse set of Republican elites taking positions favoring reforms. Existing work would support the inference that if these disconnects endure that many Republicans would adjust their issue attitudes about reform while a smaller, but still appreciable, number would modify their partisan identities. My research shows that there is also good reason to believe that there will be short-term variations in partisan identities, with some people becoming significantly more ambivalent about their partisan identities. And, further, that the likelihood that this will occur for a given individual likely depends on the nature of the information they consume.

The third important finding my research offers is that it shows there are meaningful downstream consequences for changes in partisan ambivalence on how people form evaluations and make judgments. People who become more ambivalent upon exposure to information are much less likely to lean on their partisan identities when forming evaluations. Instead they favor their existing views about the issue to a much greater degree than do people that have no changes in their partisan ambivalence. This is an important finding not only because it demonstrates

that my artificial information environments cause meaningful changes in ambivalence, but also because it identifies that even short-term changes in ambivalence affect the criteria on which people rely when making evaluations.

There are limitations to this research. Like all work relying on experimental methods, this research prioritizes internal validity over generalizability. Voters do not encounter debates between political elites in the real world like they do in my environments. For one, the positions taken by party elites with respect to the existing attitudes and partisan identities of voters is probably much less clear for real world debates. To the degree that this is the case, it may be that my research overstates the likelihood that people will internalize this disconnect and adjust their partisan leanings. On the other hand, I find statistically significant and substantively large effects even in a short-term experiment. It is likely that people would encounter information like this over the course of many weeks or months, which would presumably reinforce the information and lead to patterns along the lines of my findings.

Future research would benefit from connecting the strong, internally valid, findings from this research to survey data. In fact, I am currently working on integrating analyses based on the 2008 ANES panel survey into this research. A strength of the panel is that it asks partisan ambivalence questions twice, once early in the election and again in a post-election survey. This allows me to operationalize changes in partisan ambivalence the same way that I do in this chapter. I plan to use questions tapping the amount of disagreement, both partisan and non-partisan, in respondents' social networks to serve as my measure of political disagreement. This will allow me to specify models showing how variation in the level of disagreement in someone's social network changes their level of partisan ambivalence.

Chapter 7

Conclusion

This dissertation examines the effect of exposure to varying levels and kinds of political disagreement and disagreeable information on the nature and quality of citizens' political judgments. People encounter political disagreement in a variety of ways, ranging from informal interactions with colleagues, friends, and family members, to consuming political news and campaign information, to structured deliberative contexts, like citizen forums. Despite the centrality of political disagreement to many people's political lives, not to mention its prominent role in many democratic theories, existing work has little to say about how variations in the prominence of political disagreement affects citizens' political judgments.

The theoretical framework I outlined in Chapter 2 makes clear that there is good reason to believe that political disagreement should affect judgments and the behaviors people engage in at the various stages of the decision-making process. Consistent with a bevy of research on motivated reasoning and bias in political judgment, disagreement can cause people to "hunker down" and reflexively protect their existing political attitudes. However, as I argue and show in my empirical chapters, disagreement also creates incentives for people to engage in a more open-minded and accurate approach to reasoning.

A key argument I make in my dissertation is that research in political science would benefit from expanding the study of decision-making. Save for research rooted in the interdisciplinary tradition of political psychology, most political science research on judgment and decision-making focuses on a narrow set of outcomes, like elections and vote choice, that are traditionally viewed as critical to a healthy representative democracy. Research in this tradition has been and will continue to make important contributions to how scholars of politics understand the quality of people's political judgments. At the same time, it is beneficial to expand the scope of what is valued as constituting good political judgment.

The theoretical framework and empirical results I present are grounded in a broader view of judgment quality. Rather than focusing solely on outcomes, I explore the behaviors in which people engage prior to their final decision. Studying behaviors at stages preceding the final decision is beneficial because it speaks to the character of the decision citizens are making. Many democratic theories not only expect citizens to make good choices at the polls, but value a citizenry that is open-minded and willing to reflect on information, even if it is inconsistent with their existing beliefs. Understanding the kinds of information people collect and how they process that information serves as one way to better understand if people are open-minded in how they political judgments.

Review of Key Findings

In this dissertation I utilized an original series of experiments to test the relationship between varying levels and types of political disagreement and the nature and quality of people's political judgments. There are two key features of this experiment, both of which are embedded in information environments I created for people to learn about a ballot initiative mirrored after recent immigration reforms

in Arizona. The first feature of these environments is that they include varying amounts of disagreeable and agreeable information. This allows me to understand how encountering different levels of political disagreement shapes reasoning. The second feature is that some environments attribute this information to the major political parties while in the others the information is non-partisan. The amount of disagreement manipulation is central to all of my empirical chapters while I rely on the partisan disagreement manipulation only for the analyses contained in Chapter 6.

In my fourth chapter, I examine the direct effect of being exposed to varying levels of political disagreement on judgment. While a great deal of work argues that people are consistently biased motivated reasoners, there are relatively few works which probe the boundaries of these tendencies. This chapter tests my general theoretical expectation that exposure to higher levels of disagreement can lead to open-minded thinking. I find strong support for my expectations at all three stages of the reasoning process I examine in my research. I find that exposure to moderate and high levels of political disagreement (compared to low levels of disagreement) motivates people to collect more information and, critically, to be more willing to collect information that is disagreeable in nature. For the second stage of the reasoning process, how people process and think about that information, I find evidence that disagreement leads people to be more thoughtful about disagreeable points of view. Finally, I show that being exposed to varying levels of disagreement can lead people to rely on distinct criteria when rendering judgments. People who are exposed to low and moderate levels of disagreement lean heavily on their prior political beliefs and ignore the relevant information they collected while navigating their information environment. But, participants who are exposed to a high level of disagreement are more likely to make use of the information they collected, even when it is disagreeable, and rely on it to help

determine their vote on the initiative.

These results demonstrate that encountering higher levels of disagreement can lead people to engage in a host of behaviors that indicate they are being open-minded. In other words, encountering different kinds and amounts of political information can lead people to approach decision-making in different ways and, ultimately, shape the character of their decisions. In contrast to works arguing that people approach reasoning and judgment in a homogenous, often biased, manner, Chapter 4 shows that encountering certain kinds of political debates, such as those containing a great deal of disagreeable information, can encourage citizens to engage in a more open-minded, less biased, form of reasoning.

Chapter 5 extends the information acquisition and use variables used in my fourth chapter and examines how people's individual differences, in the form of their openness to experience and need for closure, shape their reactions to political disagreement. I find evidence that both differences moderate the effect of disagreement on these behaviors, though each is important at a different stage of the reasoning process. Openness to experience affects how people react to disagreement when collecting information. People who are high in openness collect significantly more information than do people who are low in openness when they are exposed to either a high or moderate amount of disagreement. Openness does not moderate information search at low levels of disagreement, showing that it is not simply the case that people who are high in openness always collect more information than do those who are low in openness. The effect of closure is more prominent at the information use stage, as it moderates the intersection of disagreement and information use that I found in Chapter 4. It is people who are low in need for closure that rely on disagreeable information to inform their positions on the ballot initiative while those who are high in closure ignore information and rely solely on their prior attitudes.

