



How Elite Partisan Polarization Affects Public Opinion Formation

James Druckman

Payson S. Wild Professor of Political Science
Faculty Fellow, Institute for Policy Research
Northwestern University

Erik Peterson

Undergraduate Research Assistant, Institute for Policy Research
Northwestern University

Rune Slothuus

Associate Professor of Political Science
Aarhus University

Version: April 1, 2012

DRAFT

Please do not quote or distribute without permission.

Abstract

Competition is a defining element of democracy. One of the most noteworthy events over the last quarter-century in U.S. politics is that the nature of elite party competition has changed: the parties have become increasingly polarized. Scholars and pundits actively debate how these elite patterns influence citizen's polarization (e.g., if citizens have also become more ideologically polarized). Yet few have addressed what is perhaps a more fundamental question: Has elite polarization altered the way citizens arrive at their policy opinions in the first place, and if so, in what ways? The researchers address these questions with a theory and two survey experiments on the issues of drilling and immigration. They find stark evidence that polarized environments fundamentally change how citizens make decisions, and in their estimation, make for lower quality opinions. Specifically, polarization intensifies the impact of party endorsements over substantive information, and perhaps ironically stimulates greater confidence in those—less substantively grounded—opinions. The authors discuss the implications for public opinion formation and the nature of democratic competition.

E.E. Schattschneider (1960: 138) concluded his classic book, *The Semisovereign People*, by defining democracy as “*a competitive political system in which competing leaders and organizations define the alternatives of public policy in such a way that the public can participate in the decision-making process*” (italics in original). While his work vastly influenced the trajectory of multiple areas of political science, his concluding conception of democracy has received relatively scant attention. In this paper, we take up an aspect of his definition by addressing the question: how does the tenor of political competition affect the quality of citizen decision-making?

We focus on one the most discussed contemporary developments in US politics: elite polarization. Over the last quarter-century, elected representatives and activists from the major parties have become ideologically more distinct from one another and more internally homogeneous (e.g., McCarty, Poole, and Rosenthal 2006). Lively debate revolves around the causes and consequences of elite polarization, with notable attention to whether citizens too have polarized. While there is far from a consensus on the status of citizen polarization (e.g., Fiorina and Abrams 2008: 582, Hetherington 2009: 429, Levendusky 2009), we nonetheless turn to another, in some sense, more fundamental question of how elite polarization has affected the nature and “quality” of citizens decisions.

We theorize, and with two experiments (focused on immigration and energy) find, that elite polarization dramatically changes the way in which citizens form opinions. We further argue that elite polarization prompts citizens to make decisions of significantly lower quality. This occurs because polarization stimulates partisan motivated reasoning, which, in turn, generates biased decision-making. For reasons we will explain, our dour conclusion contradicts the little extant work on the topic, which instead concludes, “elite polarization helps voters to participate more effectively” (Levendusky 2009: 140; also see Hetherington 2008). Our results have implications not only for debates about polarization

and public opinion, but also for discussions about how democratic competition affects citizens' preferences.¹

“Quality” Opinions

Our first task is, in some sense, the most theoretically perplexing. If we are to discuss the impact of competition/polarization on “opinion quality,” we must first operationalize “quality.” Unfortunately, there is far from a consensus on what constitutes a “quality” preference. Examples of desired criteria include decisions arrived at with ideological constraint (e.g., Converse 1964, 2000), decisions based upon deliberation (e.g., Bohman 1998), decisions consistent with values (e.g., Chong 2007) and, most notably, decisions based on either “full” or the “best available” information (e.g., Bartels 1996, Page and Shapiro 1992: 356, Zaller 1992: 313, Althaus 2006: 84, Lau and Redlawsk 2006). The problem with these approaches, however, is that they fall prey to what Lupia (2006) coins the “elitist move” whereby an observer, e.g., a researcher, projects what citizens “need” to do to be competent (also see Althaus 2006: 76). This echoes Schattschneider’s (1932) sentiment that “professional intervention[s] for imposing professorial standards on the political system...[deserve] to be treated with extreme suspicion.”

Given the problems identified above, we opt for a distinct approach that ensures citizens maintain some autonomy in determining what is best for them (see Druckman 2011). Given that our goal is strictly to assess the impact of one variable – polarization – on decision-making, we employ a counterfactual. We compare the decisions citizens reach in the presence of competing arguments made in either a polarized environment or a non-polarized environment (see Mansbridge 1983: 25). Specifically, we look for two dynamics. First, do opinions formed under conditions of polarization differ from those formed sans polarization? Second, do opinions that form in a polarized environment move in the direction of what analogous respondents view as “strong” or “quality” arguments or will these opinions instead move in the direction of counter-arguments viewed as “weaker” or “lower quality”? The details of our assessment will become clearer in what follows. Regardless, we recognize that, as with any definition of “quality,” some

¹ Others explore how competition influences decision-making and we build on some of this work in what follows (e.g., Sniderman and Theriault 2004, Chong and Druckman 2007a,b, Boudreau n.d.).

will disagree. Even so, our approach will assess whether polarization at the very least *changes* the nature of how opinions are formed and whether it increases the presence of what is commonly viewed as “partisan bias.” We view it as advantageous that our approach places the onus of what is quality on the citizens themselves rather than on us, as researchers.

Framing

We explore the extent to which individuals rely on different arguments. We operationalize “arguments” as directional issue or emphasis frames. Few topics have been studied as extensively in the field of political communication (e.g., Chong and Druckman 2011a,b). Frames refer to alternative conceptualizations of an issue or event; a framing effect occurs when “in the course of describing an issue or event, a speaker’s emphasis on a subset of potentially relevant considerations causes individuals to focus on these considerations when constructing their opinions” (Druckman and Nelson 2003: 730). An oft-cited example is that if a speaker describes a hate group rally in terms of free speech, then the audience will subsequently base their opinions about the rally on free speech considerations and support the right to rally. In contrast, if the speaker uses a public safety frame, the audience will base their opinions on public safety considerations and oppose the rally (Nelson, Clawson, and Oxley 1997).

A large number of studies over the past quarter century show that framing effects can substantially shape opinions. This work also isolates a variety of factors that moderate the impact of a given frame. One of the most important such factors is the frame’s “strength.” As is the case with the psychological attitude literature that touches on argument strength (e.g., O’Keefe 2002: 147, 156), frame strength is a relative construct that refers to individuals’ perceptions of what makes for a compelling argument. Scholars typically assess frame or argument strength by providing respondents with alternative frames/arguments and then asking them to rate the “effectiveness” or applicability of each (e.g., O’Keefe 2002, Chong and Druckman 2007b, 2010, Druckman 2010, Aarøe 2011, Holm 2012, Druckman and

Leeper n.d.a., n.d.b.).² Concerning a hate group rally, for instance, these frames or arguments could involve considerations of free speech, public safety, public litter, traffic problems, the community's reputation, or racism. A frame is deemed relatively stronger than another if it registers a significantly higher rating of effectiveness or applicability (for detailed discussion, see Chong and Druckman 2007a,b). Different frames on each side might be relatively strong or weak when compared to one another. For example, individuals likely perceive the public safety frame to be a stronger argument against a hate group's rally than an alternative "con" frame that argues the rally should not be held because it will result in litter in the streets.

If two opposing frames are of equal strength, their effects on an opinion tend to cancel out (Druckman 2004, Sniderman and Theriault 2004, Chong and Druckman 2007a, 2010, Jerit 2009). Perhaps more interesting is what happens when frames are not of equal strength. A growing research literature shows that strong frames, when used in isolation, move opinions. More importantly, strong frames win out when pitted against relatively weak frames, even if the weak frame is repeated. For example, Druckman (2010) pre-tested frame strength regarding the issue of a publically funded casino and found that strong frames included the (positive) economic implications and (negative) social costs of building the casino. Pre-testing also demonstrated that weak frames for this issue included the (positive) entertainment value and (negative) moral implications surrounding the casino's construction. When presented with a mix of these frames, another group of respondents were affected only by the strong frames (e.g., a single exposure to the strong economic frame moved opinion by 41%) even in the face of multiple negative moral value frames (also see Chong and Druckman 2007c, Aarøe 2011). These results are sensible insofar as the frames people find effective do in fact dominate. This leads to our first hypotheses, which echoes the aforementioned work:

² Another dimension of strength is whether the consideration emphasized in the frame is "available" meaning that individuals are able to connect a given consideration (e.g., free speech) to the issue at hand (e.g., the hate group rally). When necessary (e.g., when it is not evident considerations are relevant), availability is assessed by asking respondents to list what considerations come to mind when they think of the issue.