These analyses complement my results from Chapter 4 by unpacking how the intersection between individual-level attributes and situational features of people's information environments shape their judgments. They show that stable individual-differences play important roles in conditioning the effect of disagreement and disagreeable information on judgment. Thinking about these findings alongside the work on motivated reasoning is valuable because it reveals that certain kinds of people are more or less likely to engage in motivated reasoning processes, at least when faced with sufficiently high levels of political disagreement. In sum, openness tends to depress the general tendency people have to be motivated reasoners while closure does the opposite, with people high in need for closure being more likely to dismiss and ignore disagreeable information when making judgments.

My focus shifts in a number of ways in my final empirical chapter. In Chapter 6 I examine how partisan political disagreement affects how people evaluate the political party with which they identify and then how variation in these evaluations affects the degree to which people rely on their party identifications and issue attitudes when making judgments. My coding of disagreement for these analyses is based on the portion of my experiment in which I manipulate the presence of partisan cues attached to information. This allows me to expand my conceptualization of disagreement to include whether or not disagreeable issue information is likewise agreeable or disagreeable with respect to participants' political parties. In doing so, I identify which of my experimental conditions place people's issue attitudes and partisan identities in opposition to one another with respect to the positions adopted by co-partisan political elites. This allows me to examine how encountering large amounts of disagreeable issue information that is attributed to the opposition party exerts a differential effect on judgments compared to environments that attribute the same information to co-partisan elites.

I find that exposure to disagreement that creates issue and party conflicts makes people more likely to be ambivalent partisans (people who have a disconnect between their long-term party identifications and short-term evaluations of those parties). In and of itself this is an important finding because it shows that exposure to different forms of political debates can affect how people think about their party identifications. However, I also show that there are important downstream consequences of changes in partisan ambivalence on how people make political judgments. People who become more ambivalent as a result of exposure to high levels of disagreeable party and issue information lean less heavily on their party identifications and more heavily on their issue attitudes when rendering a judgment on the ballot initiative. People who did not become more ambivalent are comparatively less reliant on their issue attitudes and rely to a greater degree on their party identifications.

These findings have important implications for how political science understands the link between people's issue attitudes and their partisan identities. Consistent with a growing body of scholarship, I identify situations which can lead people to prioritize their issue attitudes over their partisan identities. In doing so, I expand on current findings by demonstrating that these processes can occur over a comparatively short span of time and that the content of information places a critical role in facilitating these changes.

While covering a variety of outcomes and forms of political disagreement, the findings from this research converge to demonstrate that disagreeable information can affect how people think and reason about politics. Despite the extensive data collection effort underpinning this research, there is still a great deal of work to be done to understand how information shapes the nature of citizens' political decisions. In the next section I outline some general thoughts for future directions in this area of research.

Limitations & Future Research

Focusing precisely on the causal link between disagreeable information and judgment required sacrificing other ways in which this research could have been conducted. Perhaps the most significant limitation of my research design and analyses is one of abstraction from politics and the generalizability of my results. For one, people do not consume political information using a system that resembles the dynamic process tracing environment. This is certainly true, though I did not utilize the DPTE with the intent of perfectly mimicking how people collect information. What the DPTE provides me, especially when compared to many other studies of information search, information exposure, and judgment, is the ability to better account for the agency people have over information exposure. Utilizing tools like information boards (e.g., Taber and Lodge 2006) lets scholars provide people with some control over information collection and exposure in a way that balances requirements of research design and control with generalizability. My use of the DPTE extends the logic of this approach but improves on it in important ways. Limiting the amount of time and the total amount of available information at a given moment to which people have access should ensure that people expose themselves to the information that they are most interested in consuming.

Work in this area would benefit from explicitly unpacking the effect of presenting participants with information using a tool like the DPTE compared to traditional, static information boards. It very well may be the case that the introduction of dynamics changes the character of decisions in ways that I cannot account for. Understanding how and why the presentation of political information in different ways affects the choices people make when collecting and using that information would be an important extension of work on information and judgment.

Related to critiques of generalizability, all of the information I present people with is directly relevant to the decision they are making. However, when people consume information outside of experimental settings they are presented with a cacophony of information. Certainly some of that information is political and relevant to judgments they need to make. But much more of it has little to no political substance. A logical extension of the research conducted for this dissertation is to introduce additional kinds of information into the environments in which people are embedded. This would allow not only for a way to better capture how people consume information in their everyday lives, but would also provide them with a way to opt-out from exposure to disagreeable information. I am currently working on an extension of this research that relies on this modification.

A second important limitation of my research is that I focus on a single political issue (immigration reform). Politics and political debate is defined by an on-going exchange of ideas across multiple dimensions of political issues and other forms of political disagreement. My decision to focus on immigration reform was an intentional one, derived from my need to pick an issue about which many citizens have an opinion and which, at least to a degree, crosses traditional party lines. That said, perhaps the issue of immigration reform is unique in the minds of voters and that by focusing solely on this issue I have painted an inaccurate portrait of how disagreement can affect judgments.

Ultimately I do not think that it is the case that disagreement over immigration reform is qualitatively different from disagreement over other issues. The core of what I study is the effect of the inconsistency between people's attitudes and information they are exposed to and I do not expect that the nature of this dynamic depends on particular features of issues. However, due to its prominence and the fact that many citizens have opinions on the issue, it could be the case that this is an issue for which it is too easy to create political disagreement. More

complex issues may prove more difficult and less prone to disagreement.

Studying how disagreement stemming from different kinds of political issues affects judgments is another important direction future research would benefit from taking. Do all issues create disagreement for voters? Are other issues more or less prone to result in disagreement that benefits voters along the lines of what I find in the research for this dissertation? Perhaps selecting issues for which partisan elites are more (or less) clearly sorted would change how people respond to disagreement. It may also be the case that disagreement around more technical, but still polarized, issues would provide a better venue in which to study the beneficial effects of disagreement because people will be more reliant on information when forming opinions and rendering judgments in that area.

Finally, like all research that focuses on questions of causal relationships that are tested using experimental methods, future research would benefit from testing my conclusions outside of the controlled, artificial setting I created. One way to accomplish this is to rely on panels to capture repeated measurements of individuals' opinions to see if changes in the composition of elite debate, such as how much information is available on one side or the other of a political issue, map onto variation in citizens' opinions. Admittedly this is not an easy task. For one, it is quite difficult to measure information exposure outside of experimental settings. It is also challenging to gain measures of some of the variables, like information collection and use in decision-making. That said, there are numerous works that study citizen competence and which have made great strides in identifying ways to understand the quality of decisions outside of experimental contexts (Bartels 2002; Goren 2012; Lavine, Johnston and Steenbergen 2012). If an ambitious scholar were able to identify clear behaviors that map onto open-minded thinking and could observe changes in information at the elite level, then the findings from that research could go a long way toward testing the robustness of my conclusions.

Implications

I began this dissertation with an example intended to illustrate the different ways in which people react when faced with varying amounts of disagreement and disagreeable information. It seems reasonable to return to this illustration to motivate the final section of my dissertation. As a reminder, Alice reacted to disagreement by "digging in" and acting like a motivated reasoner while John behaved in a comparatively open-minded fashion. At the outset I contended that research in political science leaves too little room for citizens to act like John and instead assumes that most, if not all, people act like Alice. The findings I have presented across my chapters are broadly consistent with this contention. People can, and in fact do, react in an open-minded fashion when exposed to high levels of political disagreement.