Hypothesis 1: When presented with opposing strong frames, individuals' opinions will not be moved by either frame. When presented with a strong frame on one side (e.g., pro) and a weak frame on the other side (e.g., con), individuals' opinions, if affected, will be moved only by the strong frame.

We added the “if affected” caveat to hypothesis 1 because if individuals have very strong prior opinions on the given issue, they are unlikely to be persuaded in any direction (e.g., Brewer 2001, Chong and Druckman 2007b).

Evidence consistent with our hypothesis would cohere with a movement in what we above construed as the formation of a “quality” opinion. That is, an opinion is of higher quality if it moves in the direction of the strong frame and not the weak frame. (Notice that we do not make assertions if the opinion is affected by neither frame – only if is the weak and not strong argument that matters.) A preference is of lower quality only if it moves in the direction of a weak instead of a strong frame. We will later return to a discussion of the possibility that what individuals perceive as “strong” may lack normative qualities favored by theorists. The question for now is whether parties, particularly when polarized, influence which types of frames people follow. Do parties endorsing frames of different quality matter? Do conditions of polarization influence this process?

Frames and Party Competition

Despite the reality that most frames enter political discourse via political actors (e.g., parties, interest groups), the vast bulk of framing studies provide study respondents with either unattributed frames or frames attributed to some (typically credible) news organization. Only a few studies explore how frames from parties influence citizens. The modal finding of these studies is that party source does matter. For example, Slothuus (2010) reports that when parties switch frames, their members follow suit, although not blindly as partisans also incorporate their own pre-existing values. Slothuus and de Vreese (2010) find that party sponsored frames increase in influence on issues on which the parties conflict. These studies, however, do not explore competitive framing environments, do not vary the “strength” of the different frames, or explicitly account for distinct partisan environments (e.g., polarized or not).

Perhaps surprisingly, a similar assessment can be made of the long-standing literature on party cues and endorsement effects. (In what follows, we use the terms party cue and party endorsements synonymously, although we recognize this is only one type of cue.) Despite being long acknowledged as central to opinion formation, there exists little work exploring how citizens grapple with party cues in the presence of substantive information. Bullock (2011: 496) explains that, “In spite of numerous claims about the relative influence of policy attributes and position-taking by party elites [i.e., party endorsements], direct evidence is slight because few studies directly compare the effects of these variables.” He continues by noting that, “in political debate, cues and frames almost always appear together: Party elites rarely take a position without trying to frame it in a way that will garner support for it” (2011: 511). Bullock (2011) reviews the relevant literature (e.g., Druckman 2001, Cohen 2003, Arceniaux 2008, Druckman et al. 2010) and tests the effects of cues versus policy arguments by varying the availability of cues and content. He finds that party cues have an effect, but they do not overwhelm content. He concludes that “party cues are influential, but partisans... are generally affected at least as much – and sometimes much more – by exposure to substantial amounts of policy information ” (2011: 512). While these results are telling, they are not sufficient to address our question as we need to introduce two variations which Bullock does not: (1) variations in argument strength and (2) variations in partisan polarization. By doing so we can provide insight into the conditions under which party cues dominate, regardless of the quality of the frame, and frame quality is the more important factor.

To address this question, we draw on the theory of partisan motivated reasoning.³ Motivated reasoning refers to the tendency to seek out information that confirms prior beliefs (i.e., a confirmation bias), view evidence consistent with prior opinions as stronger or more effective (i.e., a prior attitude

³ We recognize that there are two (non-exclusive) competing theories of how party sponsorship may influence opinions. First, party sponsorship could work as a simple cue that people follow, with content ignored entirely. Second, sponsorship could serve as a perceptual anchor that shades the interpretation of information. We opt for the latter approach here (see Petersen et al. 2011 for some direct evidence), and we believe that some of the evidence we offer (regarding assessment of argument content) is more consistent with the motivated reasoning approach. That said, we recognize that our results do not definitely rule out the simple cue approach. This is not a problem per se, as our interest lies in uncovering the effects of polarization on citizen decision-making and not isolating the precise psychological mechanism at work.

effect), and spend more time counter-arguing and dismissing evidence inconsistent with prior opinions, regardless of objective accuracy (i.e., a disconfirmation bias).⁴ These biases influence the reception of new information and may lead individuals to ‘reason’ their way to a desired conclusion. For example, consider a supporter of George W. Bush who receives information suggesting that the President misled voters about the Iraq war. Given these biases, this supporter is likely to interpret this information either as false or as evidence of strong leadership in times of crises. Motivated reasoning will likely lead this supporter, and others like him/her, to become even more supportive of Bush (e.g., Jacobson 2008). This also takes place in the presence of partisan cues that anchor reasoning (e.g., Bartels 2002, Gaines et al. 2007, Gerber and Huber 2009, 2010, Goren et al. 2009, Groenendyk 2010). For instance, individuals interpret a policy in light of existing opinions concerning the policy’s sponsor. Thus, a Democrat might view a Democratic policy as effective (e.g., a new economic stimulus plan) and thus support it whereas he/she would see the same exact policy as ineffective and oppose it if sponsored by Republicans (e.g., Kahan et al. 2009, Druckman and Bolsen 2011). Similarly, Democrats (Republicans) may view the economy as doing well (e.g., operating effectively) during a Democratic (Republican) administration even if they would view the exact same conditions negatively if Republicans (Democrats) ruled (e.g., Bartels 2002, Lavine et al. n.d).

In short, partisan motivated reasoning theory suggests that partisans will view their party’s frame as more effective than a frame sponsored by the other party. This theory also suggests that partisans will be more likely to be moved by their own party’s frame, regardless of the frame’s strength. This leads to the following two hypotheses. (In our hypotheses, it is less interesting to explore when an individual’s party offers a strong frame since in that case both key pieces of information – the party sponsor and the frame strength – push in the same direction.)

⁴ We employ the term “motivated reasoning” but this should be viewed as synonymous with Taber and Lodge’s (2006) “motivated skepticism” and Lavine et al.’s (n.d.) “partisan perceptual screen.” We also focus here on the evaluation of information rather than information seeking (for evidence on information seeking, see Hart et al. 2009, Druckman et al. n.d.).

Hypothesis 2: When partisans receive a frame, regardless of its strength, sponsored by their party and a conflicting frame, regardless of its strength, sponsored by the other party, they will view their own party's frame as more effective and the other party's frame as less effective.

Hypothesis 3: When partisans receive a frame, regardless of its strength, sponsored by their party and a conflicting frame, regardless of its strength, sponsored by the other party, they will be more likely to move in the direction of their party's frame than in the direction of the other party's frame.⁵

A number of factors moderate partisan motivated reasoning, including motivation itself. When individuals are highly motivated to form accurate opinions, they tend to focus on substance and weigh the pros and cons regardless of their partisanship and/or prior opinions (e.g., Kunda 1990: 485; also see Prior 2007, Nir 2011). Even so, most evidence to date suggests that when it comes to political issues, individuals do not generally have such motivation and instead fall back on partisan motivated reasoning when interpreting new information. Taber and Lodge (2006: 767) conclude: “despite our best efforts to promote the even-handed treatment of policy arguments in our studies, we find consistent evidence of directional partisan bias. . . . Our participants may have tried to be evenhanded, but they found it impossible to be fair-minded” (also see Hart et al. 2009; however, see Redlawsk 2002, Druckman 2011).

That said, one factor that does moderate partisan reasoning is the strength of partisan identity – those who possess strong partisan identities are more inclined to base their assessments of frames based entirely on their partisan priors. On the other hand, those who are weaker partisans are less skewed by their identities. Lavine et al. (n.d.) present substantial evidence of this weakening effect, concluding that partisan “ambivalence undercuts the judgmental confidence that citizens typically derive from partisan cues, [and] they should turn away from these perceptual anchors and pay more attention to the particulars. As a result, they should hold more accurate perceptions...” (chapter 5: 2).⁶

The evidence presented by Lavine et al. (n.d.) suggests that when a stimulus prompts partisan ambivalence, motivated reasoning should vitiate and a focus on the substance of the frame should

⁵ It is implied that we expect perceptions of frame effectiveness to mediate the process by which the frame will influence overall attitude. Yet, we do not offer a formal prediction because, as will be clear, the nature of our design – in which perceptions and attitudes are simultaneously measured – means directly testing this type of mediational prediction is not possible (see Bullock and Ha 2011).

⁶ This is also consistent with the more general impact of attitude strength on motivated reasoning (e.g., Houston and Fazio 1989: 64, Redlawsk 2002, Taber and Lodge 2006, Druckman et al. n.d.).

increase. The stimulus on which we focus is partisan polarization. As party elites polarize, and that polarization is relayed to citizens, partisans should become more confident about their own party identity. This is exactly the type of dynamic uncovered by Lelkes, Iyengar, and Sood (n.d.) who find that negative campaigning between parties, which stems from increased polarization, is “an especially important contextual factor that heightens the salience of partisan identity.” Similarly, Dancey and Goren (2010: 686) explain, “When partisan elites debate an issue and the news media cover it, partisan predispositions are activated in the minds of citizens and subsequently constrain their policy preferences.” Nicholson (2011: 52, 55) states “In the American political system, one’s political identity typically means one’s partisan identity (see Green, Palmquist, and Schickler 2004), especially in an era of partisan polarization.... In an environment characterized by intergroup disagreement, the desire to seek difference with the outgroup will likely be strong.”⁷ And, Levendusky (2010: 114-115) adds, “When elites are polarized, they send voters clearer signals about where they stand on the issues of the day... As voters follow these party cues on multiple issues, they begin to hold more consistent attitudes....” In sum, under conditions of polarization, partisan identification becomes stronger and less ambivalent leading to increased motivated reasoning (see Nicholson 2011: 54-55 for further psychological discussion).⁸ We should thus see even stronger effect of partisan motivated reasoning than we do in less polarized environments.

Hypothesis 4: In a polarized environment, when partisans receive a frame, regardless of its strength, sponsored by their party, and a conflicting frame, regardless of its strength, sponsored by the other party, they will view the their own party’s frame as more effective and the other party’s frame as less effective – to a greater extent than they do in a non-polarized environment.

Hypothesis 5: When partisans receive a frame, regardless of its strength, sponsored by their party and a conflicting frame, regardless of its strength, sponsored by the other party, they will be more likely to

⁷ Slothuus and de Vreese (2010: 637) state that “In contrast to political consensus, party conflict signals that partisan values are at stake and emphasizes differences between parties. In such conflict situations, citizens’ partisanship should be more salient to them and hence more likely be used in judging the applicability of framings of the issue.”

⁸ In an illuminating analysis, Gerber and Patashnik (2010) show how partisan polarization has led to the denigration of policy expertise in the case of “comparative effectiveness research” in the U.S. health care debate.

move in the direction of their party's frame than in the direction of the other party's frame – to a greater extent than they do in a non-polarized environment.^{9,10}

Our final hypothesis concerns the strength with which one holds their updated opinion (after receiving the frame). When individuals engage in motivated reasoning, their goal is to confirm an opinion they already hold (Taber and Lodge 2006). They therefore view new information as bolstering their prior opinion and this added evidence boosts their confidence in the opinion (e.g., Druckman and Leeper n.d.). In contrast, when acting against a prior belief (e.g., generated by the partisan perceptual screen), people may become increasingly less confident about their opinion since they likely become conflicted about what to think (e.g., Brader 2006).¹¹ Our expectation of increased attitude strength with partisan motivated reasoning coheres with social psychological work where social identification is seen as “one of the antecedents of attitude importance” (Smith, Tery, Crosier, and Duck 2005: 168, Wyer 2010). Specifically, Smith et al. (2005: 168) report that when individuals perceived that an “issue was highly relevant to the group under consideration, they reported that their own attitudes were more personally important.” We recognize this prediction is rather ironic and perhaps troubling insofar as people develop greater confidence in opinions that may be formed in a biased manner (also see Tetlock 2002).

Hypothesis 6: Partisans' opinions will be more strongly held when receiving a frame with their partisan sponsor, and even more strongly so, when this occurs under conditions of polarization.

Before turning to our experimental design, we briefly return to the issue of opinion quality. As we have emphasized, our operationalization of quality could be questioned. One could in fact argue that following one's party even in the presence of a weak frame is more sensible since one's party may be more predictive of “preferred” outcomes. (This of course minimizes the relevance of substantive

⁹ We again avoid a formal mediational prediction.

¹⁰ We previously noted that our predictions could be consistent with a theory of partisan cue taking rather than partisan motivated reasoning. In this regard, it could be that the existence of polarization indicates that the parties feel more strongly about the issue (are more certain about their positions). This kind of certainty then makes the cue stronger as the source is more certain. We thank Gabe Lenz for this point (April 17, 2011, personal communication). As mentioned, while we believe our motivated reasoning approach offers a fuller more compelling explanation, it may be that the process at work is cue taking, yet that does not alter our ultimate substantive conclusions.

¹¹ Indeed, Brader (2006: chapters 4-5) reports decreases in attitude certainty when individuals are anxious – where anxiety prompts novel information search and integration (also see Atkeson and Maestas N.d.).

information.) We point out again that our hypotheses would still be of interest given that they isolate not only different opinion formation processes in the presence of polarization, but also point to a general process – regardless of our portrayal of quality – that many bemoan. Lavine and his colleagues (n.d.) state: motivated reasoning “raises deeply troubling questions about political representation... how can an electorate possibly reward or punish an incumbent party if it holds grossly distorted views of political conditions? And how can it elect leaders who will pursue desired policy reform in the face of widespread misperception about where leaders stand, what the policy status quo is, and what the central elements and likely consequences of proposed reform are?” (chapter 5: 6; also see Jerit 2009).

Experimental Tests of Partisan Polarization and Framing

We conducted two experiments on two political issues to test our hypotheses. We did so via the Internet with a sample drawn to be representative of the U.S. population, during the spring of 2011.¹² Both experiments appeared on the same survey.

One concern in any experiment concerning partisanship is that asking one’s party identification primes them to base attitudes on that identity. We were thus fortunate that our survey experiment came as part of a panel that had begun during the summer of 2010. It was on that initial wave where respondents reported their partisan identification, by being asked “Generally speaking, which of the options on the scale below best describes your party identification?” on a 7-point fully labeled scale from strong Democrat to strong Republican. They also reported other demographic information on this prior wave.¹³

We focus our analyses on partisans, that is, individuals identifying with or leaning towards either party (N = 646). As with Levendusky’s (2010: 120) experiment on partisan polarization we exclude pure independents (also see, e.g., Druckman 2001; Baum and Groeling 2009; Bullock 2011). This approach is typical insofar as independent leaners tend to act like closet partisans when it comes to opinion holding

¹² We contracted with a survey research company (Bovitz Research Group) to collect the data. As with most internet survey samples, respondents participate in multiple surveys over time and receive compensation for their participation.

¹³ Demographics of the sample are available from the authors. 45% of t1 participants responded at t2, which is a fairly standard rate.

and vote choice (e.g., Dennis 1992, Keith et al. 1992, Clarke and Stewart 1998, Petrocik 2009, Lascher and Korey 2011). Our sample overall consisted of 53% Democrats and 47% Republicans.

We next describe the design of our experiments. We do so by discussing the issues on which we focused, the frames we employed (and hence manipulated in our design), our polarization manipulation, our precise experimental conditions, and our main dependent measures.

Policy Issues

We designed our experiments around policy proposals on energy (i.e., drilling for oil and gas) and immigration (i.e., the DREAM Act). These two issues share several features that make them well suited for testing our hypotheses. First, both received attention in policy debates in the United States prior to our study and thus are meaningful and relevant issues. While drilling for oil in the ocean began in the late 1800s, and became widely used in the mid-1900s, the issue received substantial attention in U.S. politics during 2010. In March, President Obama announced the U.S. would allow drilling for oil and gas off the Atlantic Coast and in the eastern Gulf of Mexico. He suggested it was necessary to sustain economic growth. Then, on April 20, 2010, the Deepwater Horizon oil spill, the worst offshore oil spill in U.S. history, occurred in the Gulf of Mexico. Consequently, the Obama administration shifted policy and decided that it would not open up new areas of the eastern Gulf and Atlantic seaboard to drilling, at least for seven years. Similarly, the DREAM (Development, Relief, and Education for Alien Minors) Act, a legislative proposal that was first introduced in the U.S. Senate in 2001, has been regularly debated in the U.S. Congress and several state legislatures over the last decade. While the bill has been proposed in various forms, at its core is the creation of a pathway to citizenship for undocumented immigrants living in the United States provided they entered the U.S. before the age of 16, have graduated from high school, have “good moral character,” and have completed at least two years of college or served at least two years in the U.S. military.