As I see it, these findings have important implications for two major areas in political science. The first is research on bias and motivated reasoning. It is worth returning to a quote from some of these scholars that I offered in Chapter 2. Lodge and Taber (2000, p. 185) contend that, "...most citizens most of the time will be decidedly 'partisan' in what and how they think and reason about political leaders, events, and issues." This is an important contention they offer, one that is grounded in a cogent theoretical framework and which finds consistent support across a host of research projects. Yet, it is also a pessimistic vision of political reasoning and judgment that derives largely from automatic processes residing outside of conscious awareness. My research pushes back explicitly on the notion that these processes always lead to biased political reasoning.

This dissertation offers a different vision of how people think and reason about politics. Rather than being defined largely by bias, political judgment is a balancing act, often between the desire to be accurate and correct while also maintaining

existing political beliefs and ideas. Sometimes, perhaps even often, this balancing act favors biased approaches to political judgment. However, when situations place these motivations in opposition to one another, people can and do prioritize the desire to be accurate and correct over the preference to protect and defend prior attitudes.

These points relate to the second, and more general, implication of my research. The kinds of political judgments and decisions that people make are determined by a combination of stable, long-term features such as partisanship and individual differences like openness to experience and short-term, contemporary features of people's political environments, like the amount of disagreement surrounding a political issue. This shows that research on political judgment benefits when explicitly accounting for the relationship between these two factors. For one, this allows for more accurate predictors for how people behave in these situations. But, more importantly, viewing judgments as stemming from the combination of these short- and long-term factors leads to a more holistic picture of how and why people make certain kinds of decisions. Even if people ultimately want to minimize the amount of time and effort they devote to decision-making while also maintaining their existing political attitudes, it is not always the case that the features of a particular situation will lead people to do this while still satisfying their core political motivations.

Judgments are complex. However, rather than trying to simplify what constitutes a good or bad political decision, scholars interested in understanding the quality of political judgments should view complexity as a strength that can be leveraged to better understand the character of people's political decisions. Complexity is, in other words, not a vice but rather a virtue. Scholars of political decision-making should look at the complexity of political judgment as an opportunity to think through what it is that constitutes "good" and "bad" judgments

and which conditions, both long- and short-term, tends to facilitate or hinder people making high quality political judgments.

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Appendix A

Appendix

A.1 Chapter 3

Ballot Initiative Text

Ballot Initiative Title: Immigration Restriction and Reform Act

This law requires state and local police to check the immigration status of anybody they suspect of being in the country illegally. It also provides guidelines for the prosecution of suspected illegal immigrants.

This law grants police officers who suspect somebody of being an illegal immigrant the right to stop and detain him or her. Once a suspected illegal immigrant is detained, the police shall make a reasonable attempt to determine the immigration status of that person. If the suspected illegal immigrant is unable to provide proof that they are in the country legally then law enforcement has the obligation to arrest the suspect.

Individuals convicted of being in the country illegally will also be required to face jail time. Upon completion of their sentence they will be deported from the country.

Example Arguments

Non-Partisan Argument Example # 1

Recent research raises serious questions about the link between illegal immigration and high crime in the United States. While it is true that illegal immigrants make up a disproportionately large amount of the United States prison population (relative to their size in the US population), this is due to the fact that illegal immigrants tend to be members of low social classes. Data in a report released by the **non-partisan** United States Census Bureau reveal that illegal immigrants are much more likely to be members of the lowest social class than any other class in society. In fact, when taking this into account, this research reveals that illegal immigrants are no more likely to be in prison than anyone else in America. Taking into account the social status of illegal immigrants the link between immigration and crime disappears.

Partisan Argument Example # 1

Recent research raises serious questions about the link between illegal immigration and high crime in the United States. While it is true that illegal immigrants make up a disproportionately large amount of the United States prison population (relative to their size in the US population), this is due to the fact that illegal immigrants tend to be members of low social classes. Data in a report released by the **Democrat/Republican** controlled United States Census Bureau reveal that illegal immigrants are much more likely to members of the lowest social class than any other class in society. In fact, when taking this into account, this research reveals that illegal immigrants are no more likely to be in prison than anyone else in America. Taking into account the social status of illegal immigrants the link between immigration and crime disappears.

Non-Partisan Argument Example # 2

Given the increased drug-related violence in areas of Northern Mexico it is clear that improving border security is critically important to American public safety. The **non-partisan** Border Safety Group, a collection of current and former border patrol agents, argue that, failure to provide adequate funding to prevent illegal immigrants from crossing into the United States makes it easy for violent drug cartels to funnel criminals and drugs into the United States. While it may be true that most illegal immigrants are not criminals, the risk of letting violent criminals into the United States is too great and requires much stricter border control.

Partisan Argument Example # 2

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Summary Statistics

Table A.1 displays the summary statistics for the variables used in the analyses the second half of Chapter 3. Because these analyses are based on the entire sample it also provides an overview of the sample characteristics for all of the participants in my studies.

For the demographic variables, age and education are numeric and coded to correspond to higher values of each characteristic. Gender is an indicator coded 1 if a respondent is male and a 0 if they are female. Race is a 5 category variable with the following response options: 1 - Native American/American Indian, 2 - White/Caucasian, 3 - Black/African American, 4 - Latino/Hispanic, 5 - Asian/Asian American/Pacific Islander.

All motivation variables are treated as continuous measures. For prior attitude, I rely on the same item I use to code disagreement, which is coded so that higher values correspond to more negative views of immigrants (and more positive views of the ballot initiative). Personal importance runs from 1 (extremely important) to 5 (not at all important). Interest also has five response options, running from not at all interested to extremely interested. For the predispositions, both party and ideology are 3 category variables. Party is coded 1 - Republican, 2 - Independent, 3 - Democratic while ideology runs from a minimum of liberal to a maximum of conservative. Openness and closure are both coded so that higher numeric values correspond to high levels of the individual difference.

Table A.1: Sample Summary Statistics

Variable	Mean/Median	St. Dev.	Min	Max
Demographic				
Age	31.61	11.20	18	82
Gender	1	n/a	0	1
Education	2.6	0.91	1	4
Race	2	n/a	1	5
Motivation				
Prior Attitude	3.23	1.45	1	6
Personal Importance	2.85	1.05	1	5
Interest	2.47	0.96	1	4
Predisposition				
Party ID	2.32	0.88	1	3
Ideology	1.77	0.80	1	3
Openness	5.36	1.41	1	11
Closure	3.10	0.73	1	5.5

MTurk HIT

Political Information Study HIT

To complete this HIT you will be required to click a link to complete a survey hosted on an external website. After you complete that survey you will be given a unique code to enter below.

The *average* survey takes about **20 minutes** to complete.

Please Note:

1. To complete this survey you must have flash installed on your computer.

2. The Chrome and Firefox browsers work the best for this study. If you use Internet Explorer you may need to allow remote content to be displayed. Safari may or may not work.

3. If you completed my HIT called "Political Attitudes Study HIT" during the month of February 2012 please do not participate in this study.

Compensation

1. After completing the survey make sure you copy or write down the unique code you receive at the end of the study. This is necessary for you to receive compensation. Once you receive it you can enter the code below.

2. None of the questions you will be answering have right or wrong answers. If you are uncomfortable answering any question you may skip it.

Once you have completed the study please return to this page and answer the two questions listed below.

Web Link to Survey

1. Please enter the unique code you received at the end of the survey.

2. What internet browser did you use?

3. Did any portion of the study not work? Was any portion of the study confusing?

A.2   Chapter 4

Figure A.1 displays the distribution of a variable coding the proportion of available anti-initiative information participants accessed. The variable is one of the two primary independent variables used to test H5.

Figure A.1: Histogram of Proportion of Available Anti-Initiative Information Accessed
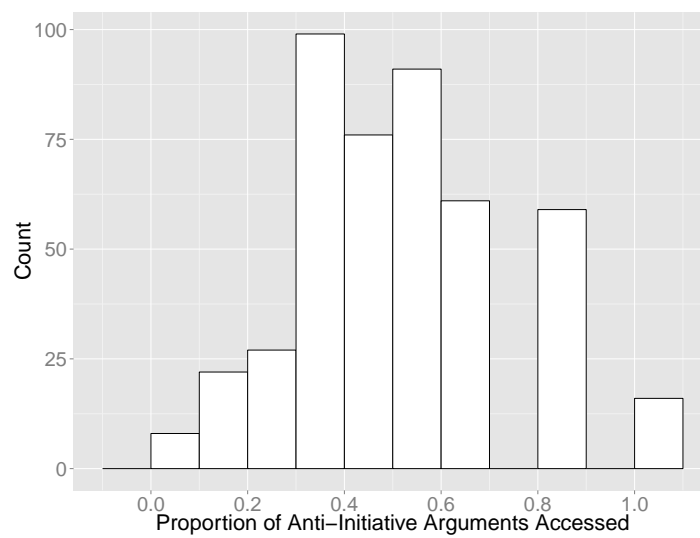
A.3   Chapter 6

Table A.2 displays a replication of the model from Table 6.5 with continuous measures of party identification and issue attitudes used instead of dummy variables. The party identification variable runs from 1 (Strong Republican) to 6 (Strong Democrat). The issue attitude measure runs from 1 (strongly predisposed to oppose the initiative) to 6 (strongly predisposed to support the initiative). This specification omits the party extremity measure included in Table 6.5 because it is redundant with the continuous measure of party identification.

Table A.2: Ballot Initiaitve Support with Continuous Meausres of Prior Attitudes and Party ID by Changes in Partisan Ambivalence

	(1) ballot3
β_1: Prior Attitude	0.69**
	(0.083)
β_2: Party ID	-0.13+
	(0.064)
β_3: Δ Partisan Ambivalence	-1.89
	(1.29)
β_4: Δ Amb*Prior Attitude	0.52*
	(0.24)
β_5: Δ Amb*Party ID	0.11
	(0.16)
β_6: Importance	0.34**
	(0.10)
β_7: Ideology	0.56**
	(0.15)
β_8: Sophistication	-0.23**
	(0.069)
β_9: Age	-0.0079
	(0.0092)
β_0: Constant	-3.53**
	(0.77)
ll	-333.741
N	794

Standard errors in parentheses

[+] $p < 0.10$, * $p < 0.05$, ** $p < 0.01$

A.4 Pilot Test

Prior to fielding my experiment I administered an extensive pilot test to determine which stimuli to include in my manipulations of disagreement. I tested 30 potential arguments for inclusion as stimuli in my experiments. Going into the pilot I did not have a set number of arguments in mind for use in my final study. Rather my goal was to identify as many arguments as possible that were comparable in terms of their perceived strength. The pilot test included an experimental manipulation where half of the participants evaluated non-partisan arguments while the other half evaluated equivalent partisan arguments. This allowed me to understand if attaching partisan cues to the information affected perceptions of strength. The first section focuses on perceived argument strength of the anti-initiative arguments.

Anti-Initiative Arguments

Argument Strength

Table A.3 contains summary statistics for the fifteen anti-initiative arguments. This is collapsed across the partisan and non-partisan experimental conditions. The measure is a five point scale, assessing strength from Very Weak to Very Strong.

The eight highest rated arguments (in order of strength) are: **5, 15, 13, 25, 11, 16, 12** and **1**. One potential problem is that none of the arguments is rated above 3.5. While I did not have a prior standard for a minimum argument quality rating for use in my study, ideally the average would have been higher than this. That said, most work in this area also does not have an objective standard and instead relies on arguments that receive the highest ratings.

Examining the distribution of the argument variables reveals that all of the variables are skewed. The arguments evaluated as relatively strong are skewed left and the weak are skewed right. The distributions of the highest and lowest ranked arguments are displayed below. That the distributions are skewed demonstrates that the arguments

Table A.3: Anti-Initiative Argument Strength

Variable	Mean	N	SD
Arg 1	2.97	149	1.53
Arg 3	2.94	149	1.33
Arg 5	3.56	148	1.27
Arg 6	2.82	144	1.40
Arg 10	2.66	148	1.46
Arg 11	3.19	149	1.42
Arg 12	3.02	149	1.43
Arg 13	3.34	151	1.36
Arg 15	3.49	143	1.38
Arg 16	3.04	147	1.43
Arg 17	2.78	142	1.42
Arg 18	2.14	144	1.27
Arg 24	2.98	146	1.44
Arg 25	3.15	100	1.38
Arg 31	2.91	144	1.37

are effective. Rather than the modal response being "neither strong nor weak," participants tend to either view the arguments as strong or weak.
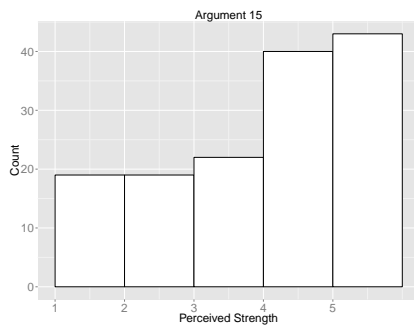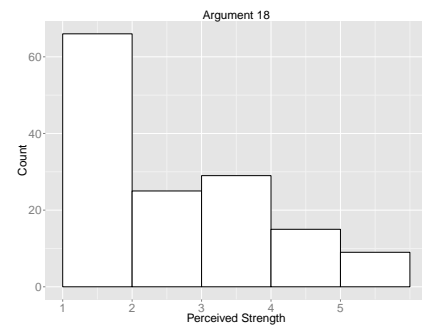

Figure A.2: Highest Ranked Argument

Figure A.3: Lowest Ranked Argument

Partisan Cues and Immigration Attitudes

In this section I asses how party agreement and prior immigration attitudes drive perceptions of strength. Because my studies relies on a party cue manipulation that varies the presence or absence of party cues attached to information, it is problematic if there are large

differences in terms of which arguments are perceived as relatively strong or weak depending on party cues and/or participants attitudes about illegal immigration. I collapse Republican Party Agreement and Democratic Party Agreement together because there are no differences by political party.