Second, we suspect that, while topically relevant, the public’s opinions on these issues are not strongly crystallized and, indeed, are somewhat conflicted. As we will discuss in further detail, this

conflict stems from the existence of many competing considerations that make it difficult for one to be overly confident in their view (see, e.g., *New York Times* February 21, 2012, A20, Krauss and Broder 2012). As with most other work, we opt for this since it means there is some room for movement in our experiments (see, e.g., Chong and Druckman 2010: 667, Levendusky 2010: 119-120, Nicholson 2011, Slothuus 2011, Druckman and Leeper n.d.a).

Third, it was important that we opt for issues on which the parties do not consistently hold dramatically different positions.¹⁴ If this were the case, it would not be possible to shape the perceived level of partisan disagreement (i.e., polarization) on these issues. While Republicans in Congress tend to favor allowing drilling and Democrats in Congress tend to oppose drilling, the partisan divide is not stark and members of each party can be found on each side of the issue (often depending on geography; for example, Virginia Democratic Senator Mark Warner strongly supports offshore drilling). The public is similarly split on drilling, and not overly driven by partisan predications (Bolsen and Cook 2009). The various versions of the DREAM Act, meanwhile, have been co-sponsored and supported by both Democrats and Republicans, although it is the Democrats at the elite level who more consistently support the act. Partisan support at the mass level is even more mixed than what is found with the issue of drilling. Perhaps not surprisingly, the two issues on which we focus have been used in prior work that touches on polarization (e.g., Levendusky 2010 on drilling, Nicholson 2011 on immigration)

Issue Frames

Our next task was to select the frames on each issue. We identified the relevant arguments/frames in public debate by engaging in a content analysis of policy debate and media coverage (see Peterson 2011) and assessing prior work on each issue (e.g., Smith 2001, 2002, Bolsen and Cook 2009, Batalova and McHugh 2010, Carlisle et al. 2010, Foley 2010). We selected seven prominent frames on each

¹⁴ Pew data that ask which party does a “better job” at handling a given issue shows that, in September 2010, immigration was basically split with 39% citing the Republicans, 32% citing the Democrats, and the others saying both, neither, or don’t know. For energy, which was asked in August 2009 (so two years before our survey), there is a slight Democratic tilt with 47% saying Democrats and 25% saying Republicans.

issue.¹⁵ Next, we presented 138 non-student participants (who were not in the main experiment) with sequential descriptions of each issue along with brief depictions of the frames/arguments. As with the aforementioned prior work, we asked respondents to evaluate the direction and strength of frames on each policy issue (on 7-point scales ranging from definitely opposed to definitely supportive, and from definitely not effective to definitely effective).

[Table 1 About Here]

Full details of the pre-test results are available from the authors; in the end, we selected four frames for each issue: a strong and weak pro frame (e.g., for drilling, the DREAM Act) and a strong and weak con frame (e.g., opposed to drilling, the DREAM Act). We display our choices in Tables 1a and 1b. For drilling, our strong-pro frame emphasized the “economic benefits” of the practice, including how drilling will increase oil supply, leading to lower gas prices, and the generation of employment opportunities. In contrast, our weak-pro frame suggested that drilling leads to new “technological developments” (e.g., sound migration techniques) that sometimes have more general applications beyond drilling.

On the con side, our strong drilling frame focused on the dangers of drilling for “workers and maritime life” while our weak con frame focused on the “regulation” that would come with drilling insofar as government agencies would have to oversee the process. For the DREAM Act issue, as displayed Table 1b, our strong pro frame emphasized how the young “beneficiaries” would be offered many opportunities (e.g., to go to become doctors, teachers, etc.) while the weak pro frame focused on “public support” for the act (e.g., many segments of the public support the Act). On the con side, our strong frame concerned “overburdening the system” due to an onslaught of illegal immigration (and demands on services) while the weak frame put weight on the “politics” underlying the design of the Act.

¹⁵ The drilling frames included ones that emphasized the consequences for the economy, foreign dependence, national security, technological development, the ecosystem, regulatory issues, and worker and maritime life. The DREAM frames included ones that emphasized the impact on the beneficiaries, public support, fairness, economic consequences, impact on legal immigrants, surrounding politics, and systematic consequences (e.g., how it will overburden the system).

For each of our two issues, pre-test respondents perceived each pro frame to be significantly more supportive on the issue than each of con frames. Moreover, pre-test respondents viewed each strong frame as significantly more effective than each weak frame but, the two strong (weak) were not seen as significantly different from one another in terms of strength (nor were the weak frames statistically distinct from one another in terms of “in”effectiveness). Thus, we are confident, for each issue, that are pro (con) frames differ from one another only in terms of strength (and not direction) and our strong (weak) frames differ from one another only in terms of direction (and not strength). Also, note that on both issues, we did not observe partisan differences in the assessments of the frames.

As we will discuss, assigned respondents receive a single (strong or weak) pro frame on each issue and a single (strong or weak) con frame on each issue.¹⁶ Before further describing the conditions, however, we turn to the other main factor in our study: partisan cues and polarization.

Partisan Cues and Polarization

Our hypotheses offer distinct predictions about the impact of strong and weak frames depending on the presence of party cues and the degree of polarization. Of course, a critical baseline is how respondents react to the frames sans partisan endorsements. For this reason, one set of conditions excluded any reference to political parties (i.e., no party cues were present). These conditions allow us to test hypothesis 1 about reactions to basic frames and serve as a critical baseline against which to assess the impact of partisan cues and polarization.

In terms of how we operationalized the partisan endorsements and polarization, two points are relevant. First, we followed Levendusky (2010) in offering multiple competing party cues in all cases – we never offer a frame that receives a party endorsement against another frame sans a party endorsement. This is realistic given that each party adopts a position and offers an argument/frame on most issues. It also does not limit our ability to test our hypotheses. Second, also like Levendusky (2010), we have the

¹⁶Our inclusion of a limited number of frames in the experimental design is realistic as content analyses show that competing sides in policy debates tend to restrict their attention to very few frames on each side (Hänggli 2010, Chong and Druckman 2011).

parties maintain single positions across all conditions. *That is, the Democrats always oppose drilling and endorse the DREAM Act – albeit using different frames – while the Republicans always do the reverse.* This is realistic given the parties “typical” positions. Our wording stated, for example, “Democrats in Congress tend to favor... and Republicans in Congress tend to oppose...”. We recognize the advantage that would have come with having parties flip to unconventional positions (see, e.g., Slothuus 2011), but we opted against varying party positions as this allowed for a feasible number of conditions (which, as we will shortly show, is already a high number of 13 conditions). More importantly, maintaining consistent party endorsements does not constrain our ability to assess our key hypotheses about the impact of party endorsements and polarization (for a similar argument, see Levendusky 2010). In sum, respondents receive, on each issue, a weak or strong pro frame *and* a weak or strong con frame. These frames *either* come with no party endorsements *or* with a party endorsement such that the pro (con) drilling frame always is endorsed by Republicans (Democrats) while the pro (con) DREAM frame is always endorsed by Democrats (Republicans).

The second aspect of our manipulation is how we varied the level of polarization. We again followed Levendusky (2010: 117) and did this in one of two ways. We told respondents that the partisan elites were *either* moderate *or* polarized (i.e., parties are far apart and homogenous).¹⁷ Of course, this allows us to test our hypotheses about the added impact of polarization. In the non-polarized or moderate conditions, we told participants that “the partisan divide is not stark as the parties are not too far apart” and that “members of each party can be found on both sides of the issue.” In contrast, the polarized

¹⁷ As with Levendusky (2010), we do not include conditions with party cues and no polarization manipulation. Such conditions would have allowed us to infer about the “natural” state of the world (e.g., closer to our polarization scenario or non-polarization scenario). Yet, it would have again expanding the number of conditions to 17 and we suspect any such inferences would have limited time and issue generalizability. Our ultimate interest is in polarization versus non-polarized settings and one can assess independently the extent to which a given time/issue approaches one or the other (see Slothuus 2011).

stimulus stated that “the partisan divide is stark as the parties are far apart” and “most members of each party are on the same side as the rest of their party.”¹⁸

[Table 2 About Here]

Our full set of conditions included thirteen different scenarios with each respondent randomly assigned to one. The first was simply a control group (condition 1) that answered the dependent measures, described below, with no other information provided them. We display the twelve treatment conditions in Table 2 (with the cells reporting the Ns for each issue; the first N is for the drilling issue). The columns list the mix of frames to which a respondent in a given condition was exposed – as explained, this always involved one pro and one con frame, of varying strengths. The rows report the nature of the partisan endorsement and the specific endorsement for each issue (in the first column of each row). The frames used in the conditions reported in row one made no reference to party. The conditions in the second row provided partisan endorsements, but these endorsements were preceded by the previously described non-polarized prompt. The conditions in the final row included endorsements along with the polarized scenario. To get a sense of the wording of a specific condition, consider condition 10 (polarized party endorsements, two strong frames), for the drilling issue, which read:

There has been a lot of recent discussion about whether to allow drilling for oil and gas off the Atlantic Coast and in the eastern Gulf of Mexico.