Table A.4: Anti-Initiative Argument Strength (Party Agreement)

Variable	Mean	N	SD
Arg 1	3.00	28	1.492
Arg 3	3.07	28	1.30
Arg 5	3.61	28	1.39
Arg 6	3.14	28	1.29
Arg 10	2.50	28	1.50
Arg 11	3.79	28	1.37
Arg 12	3.21	28	1.52
Arg 13	3.85	28	1.23
Arg 15	3.82	28	1.38
Arg 16	3.36	28	1.28
Arg 17	2.71	28	1.38
Arg 18	2.17	28	1.44
Arg 24	3.32	28	1.47
Arg 25	3.11	18	1.23
Arg 31	3.07	28	1.51

In this case, the highest ranked arguments are **15, 13, 11, 5, 16, 24** and **12**. While the order of strength changes, these are the same arguments as in the whole sample, save for argument 24 (which does not appear in the overall top 7). In short, partisan agreement does not lead to substantial shifts in which arguments are perceived as strong.

I now turn to assessing the effect of attitude agreement on perceptions of argument strength. To assess attitude agreement I rely on one of of the immigration questions asked in my pilot study. The question is, "Generally speaking, do you believe that illegal immigration leads to more crime, less crime, or that it does not have an influence on crime in the United States?" Respondents who say that it leads to more crime are treated as disagreeing with these arguments (because the arguments are opposed to the restrictive ballot

initiative). Those who say that it leads to less crime or has no effect are treated as being agreeable to this information. [1]

Table A.5: Anti-Initiative Argument Strength by Attitude Agreement

Agreement	Variable	Mean	N	SD
Disagree	Arg 1	2.53	75	1.58
	Arg 3	2.53	75	1.34
	Arg 5	3.23	74	1.43
	Arg 6	2.55	73	1.43
	Arg 10	2.43	76	1.41
	Arg 11	2.79	75	1.47
	Arg 12	2.59	76	1.45
	Arg 13	3.26	77	1.36
	Arg 15	3.00	73	1.47
	Arg 16	2.57	74	1.47
	Arg 17	2.61	72	1.56
	Arg 18	1.93	74	1.2
	Arg 24	2.49	75	1.47
	Arg 25	2.98	56	1.43
	Arg 31	2.61	75	1.48
Agree	Arg 1	3.42	74	1.35
	Arg 3	3.35	74	1.20
	Arg 5	3.88	74	1.01
	Arg 6	3.10	71	1.32
	Arg 10	2.89	72	1.49
	Arg 11	3.60	74	1.26
	Arg 12	3.47	73	1.26
	Arg 13	3.43	74	1.37
	Arg 15	3.99	70	1.10
	Arg 16	3.52	73	1.24
	Arg 17	2.96	70	1.27
	Arg 18	2.35	70	1.31
	Arg 24	3.49	71	1.22
	Arg 25	3.36	44	1.28
	Arg 31	3.23	69	1.16

Individuals who agree with the information presented picked the following seven arguments as the strongest: **15, 5, 11, 16, 24, 12,**

---

[1]50 percent of the sample gave the disagreeable response to this question. The other 50 percent were agreeable. I collapse the "less crime" and "no effect on crime" responses together because only 5 percent of the sample responded that illegal immigration leads to a decrease in crime.

and **25**. This time 13 drops out of the top seven and both 25 and 24 are in it. The upper portion of the table displays summary statistics for the anti-initiative arguments for people who disagreed with the information. Clearly they evaluated strength as lower than those who agreed with the information. The 7 highest ranked arguments for these participants are: **13, 5, 15, 25, 11, 17,** and **6**. Once again most of the arguments are the same. Argument 17 appears for the first time in a top 7 while, once again, 24 drops out.

In general these analyses reveal that across the entire sample, for both the partisan and non-partisan arguments, and when there is attitude agreement or disagreement there is a good bit of consistency in terms of which arguments are viewed as the strongest. For my final study I relied on arguments **5, 6, 11, 12, 13, 15, 16, and 25**.

Pro-Initiative Arguments

I now turn to identifying the highest rated pro-initiative arguments. I take the same approach that I did with the anti arguments. The full sample summary statistics are displayed below.

Table A.6: Pro-Initiative Argument Strength

Variable	Mean	N	SD
Arg 2	3.30	149	1.41
Arg 4	3.07	146	1.39
Arg 8	3.04	146	1.46
Arg 9	3.23	144	1.43
Arg 14	3.47	149	1.35
Arg 19	3.82	148	1.26
Arg 20	2.85	146	1.45
Arg 21	3.01	142	1.43
Arg 22	3.20	148	1.31
Arg 23	3.37	145	1.37
Arg 26	3.33	144	1.53
Arg 27	2.48	145	1.36
Arg 28	3.19	145	1.50
Arg 29	3.17	145	1.40
Arg 30	2.61	150	1.51

Simply looking at the results suggests that overall the pro-initiative arguments are perceived as stronger than the anti-initiative arguments (I will formally assess this using regression in the next section). The seven highest rated pro arguments are: **19, 14, 23, 26, 2, 9,** and **28**. I have omitted histograms for the pro arguments because the distributions are the same as the anti arguments.

Partisan Cues and Immigration Attitudes

This table shows the effect of party agreement on perceptions of argument strength. As was the case with the anti-initiative arguments, party agreement drives people to perceive the arguments as stronger. The seven highest rated party agreement arguments are: **19, 14, 28, 21, 22, 26,** and **9**. In this case argument 26 enters the top 7 while argument 2 drops out.

Table A.7: Pro-Initiative Argument Strength - Party Agreement

Variable	Mean	N	SD
Arg 2	3.21	23	1.24
Arg 4	3.30	23	1.33
Arg 8	3.39	23	1.61
Arg 9	3.57	23	1.41
Arg 14	4.00	22	1.07
Arg 19	4.21	23	1.17
Arg 20	3.39	23	1.62
Arg 21	3.70	23	1.49
Arg 22	3.68	22	1.21
Arg 23	3.56	23	1.47
Arg 26	3.65	23	1.43
Arg 27	3.09	23	1.47
Arg 28	3.87	23	1.25
Arg 29	3.47	23	1.50
Arg 30	3.17	23	1.40

The last portion of this analysis looks at the effect of attitude agreement and disagreement with the arguments. Attitude disagreement is listed first and attitude agreement is listed second. Within attitude agreement the seven highest rated arguments are: **19, 14, 26, 23, 2, 4,** and **9**. Within attitude disagreement the seven highest rated arguments are: **19, 29, 2, 22, 9, 28,** and **23**.

Once again, there is a fair amount of overlap between which of these seven arguments rated as the strongest. When there are cases of arguments dropping out of the top seven in a given subgroup it is often not a significant departure. For example, within the anti-initiative argument disagreement subgroup, argument 14 (which is present in the top seven for argument agreement, party agreement, and the overall top seven) is the 8th highest argument. The arguments I rely on to serve as the pro-initiative stimuli in my experiment are: 2, 9, 14, 19, 21, 22, 23, and 29.