Republicans in Congress tend to favor drilling and Democrats in Congress tend to oppose drilling. Moreover, the partisan divide is stark as the parties are far apart. Also, not only do Republicans tend to be in favor and Democrats opposed, but most members of each party are on the same side as the rest of their party.

¹⁸ We thus operationalize polarization in a different way than Levendusky, who presented respondents with a picture of the issue positions of members of Congress as being either polarized or not. We opted for our approach for two reasons. First, we found words better mimic the type of information respondents may receive (e.g., via a media report). Second, such ecological validity is important in our case as we suspect such information prompts distinct processing approaches. The polarization text may stimulate citizens to engage in directional processing to be consistent with fellow partisans (for a similar approach in a distinct domain, see Boiney et al. 1997: 8). The non-polarized text will relieve partisans of such a directional goal and may generate more memory search (see Redlawsk 2002). To be clear, we did not opt for these manipulations so as to explicitly skew the likely results in the direction of particular types of processing; rather, we wanted to best mimic the type of information encountered which we in turn believe has precise processing implications.

The main argument for those in favor of drilling is that drilling increases our oil supply, which leads to lower gas prices. It also generates employment opportunities and development.

The main argument for those opposed to drilling is that workers are required to learn new skills in order to protect themselves against the dangers of drilling. Marine life also must adapt to survive in the face of site construction and drilling.

We purposely avoided overly blunt party cues by de-coupling the cues from the arguments.

Hence, we presented party cues and frames as potentially competing information in order to illuminate what information people utilize. We also provided at least some substantive information in the frames rather than strict endorsements since some detailed information is important when studying relative partisan cue effects (Bullock 2011). The detailed wordings of the other conditions appear in Appendix A.

We assigned all participants to conditions on both issues, and they always received information about the drilling issue first. Participants also were assigned to the same conditions on each issue as we worried it would seem disorienting to vary the extent of polarization across issues for a respondent (see Slothuus 2011) and it would also increase the likelihood of experimental spill-over effects (Transue, Lee, and Aldrich 2009: 160).¹⁹

Measures

We included appropriate measures to test each of our hypotheses as well as various variables, shown in prior work, to affect energy or immigration attitudes. In what follows, we do not report results with these other variables as they do not affect our main results; suffice it to say those results echo prior work energy and immigration.

Our main dependent variables involve, respectively, support for drilling and support for the DREAM Act. (We adopted wordings for these questions from prior national surveys on these issues.) The drilling item asked, "...to what extent do you oppose or support drilling for oil and gas off the Atlantic Coast and in the eastern Gulf of Mexico?," with answers on a fully labeled 1 to 7 scale ranging from strongly oppose to strongly support. The DREAM Act support variable similarly asked (with an

¹⁹ As we will show, the dynamics are very similar across issues, and hence there is little reason to assume/believe that partisan stimulus accumulating over time was reinforcing its effects (i.e., if that would have been the case, partisan differences should increase in magnitude to the second experiment).

analogous 7-point scale): “to what extent do you oppose or support the DREAM Act?” These measures allow us to test hypotheses 1, 3, and 5, concerning the relative impact of partisan cues and polarization on overall opinion. (Note that all the DREAM Act measures came after the DREAM Act treatments, which followed the drilling Act treatments and measures.)

Testing hypotheses 2 and 4 requires a measure asking respondents to assess the effectiveness of the frames to which they were exposed. We followed others (e.g., Druckman and Bolsen 2011) and asked, for each issue, “...how effective or ineffective did you find the main argument opposed to drilling [the DREAM Act]?”, with response options offered on a 1 to 7 scale ranging from completely Ineffective to completely effective. We then also asked, using an analogous scale “...how effective or ineffective did you find the main argument in favor of drilling [of the DREAM Act]?”

Finally, to test hypothesis 6 about opinion strength, we asked respondents, after they reported their overall support opinions for each issue: “How important to you is your opinion about drilling [towards the DREAM Act] (e.g., how strongly do you feel about your opinion)?”. As with the other questions, respondents could provide an answer on a 1 to 7 scale from extremely unimportant to extremely important. This is conventional measure of attitude strength (e.g., Visser et al. 2006).

Results

We begin by presenting the results regarding overall support for drilling and the DREAM Act (i.e., hypotheses 1, 3, 5). We do so by charting the *percentage* change in opinion, by condition, relative to the control group, which was simply asked for opinions about the two issues with no other information provided. The means and standard deviations for each condition appear in Appendix B (Tables B.1 and B.2). Our approach is appropriate since we posited the control group as a baseline for our hypotheses (at least implicitly). We also will compare across treatment conditions, when necessary, to assess specific hypotheses. Our results are robust if we instead present them in terms of multivariate regressions with control variables; this is not surprising given random assignment. (Details are available from the

authors.²⁰) Finally, because our results on both issues are very similar to one another, we present them in tandem – that is, we go through each hypothesis on both issues rather than sequentially presenting results on the issues.²¹

[Figure 1 About Here]

Figures 1, 2, and 3, present the change in opinion across each of our twelve treatment conditions (with panel A being for the drilling issue and panel B being for the DREAM Act, with “Stg” indicating strong frame and “Wk” indicating weak frame). In all of the figures, we distinguish Democrat and Republican respondents since we focus on detecting party endorsement effects on partisans (at least when such endorsements were provided). Figure 1 presents the results for the conditions where no party endorsements were included and thus allows us to test hypothesis 1 that frames of equal strength should cancel, but that strong frames overwhelm weak frames. This is exactly what we find on both issues. For example, Figure 1A shows that for both types of partisans, exposure to the pro-strong and con-strong frames (condition 2) does not cause a significant change in opinion, with opinions only moving a bit more than 2% for Democrats and about 5% for Republicans (note significance levels are indicated with asterisks). The same is true with pro-weak and con-weak exposure (condition 5). Yet, when the pro frame is strong (economic benefits) the con frame is weak (regulation) (condition 3), opinions dramatically become more supportive for both types of partisans. In other words, the strong economic argument, when pitted against the weak regulation frame increases support for drilling by nearly 19% among Democrats

²⁰ As mentioned, the control variables acted in predictable directions and, of course, Republicans were more supportive of drilling and Democrats were more supportive of the DREAM Act. The control variables include basic demographics, ideology, relevant values (e.g., environmental values or ethnocentrism), national economic retrospective evaluations, media use, general political knowledge, and domain-specific knowledge.

²¹ We included a manipulation check to ensure that participants did in fact register the parties’ endorsements (i.e., we asked respondents, toward the end of the survey if they recalled the pro and con positions of the parties on each issue). On the drilling issue, on average 89 % of participants correctly recalled the pro and con positions of the parties (ranging from 85 % to 94 % across the eight conditions with party cues), and on the immigration issue 87 % correctly recalled party positions. We also found no significant difference in recall accuracy based on whether the respondent was in a polarized or no-polarized condition. We further asked respondents across conditions the extent to which they thought the parties were polarized and the results confirmed that our polarization conditions prompted significant higher perceptions of polarization. Finally, we asked people to report the “importance” of their party identification and found significantly higher scores in the polarization conditions, suggesting that polarization did in fact strengthen partisan identification.

and 14% among Republicans. Analogously, opinions move significantly in the other direction when the pro frame is weak (technological developments) and con one is strong (worker and maritime life) (condition 4). We find virtually identical results in Figure 1b on the DREAM Act. For example, upon receiving the pro strong beneficiaries frame along with the weak con politics frame (condition 3), Democratic support increases by nearly 15% while Republican support grows by over 17%. Yet when pitted against the strong con overburdening the system frame (condition 2), neither partisan group displays a significant change.²²

In sum, in all eight instances of opposing frames of unequal strength, frames move opinion significantly in the expected directions, whereas none of the opposing frames of equal strength has any significant impact on opinion. Moreover, when the opposing frames push opinions in opposite directions, the effects are large, with differences in opinion typically in the range of 25 percentage points or more between Pro and Con frames (i.e., a quarter of the opinion scale). This is very strong support for hypothesis 1, in line with Chong and Druckman (2007b) and Druckman (2010). Also of note is that the results are robust among both Democrats and Republicans despite their partisan inclinations in different directions. These results provide an ideal baseline for investigating what happens to the influence of substantive information once policy debates also include party cues explicitly telling where the parties stand on the issue.

[Figure 2 About Here]

Opinion dynamics change when party endorsement information is provided to respondents. How they change, however, depends substantially on whether polarization is high or low. Figure 2 presents results from the condition where respondents are informed that polarization is low and recall that for drilling the *pro frame was endorsed by Republicans while the con frame was endorsed by Democrats and for the DREAM Act, it was the Democrats pushing the pro position and Republicans the con*. We find mixed support for hypothesis 3. Specifically, strong arguments, when paired with weak arguments,

²² The weak-weak mix on the DREAM Act comes close to having the pro frame win out among Democrats, although it is not significant at the .1 level, one tailed.

outperform party endorsements (conditions 7 and 8). On drilling, for example, Democratic respondents who receive the strong pro economic argument endorsed by Republicans and the weak con regulation frame endorsed by the Democrats became *more supportive* of drilling by 15%. In other words, the party endorsement fell flat and the substance won out. The same is true for Republicans when they received the Democratically endorsed strong con frame of worker and maritime life (condition 8) – they followed this by becoming nearly 11% less supportive despite also receiving the Republican endorsed weak pro frame (technological developments). We see almost the exact same dynamics on the DREAM Act – when arguments vary in strength – substance and not party endorsements carry the day. This partially contradicts hypothesis 3 that suggested partisan motivated reasoning throughout.

However, hypothesis three is fully supported when the arguments involved are of equal strength. Partisans exposed to equally strong or weak frames (conditions 6 and 9), turn to party endorsements for guidance. On drilling, for example, Republican participants who received the strong pro economic frame endorsed by Republicans as well as the strong con frame of worker and maritime life frame that was endorsed by Democrats (condition 6) ended up following the Republican endorsement and becoming over 10% more supportive. The same type of dynamic occurs when both frames are weak as well as on the DREAM Act – although these movements do not always reach levels of conventional statistical significance.

The results from the non-polarized conditions suggest that substantive information is inconclusive as to which policy to support. When arguments/frames are of unequal strength, they follow the direction of the stronger argument. But, when the arguments are equally strong, citizens turn to party cues to find their way. Individuals appear to follow a lexicographical reasoning process where, if the first information considered is not decisive, then a second piece of information is turned to for help (e.g., Payne et al. 1993: 26). It is notably interesting, however, that the first piece of information that is relevant, under conditions of low polarization, is the argument and not the party cue. This echoes Bullock (2011) in that that substance can overwhelm party cues.

[Figure 3 About Here]

This is *not* the case, however, under conditions of polarization. As Figure 3 demonstrates, partisans ignore the substance of the frame and entirely follow their party under conditions of polarization. Consider the case of drilling, once more. Democrats who receive the strong pro economic frame, endorsed by the Republican Party, and the weak con regulation frame, endorsed by the Democratic Party (condition 11), become nearly 13% less supportive of drilling for oil. That is, they ignore the stronger substance and follow their party. This sharply contrasts with what they did in the non-polarized environment where they went with the stronger frame despite Republican endorsement and became 15% more supportive (see condition 7 in Figure 2a). That is a 28% swing in opinion due to polarization. We could go through many other examples evident in Figure 3, but the trend stands across all conditions on both issues. In a polarized partisan environment, partisan motivated reasoning overwhelms all substance. These results largely confirm hypothesis 5. (They do not fully support this hypothesis, however, as the hypothesis predicted greater partisan effects in the polarized than in the non-polarized conditions and we found that partisan effects are similar across these conditions when the arguments are of equal quality.)

Overall, our results can be summarized as follows:

- *When presented with opposing frames of the same strength (with no party endorsements), individuals' opinions are not affected.*
- *When presented with opposing frames of differing strength (with no party endorsements), individuals' opinions move only in the direction of the strong frame.*
- *Under conditions of low-polarization:*
 - *when presented with opposing frames of different strength (e.g., one strong and one weak), endorsed by different parties, partisans' opinions move only in the direction of the strong frame regardless of the party endorsements. In this case, substance outweighs partisan cues (see Bullock 2011).*
 - *when presented with opposing frames of similar strength (e.g., both strong or both weak), endorsed by different parties, partisans' opinions move only in the direction of the frame endorsed by their party. In this case, party endorsements drive opinions, in the face of arguments that do not differ in strength.*

- *Under conditions of high-polarization, when presented with opposing frames, regardless of strength, partisans' opinions move only in the direction of the frame endorsed by their party. In this case, party endorsements drive opinions, regardless of argument strength – that is, even if the other party's argument is stronger.*

In sum, partisan endorsements matter when both parties contrive of arguments of equivalent strength and put them forward in an environment of low polarization; substance wins out otherwise. Thus, parties do not always rule public opinion. However, substance becomes irrelevant and partisan cues carry the day when conditions polarize. Polarization clearly plays a role in shaping how policy opinion formation works: it stimulates greater motivated reasoning. To the extent that following stronger arguments indicates higher quality opinions, the results suggest that polarization directly leads to lower quality opinions.

Evaluations of Frame Strength

We next turn to a test of hypotheses 2 and 4, which posited that partisan endorsements should affect the evaluations of the frames themselves. This possibility comes directly from the theory of partisan motivated reasoning where the source of an argument serves as a perceptual screen for evaluating arguments (e.g., Druckman and Bolsen 2011). We test these hypotheses with our aforementioned measures that asked respondents to assess the “effectiveness” of each frame to which they were exposed.

[Tables 3 and 4 About Here]

We present the results in Tables 3 and 4 – 3a for Democrats on drilling, 3b for Republicans on drilling, 4a for Democrats on the DREAM Act, and 4b for Republicans on the DREAM Act. Each table reports the average evaluation score of the pro and con frame in each condition (along with the standard deviation). The key statistic, however, is the difference in evaluation between the pro and con frames, which is listed in the final column of each table. Hypotheses 3 and 4 suggest that, as party cues are added, these differences should become significant in the direction of the party endorsements. A positive

significant difference indicates respondents found the pro frame significant more effective whereas a negative significant differences suggests respondents found the con frame significantly stronger.²³

As expected, when party endorsements are not provided, partisans of both stripes see the strong frames as more significantly effective than the weak frames, regardless of whether they are pro or con. (The one exception was condition 3 for the DREAM Act frames; while Democrats rated the pro frame as significantly more effective than the con, the difference between the two for Republican respondents was statistically insignificant from zero.) When the frames are of equal strength, respondents do not see significant differences between them. These findings echo our pretest results and show that both partisan groups agree over which frames are strong and weak. These differences in evaluations of frames are also consistent with the opinion differences found in Figures 1A-B, and support a clear implication of hypothesis 1.

When we turn to the non-polarized partisan endorsement conditions, the results match what we found in Figures 2A-B. In short, when the frames were of unequal strength, partisans ignored the endorsements and evaluated the stronger frame as more effective (the only exception being the difference in condition 7 on the DREAM Act is not significant among Republicans). These findings again point to the strength of substance over the cues in non-polarized conditions. However, we also see some tendencies to partisan bias in the evaluations of frames when the frames are of equal strength. Thus, we see Republicans go with their party's frame in the equal strength non-polarized conditions (6 and 9), indicating motivated reasoning. Similarly, on the DREAM Act issue, both Democrats and Republicans faced with two weak frames (condition 9) find the frame from their party more persuasive, and so do Republicans when they receive two strong frames (condition 6). Overall, however, the substantive content of the frames tend to dominate their evaluations, even when non-polarized party cues are present, with motivated reasoning only rearing its head when the competing frames are equally strong.

²³ Overall, Democrats find the con frames on drilling and the pro frames on the DREAM Act stronger, whereas Republicans find the opposite frames stronger (i.e., pro frames on drilling and con frames on the DREAM Act). These differences are consistent with partisan and ideological values. This is not relevant to our hypotheses, however, as we are concerned with how party cues and polarization change evaluations of these frames.