Table A.8: Pro-Initiative Argument Strength - Attitude Agreement

Agreement	Variable	Mean	N	SD
Disagree	Arg 2	2.91	69	1.35
	Arg 4	2.47	68	1.28
	Arg 8	2.57	69	1.34
	Arg 9	2.80	66	1.46
	Arg 14	2.83	70	1.34
	Arg 19	3.45	69	1.39
	Arg 20	2.55	66	1.22
	Arg 21	2.37	65	1.18
	Arg 22	2.86	70	1.30
	Arg 23	2.72	68	1.21
	Arg 26	2.57	65	1.41
	Arg 27	2.09	67	1.11
	Arg 28	2.78	67	1.42
	Arg 29	3.04	67	1.32
	Arg 30	2.17	71	1.31
Agree	Arg 2	3.64	80	1.39
	Arg 4	3.59	78	1.30
	Arg 8	3.46	77	1.44
	Arg 9	3.59	78	1.31
	Arg 14	3.97	79	1.11
	Arg 19	4.15	79	1.04
	Arg 20	3.10	80	1.59
	Arg 21	3.55	77	1.41
	Arg 22	3.49	78	1.27
	Arg 23	3.94	77	1.26
	Arg 26	3.96	79	1.33
	Arg 27	2.81	78	1.47
	Arg 28	3.54	78	1.47
	Arg 29	3.27	78	1.46
	Arg 30	3.01	79	1.56

Multivariate Analyses of Argument Strength

Given the arguments I selected to use in my analyses, it is important to identify if there are differences in perceived argument strength *across* the pro- and anti-initiative arguments. To test for this I first stacked the data set so that each respondent appears in the data set 15 times (one time for each of the 15 arguments). I then created a dummy variable indicating if a given argument was anti-initiative (coded 1) or pro-initiative (coded 0). I then regressed perceived argument strength on this dummy variable two times, the first on all arguments in the pilot test and a second time on only the arguments used in my analyses The results are displayed in Table A.9. Standard errors are clustered by respondent to account for the repeated observations.

Table A.9: Perceived Argument Strength by Argument Valence

	All Arguments	Included Arguments
Valence	-0.14	-0.078
	(0.11)	(0.11)
Constant	3.14**	3.15**
	(0.076)	(0.080)
Adjusted R^2	0.002	0.000
Observations (Clusters)	4345 (309)	2349 (308)

Standard errors in parentheses

[+] $p < 0.10$, * $p < 0.05$, ** $p < 0.01$

The results are good as they clearly show that there is not a systematic difference in perceived argument strength by whether information was pro or anti-initiative. This is especially true when restricting the analysis to only include arguments selected for use in my studies.

A.5 Pre-Treatment Survey

Political Interest and Engagement

How interested are you in politics and public affairs?
    Extremely interested
    Very interested
    Moderately interested
    Slightly interested
    Not interested at all

During a typical week, how many days do you talk about politics with family or friends?
    (Pull down menu: 1-7) Days

Party Identification and Ideology

Generally speaking, do you usually think of yourself as a Republican, a Democrat, or an Independent?
    Republican
    Democrat
    Independent

(If Republican) Would you call yourself a strong Republican or a not very strong Republican?
    Strong Republican
    Not very strong Republican

(If Democrat) Would you call yourself a strong Democrat or a not very strong Democrat?
    Strong Democrat
    Not very strong Democrat

(If Independent or skipped) Do you think of yourself as closer to the Republican Party or the Democratic Party?

    Closer to the Republican Party
    Closer to the Democratic Party
    Neither

When it comes to politics, would you describe yourself as a liberal, a conservative, or a moderate?

    Liberal
    Conservative
    Moderate

(If liberal) Would you call yourself very liberal or somewhat liberal?

    Very liberal
    Somewhat liberal

(If conservative) Would you call yourself very conservative or somewhat conservative?

    Very conservative
    Somewhat conservative

(If moderate or if skipped) Do you think of yourself as closer to liberals, or conservatives, or neither of these?

    Closer to liberals
    Closer to conservatives
    Neither of these

Immigration Attitudes

Listed below is a series of statements about illegal immigration. For each statement, please indicate how much you agree or disagree with it by checking one box to the right of each statement.

Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree

- Illegal immigrants pose a threat to the jobs of average Americans

- Illegal immigrants pose a threat to public safety in the United States

- All illegal immigrants should be deported

- Illegal immigrants are positive contributors to the United States

- Police officers should spend less time looking for illegal immigrants and more time fighting other types of crime

- Illegal immigrants are no more likely to commit crimes than other people

- Illegal immigrants who commit a crime, even if it is a misdemeanor, should be deported

- Illegal immigrants improve the cultural diversity of the United States

- Police officers should check the immigration status of anyone they believe to be an illegal immigrant

- The government should devote more resources toward preventing illegal immigration

- Illegal immigrants work hard to earn an honest living to provide for their families

How important is the issue of illegal immigration to you personally?
    Extremely important
    Very important
    Moderately important
    Slightly important
    Not at all important

Which political party do you think is doing a better job dealing with the issue of illegal immigration?
    Republican Party
    Democratic Party
    Both parties equally

Do you favor, oppose, or neither favor nor oppose the U.S. government making it possible for illegal immigrants to become U.S. citizens?
    Favor
    Oppose
    Neither favor nor oppose

(If favor/oppose) Do you favor/oppose this:
    A little
    Moderately
    A great deal

How important to you personally is the issue of whether illegal immigrants should be allowed to become U.S. citizens?
    Extremely important
    Very important
    Moderately important
    Slightly important
    Not at all important

Should government spending on border security to prevent illegal immigration be increased, decreased, or kept about the same as it is now?
    Decreased
    Increased
    Kept the same

(If decreased/increased) Do you think it should be decreased/increased:
    A little
    Moderately
    A great deal

How certain are you of your opinion that government spending on border security to prevent illegal immigration should be (INSERT - Response from prior question OR Kept the Same from two questions ago)?
    Extremely certain
    Very certain
    Somewhat certain
    Slightly certain
    Not at all certain

How important to you personally is the issue of government spending on border security to prevent illegal immigration?
    Extremely important
    Very important
    Somewhat important
    Slightly important
    Not at all important

Should government spending on law enforcement efforts to find illegal immigrants be increased, decreased, or kept about the same?
    Decreased
    Increased

Kept the same

(If decreased/increased) Do you think it should be decreased/increased:
    A little
    Moderately
    A great deal

How certain are you of your opinion that law enforcement efforts to find illegal immigrants should be (INSERT - Response from prior question OR Kept the Same from two questions ago)?
    Extremely certain
    Very certain
    Somewhat certain
    Slightly certain
    Not at all certain

How important to you personally is the issue of government spending on law enforcement efforts to find illegal immigrants?
    Extremely important
    Very important
    Somewhat important
    Slightly important

Do you think that illegal immigration leads to more violent crime or do you think that it has no effect on violent crime?
    More violent crime
    No effect on violent crime

(If more crime) How much more violent crime do you think it leads to?
    A lot more violent crime
    Somewhat more violent crime
    A little more violent crime

How certain are you that illegal immigration leads to (INSERT - Response from prior question OR No Effect from prior to the branch) violent crime?

    Extremely certain
    Very certain
    Somewhat certain
    Slightly certain
    Not at all certain

What about non-violent crime? Do you think that illegal immigration leads to more non-violent crime or do you think that it has no effect on non-violent crime?

    More non-violent crime
    No effect on non-violent crime

(If more non-violent crime) How much more non-violent crime do you think it leads to?