We observe dramatically different results in the partisan polarization conditions. We find that partisans *always* evaluate the frames endorsed by their party as significantly stronger, regardless of policy issue. Thus, polarization seems to spark motivated reasoning and people are clearly evaluating frames differently dependent on the presence of polarization. On the drilling issue, this is clearest for Democrats when comparing conditions 3, 7, and 11 – where the pro frame is strong and the con frame is weak. In the no party cue and non-polarized cue conditions, the Democratic participants see the strong frame as significantly stronger. Yet, this flips completely in the polarized condition (11). For Republicans, we see the exact same dynamics in conditions 4, 8, and 12. In both the former cases, the Pro frame is always evaluated as significantly weaker (even though their party endorses the opposite side of the issue), but when the parties are polarized, this switches and the Con frame is perceived as significantly stronger. This means that motivated reasoning affects both the pro and con frames. Again, these dynamics are found as nearly mirror images on the DREAM Act issue. These results strongly support hypothesis 3 and partially support hypothesis 5. We say it is only partial support for hypothesis 5 because of the presence of some motivated reasoning in the non-polarization conditions when the arguments are of equal strength.

In sum, these dynamics on evaluations of frames clearly demonstrate that partisan polarization influences both the extent to which citizens rely on substantive information and party cues when forming policy opinions and how citizens process substantive arguments. Participants from both parties always evaluated the stronger frame as more persuasive in condition where no party endorsement was offered or when a party endorsement was present in an environment of low polarization. This latter result was especially clear when the strong frame was matched with a weak argument. Partisan polarization stunted these effects, however, with strong frames rated as ineffective if they did not conform to endorsements from the individual's own party. Half-hearted evaluations of weak frames, meanwhile, turned into enthusiasm if the frame was endorsed by the individual's party under conditions of polarization. These findings further emphasize that partisan polarization is a crucial condition for how citizens respond to competing sides in policy debates. It is direct evidence of partisan motivated reasoning whereby a salient

partisan identity colors the evaluation of arguments. Party endorsements, particularly under conditions of polarization do not simply serve as cues people blindly follow, but shape how they view the arguments put forth by different sides.

Opinion Strength

Our final hypothesis (6) posits that opinion strength should grow as a partisan sponsor is added and, particularly, when the parties are polarized. This is somewhat of an ironic prediction insofar as people are gaining confidence in opinions that are less and less based on the substance of the argument. We test this with our aforementioned item that asked individuals to rate, on a 7-point scale, how much importance they attached to their attitude on each issue.

[Table 5 About Here]

To test this hypothesis, we use the control group as a baseline and expect that adding partisan sponsors, particularly under conditions of polarization, should result in a percentage increase in attitude strength. We present the percentage change relative to the control group for each condition and each partisan group in Table 5. We present the means and standard deviations in Appendix B (Tables B.3 and B.4). The results here accentuate just how dramatic an effect partisan polarization can have. Without a polarized environment, we see little change in attitude importance – the only significant changes come from Republicans in equal strength conditions (6 and 9) on the drilling issue and marginally by Democrats in condition 8 on the DREAM Act. Yet in every polarized condition, and for both issues, individuals become dramatically more confident in their opinions (by 12% to 18%). Thus, hypothesis 6 is supported insofar as the impact of polarization is in fact significantly greater than conditions sans polarization (although we did expect more changes in the party endorsement non-polarized conditions than were observed).

In short, not only does a polarized environment increase partisan motivated reasoning – and less reliance on substance – but it dramatically causes people to view their opinions as much more important. Attitude importance, in turn, has been shown to affect a variety of behaviors such as willingness to

persuade others or otherwise take action on behalf of an issue (Visser et al. 2006; also see Johnson and Fowler 2011) and possible long-term benefits of over-confidence that may speak to the stability of parties in general. This is concerning: polarized parties lead to more confidence in opinions, that is, people consider them more important – even though these opinions are they are less substantively grounded (i.e., confidence is one dimension of attitude importance). This is a neglected consequence of partisan polarization.

Conclusion

We find that in the absence of party endorsements, the quality of the arguments/frames in play drives opinions. Moreover, frame strength continues to play this role in non-polarized conditions, overwhelming the influence of party cues on attitudes. Party cues only begin to exert influence in non-polarized competitive environments when the parties offer equally strong arguments and individuals must turn to something other than substance for guidance. This suggests a lexiogrocpical psychology where individuals turn to a primary piece of information and follow it when it is definitive. If it lacks clarity, however, they turn to secondary information, which in this case are party endorsements.

Perhaps the most important finding is that polarized party environments cause the order of priority to shift, such that suddenly strengthened party identity causes the party endorsements to carry the day. In such conditions, partisans follow their party regardless of the strength of the argument the party makes. Moreover, when individuals engage in such strong partisan motivated reasoning, they develop what is, in essence, a false over-confidence in their opinions. This means that they are less likely to consider alternative positions and more likely to take action based upon them (e.g., attempt to persuade others) (Visser et al. 2006).

Our results regarding the evaluation of the arguments/frames suggests partisan endorsements color how people assess the information given to them through motivated reasoning processes, at least under some conditions. We have posited that such partisan motivated reasoning can lead to lower “quality” opinions – in line with what Lavine et al. (n.d.) suggest. As we have repeatedly made clear,

however, we are cautious in pushing this line of our argument, as a definitive criterion of quality opinions does not exist. Nonetheless, we believe that a movement away from arguments that citizens otherwise view as high quality and effective and toward party endorsements that lack substance is a movement away from quality. We also should mention that partisan motivated reasoning, as is made clear by Chong and Druckman (2010), Druckman and Leeper (n.d.), and Druckman et al. (n.d.), can lead to dogmatic adherence to a prior opinion such to the point of extreme inflexibility and intolerance.

Our conclusion thus stands in stark contrast with Levendusky (2010) who, while clearly acknowledging some downsides of polarization, paints a much more optimistic picture of how polarization affects opinion quality. The difference, as explained, is that he focuses on how polarization facilitates the creation of ideological coherent opinions, the use of cues, and the likelihood of “voting correctly” (operationalized by low information voters emulating the behavior of high information voters) (also see Garner and Palmer 2011). Alternatively, one could argue that increased reliance on partisan justifications have normatively desirable properties (e.g., White and Ypi 2011). These inconsistent conclusions do not suggest either approach is preferable.²⁴ Rather, it accentuates the complete lack of consensus criteria on how public opinion should be evaluated. This has become even more complicated because for many years “strong” or ideological consistent opinions were widely accepted as an ideal, but recent evidence, as discussed, suggests these types of opinions generate motivated reasoning which means less “objective” assessment of information and more (false) confidence in those opinions (see Taber and Lodge 2006). Despite over a century of grappling regarding what makes for a “good” public opinion, scholars and theorists continue to put forth widely different and contradictory standards (for a full assessment, see Druckman 2011). This has far more than pedantic implications – if political scientists hope to play a role in promoting civic competence and coherent voting behavior, there needs to be greater discussion on what it means to be competent. This requires increased conversations between empirical scholars and normative theorists.

²⁴ Also of relevance is Harbridge and Malhotra’s (2011) finding that party conflict can reduce confidence in Congress, at least among certain subgroups of citizens.

Of course, our results also call into question the sixty year old plea for strong parties in the U.S (APSA 1950; for the latest state of the art work on parties see Sniderman and Stiglitz 2012). While strong, clearly defined parties have benefits, they also come with costs, which need to be weighed against one another. In terms of whether citizens are indeed polarizing, our results suggest that the answer may be more complicated than commonly recognized. In short, we suspect citizen polarization occurs issue by issue – it will depend on how polarized elites are on a given issue and will also depend on how citizens themselves seek out information (see Druckman et al. n.d.). How this all aggregates into overall ideological citizen polarization then will depend on the weights given to distinct issues (also see Ura and Ellis 2012).²⁵

A final comment concerns the general implications for democratic competition – competition is a defining element of even the most minimalist conceptions of democracy. Yet when it comes to the impact of competition on public opinion formation, the opinion dynamics involved can be problematic. Chong and Druckman (2010) suggest that competition over-time prioritizes the argument that comes last and thus the ordering of arguments means competitors are not on equal footing. Druckman et al. (2012) show that the ordering depends on whether people seek out information; when they do, the argument that comes first is more powerful. Regardless, because politics takes place over-time and hence so does competition, one should not presume competition works perfectly in how it shapes opinions. Our evidence adds yet another deleterious consequence by suggesting intense competition can hinder attention to substance. This is truly ironic insofar as the very entities charged with creating competition – political parties – may harm public opinion when they are overly competitive.