    A lot more non-violent crime
    Somewhat more non-violent crime
    A little more non-violent crime

How certain are you that illegal immigration leads to (INSERT - Response from prior question OR No effect from prior to branch) non-violent crime?

    Extremely certain
    Very certain
    Somewhat certain
    Slightly certain
    Not at all certain

Partisan Ambivalence

(*Randomize Democrat or Republican Question Order*)

<u>Democratic Party</u>

You might have favorable thoughts or feelings about the **Democratic Party**. Or you might have unfavorable thoughts or feelings about the Democratic Party. Or you might have some of each.

I would like to ask you first about any **favorable** thoughts and feelings you might have about the Democratic Party. Then, in a moment, I will ask you some separate questions about any unfavorable thoughts and feelings you might have.

First, do you have any **favorable thoughts or feelings** about the **Democratic Party**, or do you not have any?
    Have favorable thoughts or feelings about the Democratic Party
    Do not have any

(If have favorable thoughts) How favorable are your favorable thoughts and feelings about the **Democratic Party**?
    Extremely favorable
    Very favorable
    Moderately favorable
    Slightly favorable

Do you have any **unfavorable thoughts or feelings** about the **Democratic Party**, or do you not have any?
    Have unfavorable thoughts or feelings about the Democratic Party
    Do not have any

(If have unfavorable thoughts) How unfavorable are your unfavorable thoughts and feelings about the **Democratic Party**?

Extremely unfavorable
Very unfavorable
Moderately unfavorable
Slightly unfavorable

Republican Party

You might have favorable thoughts or feelings about the **Republican Party**. Or you might have unfavorable thoughts or feelings about the Republican Party. Or you might have some of each.

I would like to ask you first about any **favorable** thoughts and feelings you might have about the Republican Party. Then, in a moment, I will ask you some separate questions about any unfavorable thoughts and feelings you might have.

First, do you have any **favorable thoughts or feelings** about the **Republican Party**, or do you not have any?
    Have favorable thoughts or feelings about the Republican Party
    Do not have any

(If have favorable thoughts) How favorable are your favorable thoughts and feelings about the **Republican Party**?
    Extremely favorable
    Very favorable
    Moderately favorable
    Slightly favorable

Do you have any **unfavorable thoughts or feelings** about the **Republican Party**, or do you not have any?
    Have unfavorable thoughts or feelings about the Republican Party
    Do not have any

(If have unfavorable thoughts) How unfavorable are your unfavorable thoughts and feelings about the **Republican Party**?

    Extremely unfavorable
    Very unfavorable
    Moderately unfavorable
    Slightly unfavorable

A.6   Post-Treatment Survey

Cognitive Response

I would now like you to list some of your thoughts about illegal immigration that occurred to you while you were reading arguments in the previous section. You will have 2 minutes to list your thoughts. After the 2 minutes are over you will automatically be taken to the next part of the survey. You are free to list as many or as few thoughts as you want.

Think back to the portion of the study during which you read arguments about illegal immigration. As you were reading those arguments and thinking about your vote on the ballot initiative, what kind of thoughts occurred to you?

(**Participants can list up to 10 thoughts**)

I would now like you to tell me if the thoughts you just listed are positive, neutral, or negative.

(**Participants are now shown the thoughts they listed and asked to code them as either positive, neutral, or negative.**)

Manipulation Check

Think back to the headlines you saw about arguments concerning illegal immigration. Some were supportive of the ballot initiative. Others were opposed to the initiative.

Including those you did and did not read, do you recall seeing more arguments that were supportive of the initiative, more arguments that were opposed to the initiative, or an even number of arguments in support or opposition to the initiative?

More arguments in support

More arguments in opposition
Even number

(If more arguments in Support/Opposition) Would you say there were a lot more arguments in (Insert: support than opposition/opposition than support) or a few more arguments in (Insert: support than opposition/opposition than support)?

A lot more arguments in (Insert: support/opposition)
A few more arguments in (Insert: support/opposition)

Immigration Attitudes

Listed below is a series of statements about illegal immigration. For each statement, please indicate how much you agree or disagree with it by checking one box to the right of each statement.

Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree

- Illegal immigrants pose a threat to the jobs of average Americans

- Illegal immigrants pose a threat to public safety in the United States

- All illegal immigrants should be deported

- Illegal immigrants are positive contributors to the United States

- Police officers should spend less time looking for illegal immigrants and more time fighting other types of crime

- Illegal immigrants are no more likely to commit crimes than other people

- Illegal immigrants who commit a crime, even if it is a misdemeanor, should be deported

- Illegal immigrants improve the cultural diversity of the United States

- Police officers should check the immigration status of anyone they believe to be an illegal immigrant

- The government should devote more resources toward preventing illegal immigration

- Illegal immigrants work hard to earn an honest living to provide for their families

Do you favor, oppose, or neither favor nor oppose the U.S. government making it possible for illegal immigrants to become U.S. citizens?

Favor
Oppose
Neither favor nor oppose

(If favor/oppose) Do you favor/oppose this:

A little
Moderately
A great deal

Should government spending on border security to prevent illegal immigration be increased, decreased, or kept about the same as it is now?

Decreased
Increased
Kept the same

(If decreased/increased) Do you think it should be decreased/increased:

A little
Moderately
A great deal

How certain are you of your opinion that government spending on border security to prevent illegal immigration should be (INSERT - Response from prior question OR Kept the Same from two questions ago)?
    Extremely certain
    Very certain
    Somewhat certain
    Slightly certain
    Not at all certain

Should government spending on law enforcement efforts to find illegal immigrants be increased, decreased, or kept about the same?
    Decreased
    Increased
    Kept the same

(If decreased/increased) Do you think it should be decreased/increased:
    A little
    Moderately
    A great deal

How certain are you of your opinion that law enforcement efforts to find illegal immigrants should be (INSERT - Response from prior question OR Kept the Same from two questions ago)?
    Extremely certain
    Very certain
    Somewhat certain
    Slightly certain
    Not at all certain

Do you think that illegal immigration leads to more violent crime or do you think that it has no effect on violent crime?
    More violent crime
    No effect on violent crime

(If more crime) How much more violent crime do you think it leads to?

    A lot more violent crime

    Somewhat more violent crime

    A little more violent crime

How certain are you that illegal immigration leads to (INSERT - Response from prior question OR No Effect from prior to the branch) violent crime?

    Extremely certain

    Very certain

    Somewhat certain

    Slightly certain

    Not at all certain

What about non-violent crime? Do you think that illegal immigration leads to more non-violent crime or do you think that it has no effect on non-violent crime?

    More non-violent crime

    No effect on non-violent crime

(If more non-violent crime) How much more non-violent crime do you think it leads to?

    A lot more non-violent crime

    Somewhat more non-violent crime

    A little more non-violent crime

How certain are you that illegal immigration leads to (INSERT - Response from prior question OR No effect from prior to branch) non-violent crime?

    Extremely certain

    Very certain

    Somewhat certain

Slightly certain
Not at all certain

Partisan Ambivalence

(*Randomize Democrat or Republican Question Order*)

Democratic Party

You might have favorable thoughts or feelings about the **Democratic Party**. Or you might have unfavorable thoughts or feelings about the Democratic Party. Or you might have some of each.

I would like to ask you first about any **favorable** thoughts and feelings you might have about the Democratic Party. Then, in a moment, I will ask you some separate questions about any unfavorable thoughts and feelings you might have.

First, do you have any **favorable thoughts or feelings** about the **Democratic Party**, or do you not have any?
   Have favorable thoughts or feelings about the Democratic Party
   Do not have any

(If have favorable thoughts) How favorable are your favorable thoughts and feelings about the **Democratic Party**?
   Extremely favorable
   Very favorable
   Moderately favorable
   Slightly favorable

Do you have any **unfavorable thoughts or feelings** about the **Democratic Party**, or do you not have any?
   Have unfavorable thoughts or feelings about the Democratic
   Party

Do not have any

(If have unfavorable thoughts) How unfavorable are your unfavorable thoughts and feelings about the **Democratic Party**?
    Extremely unfavorable
    Very unfavorable
    Moderately unfavorable
    Slightly unfavorable

Republican Party

You might have favorable thoughts or feelings about the **Republican Party**. Or you might have unfavorable thoughts or feelings about the Republican Party. Or you might have some of each.

I would like to ask you first about any **favorable** thoughts and feelings you might have about the Republican Party. Then, in a moment, I will ask you some separate questions about any unfavorable thoughts and feelings you might have.

First, do you have any **favorable thoughts or feelings** about the **Republican Party**, or do you not have any?
    Have favorable thoughts or feelings about the Republican Party
    Do not have any

(If have favorable thoughts) How favorable are your favorable thoughts and feelings about the **Republican Party**?
    Extremely favorable
    Very favorable
    Moderately favorable
    Slightly favorable

Do you have any **unfavorable thoughts or feelings** about the **Republican Party**, or do you not have any?

Have unfavorable thoughts or feelings about the Republican
Party

Do not have any

(If have unfavorable thoughts) How unfavorable are your unfavorable thoughts and feelings about the **Republican Party**?

Extremely unfavorable

Very unfavorable

Moderately unfavorable

Slightly unfavorable

Need for Cognition and Need to Evaluate

Some people have opinions about almost everything; other people have opinions about just some things; and still other people have very few opinions. What about you? Would you say you have opinions about almost everything, about many things, about some things, or about very few things?

Almost everything

Many things

Some things

Very few things

Compared to the average person do you have fewer opinions about whether things are good or bad, about the same number of opinions, or more opinions?

Fewer opinions

About the same number

More opinions

(If fewer opinions) Would you say you have a lot fewer opinions or just somewhat fewer opinions?

A lot fewer opinions

Somewhat fewer opinions

(If more Opinions) Would you say you have a lot more opinions or just somewhat more opinions?

A lot more opinions

Somewhat more opinions

Some people like to have responsibility for handling situations that require a lot of thinking, and other people dont like to have responsibility for situations like that. What about you? Do you like having responsibility for handling situations that require a lot of thinking, do you dislike it, or do you neither like nor dislike it?

Like

Dislike

Neither like nor dislike

(If like) How much do you like the responsibility for thinking?

A lot

Somewhat

(If dislike) Do you dislike it a lot or just somewhat?

A lot

Somewhat

Some people prefer to solve simple problems instead of complex ones, whereas other people prefer to solve more complex problems. Which type of problem do you prefer to solve: simple or complex?

Simple

Complex

Need for Closure

For each statement, please indicate how much you agree or disagree with it, according to your attitudes, beliefs and experiences, by checking one box to the right of each statement.

- In case of uncertainty, I prefer to make an immediate decision,

Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree

whatever it may be

- When I find myself facing various, potentially valid, alternatives, I decide in favor of one of them quickly and without hesitation

- I prefer to decide on the first available solution rather than to ponder at length what decision I should make

- I get very upset when things around me arent in their place

- Generally, I avoid participating in discussions on ambiguous and controversial problems

- When I need to confront a problem, I do not think about it too much and I decide without hesitation

- When I need to solve a problem, I generally do not waste time in considering diverse points of view about it

- I prefer to be with people who have the same ideas and tastes as myself

- Generally, I do not search for alternative solutions to problems for which I already have a solution available

- I feel uncomfortable when I do not manage to give a quick response to problems that I face

- Any solution to a problem is better than remaining in a state of uncertainty

- I prefer activities where it is always clear what is to be done and how it need to be done

- After having found a solution to a problem I believe that it is a useless waste of time to take into account diverse possible solutions

- I prefer things to which I am used to those I do not know, and cannot predict

Big 5

The following section contains pairs of words. On a scale of zero to ten, please choose which word best describes you. For example, the number zero means relaxed, the number ten means tense, and the number five is exactly in the middle neither relaxed nor tense. On this scale, what number best describes you?

- Imaginative - Unimaginative
- Analytical - Unanalytical
- Creative - Uncreative
- Curious - Uncurious
- Intellectual - Unintellectual
- Philosophical - Unreflective
- Hardworking - Lazy
- Neat - Sloppy
- Outgoing - Shy
- Extraverted - Introverted
- Sympathetic - Unsympathetic
- Kind - Unkind
- Relaxed - Tense
- Calm - Nervous

Political Knowledge

Next are some questions to determine how much information about politics gets out to the public. Please answer these questions on your own, without asking anyone or looking up the answers. Many people don't know the answers to these questions, but I would be grateful if you would please answer every question, even if you're not sure what the right answer is.

You will have 30 seconds to answer each question after it appears on the screen. After 30 seconds, the screen will automatically go on to the next question. If you finish answering a question before the time is up, you can go to the next question by clicking the "Next" button.

Do you happen to know how many times an individual can be elected President of the United States under current laws?

For how many years is a United States Senator elected that is, how many years are there in one full term of office for a U.S. Senator?

How many U.S. Senators are there from each state?

For how many years is a member of the United States House of Representatives elected that is, how many years are there in one full term of office for a U.S. House member?

According to federal law, if the President of the United States dies, is no longer willing or able to serve, or is removed from office by Congress, the Vice President would become the President. If the Vice President were unable or unwilling to serve, who would be eligible to become president next?

    Chief Justice of the Supreme Court
    Secretary of State
    Speaker of the House of Representatives

What percentage vote of the House and the Senate is needed to override a Presidential veto?
  A bare majority
  Two-thirds
  Three-fourths
  Ninety percent

Demographics

What is your gender?
  Male
  Female

How old are you?

What is your primary employment status?
  Working full time
  Working part time
  Retired
  Full time student
  Homemaker
  Unemployed
  Other (specify)

What is your race/ethnicity? Circle as many as apply:
  Native American / American Indian
  White / Caucasian
  Black / African-American
  Latino / Hispanic
  Asian / Asian American / Pacific Islander
  Other

What is the highest level of formal education you have completed?
Less than high school diploma
High School diploma
Some college
Associates degree or technical degree
College degree
Some graduate education
Graduate or professional degree

What state do you live in?

Are you a United States citizen?
Yes
No

Could you please tell me your level of annual income in 2011?
$0 to $15,000
$15,001 to $30,000
$30,001 to $45,000
$45,001 to $60,000
$60,001 to $75,000
$75,001 to $100,000
$100,001 to $150,000
More than $150,000