²⁵ We view our work as seeing an agenda, as well, for more research into how elite polarization affects not only whether citizens themselves polarize, but also how it affects how they arrive at their policy opinions. There are a number of alternative situations worth exploring. For example, Nicholson (2011b) finds that it is out-party sponsorship and not in-party sponsorship that drives opinion formation – an idea we cannot explicitly test since our partisan conditions include cues from both parties. Nicholson also draws a sharp distinction between individual partisan politicians (e.g., presidential candidates) and parties themselves – another difference we cannot test given our focus on parties in general. Finally, Nicholson (2011a) suggests variations in the messages (e.g. including of explicit references to other groups) can temper source effects and Mackie et al. (1990) suggest that effects also may depend on the relevance of the issue at hand.

References

- Aarøe, Lene. 2011. "Investigating Frame Strength." *Political Communication* 28: 207-226.
- Althaus, Scott. 2006. "False Starts, Dead Ends, and New Opportunities in Public Opinion Research." *Critical Review* 18(1-3): 75-104.
- American Political Science Association. Committee on Political Parties. 1950. "Toward a More Responsible Two-party System."
- Arceneaux, Kevin. 2008. "Can Partisan Cues Diminish Democratic Accountability?" *Political Behavior* 30: 139-160.
- Atkeson, Lonna Rae and Cherie D. Maestas. N.d. *Catastrophic Opinions*. Unpublished manuscript, University of New Mexico.
- Atkeson, Lonna Rae and Cherie D. Maestas. 2009. "Meaningful Participation and the Evolution of the Reformed Presidential Nominating System." *PS: Political Science & Politics* 42(1): 59-64.
- Batalova, Jeanne, and Margie McHugh. 2010. "DREAM vs. Reality." *Migration Policy Institute*.
- Bartels, Larry. 1996. "Politicians and the Press?" Presented at the Annual Meeting of the American Political Science Association.
- Bartels, Larry 2002. "Beyond the Running Tally" *Political Behavior* 24 (2):117-50.
- Baum, Matthew A. and Groeling, Tim. 2009. "Shot by the Messenger." *Political Behavior* 31(2): 157-186.
- Bohman, James. 1998. "Survey Article." *Journal of Political Philosophy* 6 (4):400-25.
- Bolsen, Toby and Fay Lomax Cook. 2008. "Public Opinion on Energy Policy, 1974-2006." *Public Opinion Quarterly* 72(2): 364-388.
- Boiney, Lindsley G., Jane Kennedy, and Pete Nye. 1997. "Instrumental Bias in Motivated Reasoning: More When More is Needed." *Organizational Behavior and Human Decision Processes* 72(1): 1-24.
- Boudreau, Cheryl. n.d. "Gresham's Law of Cue-Taking." *Political Communication*. Forthcoming.
- Brader, Ted. 2006. *Campaigning for Hearts and Minds*: The University of Chicago Press.
- Brewer, Paul R. 2001. "Value Words and Lizard Brains." *Political Psychology* 22(March):45-64.
- Bullock, John G. 2011. "Elite Influence on Public Opinion in an Informed Electorate." *American Political Science Review* 105: 496-515.
- Carlisle, Juliet E, Jessica T. Feezell, Kristy E.H. Michaud, Eric R. A. N. Smith, and Leeanna Smith. 2010. "The Public's Trust in Scientific Claims Regarding Offshore Oil Drilling." *Public Understanding of Science* 19: 514-527.

- Chong, Dennis. 2007. "The Value of Information and Endorsements." Unpublished Paper, Northwestern University.
- Chong, Dennis and James N. Druckman. 2007. "A Theory of Framing and Opinion Formation in Competitive Elite Environments." *Journal of Communication* 57: 99-118.
- Chong, Dennis and James N. Druckman. 2007. "Framing Public Opinion in Competitive Democracies." *American Political Science Review* 101: 637-655.
- Chong, Dennis and James N. Druckman. 2007. "Framing Theory." *Annual Review of Political Science* 10: 103-126.
- Chong, Dennis and James N. Druckman. 2010 "Dynamic Public Opinion." *American Political Science Review* 104: 663-680.
- Chong, Dennis, and James N. Druckman. 2011a. "Identifying Frames in Political News." In *Sourcebook for Political Communication Research*, eds. Erik P. Bucy and R. Lance Holbert. New York: Routledge.
- Chong, Dennis, and James N. Druckman. 2011b. "Strategies of Counter-Framing." Paper presented at the Annual Meeting of the International Society for the Study of Political Psychology, Istanbul, Turkey.
- Clarke, Harold and Stewart, Marianne C. 1998. "The Decline of Parties in the Minds of Citizens." *Annual Review of Political Science* 1: 357-378
- Cohen, Geoffrey L. 2003. "Party Over Policy." *Journal of Personality and Social Psychology* 85 (5):808-22.
- Converse, Philip E. 1964. "The Nature of Belief Systems in Mass Publics." In *Ideology and Discontent*, ed., D. E. Apter: The Free Press of Glencoe.
- Converse, Philip E. 2000. "Assessing the Capacity of Mass Electorates." *Annual Review of Political Science* Volume 3:331-53.
- Dancey, Logan and Paul Goren. 2010. "Party Identification, Issue Attitudes, and the Dynamics of Political Debate." *American Journal of Political Science* 54(3): 686-699
- Dennis, Jack. 1992. "Political Independence in America." *Political Behavior*. 14(3): 261-296.
- Druckman, James N. 2001. "The Implications of Framing Effects for Citizen Competence." *Political Behavior* 23 (3):225-56.
- Druckman, James N. 2004. "Political Preference Formation." *American Political Science Review* 98 (04):671-86.
- Druckman, James N. 2010. "Competing Frames in a Political Campaign." In Brian F. Schaffner and Patrick J. Sellers, eds., *Winning with Words*. New York: Routledge.

- Druckman, James N. 2011. "The Politics of Motivation." *Critical Review*.
- Druckman, James N. and Toby Bolsen. 2011. "Framing, Motivated Reasoning, and Opinions about Emergent Technologies." *Journal of Communication* 61: 659-688.
- Druckman, James N., and Kjersten R. Nelson. 2003. "Framing and Deliberation." *American Journal of Political Science* 47 (4): 729-745.
- Druckman, James N., and Thomas J. Leeper. N.d.a. "Is Public Opinion Stable?" *Daedalus*, Forthcoming.
- Druckman, James N., and Thomas J. Leeper. N.d.b. "Learning More from Political Communication Experiments" *American Journal of Political Science*, Forthcoming.
- Druckman, James N., Cari Lynn Hennessy, Kristi St. Charles, and Jonathan Weber. 2010. "Competing Rhetoric Over Time." *The Journal of Politics* 72: 136-148.
- Druckman, James N., Jordan Fein, and Thomas J. Leeper. 2012. "A Source of Bias in Public Opinion Stability." *American Political Science Review*. Forthcoming.
- Fiorina, Morris P., and Samuel J. Abrams. 2008. "Political Polarization in the American Public." *Annual Review of Political Science* 11:563-88.
- Foley, Elise. (2010) "Dream Act Refresher." *Washington Independent*. September 16, 2010 (<http://washingtonindependent.com/97658/dream-act-refresher>).
- Gaines, Brian, James H. Kuklinski, and Paul J. Quirk. 2007. "Interpreting Iraq." *Journal of Politics* 69(4): 957-974
- Garner, Andrew, and Harvey Palmer. 2011. "Polarization and Issue Consistency Over Time." *Political Behavior*. 33: 225-246.
- Gerber, Alan S. and Gregory A. Huber. 2009. "Partisanship and Economic Behavior." *American Political Science Review* 103 (3): 407-26.
- Gerber, Alan S. and Gregory A. Huber. 2010. "Partisanship, Political Control, and Economic Assessments." *American Journal of Political Science* 54 (1): 153-73.
- Gerber, Alan S. and Eric M. Patashnik. 2010. "Problem Solving in a Polarized Age." *The Forum* 8 (1): Article 3.
- Goren, Paul, Christopher M. Federico, and Miki Caul Kittlilson. 2009. "Source Cues, Partisan Identities, and Political Value Expression." *American Journal of Political Science* 55: 805-820.
- Groenendyk, Eric W. 2010. "Being Earnest About Importance." Presented at the Annual Meeting of the American Political Science Association.
- Green, Donald P., Bradley Palmquist, and Eric Schickler. 2004. *Partisan Hearts and Minds*. New Haven: Yale University Press.

- Hänggli, Regula and Hanspeter Kriesi. 2010. "Political Framing Strategies and their Impact on Media Framing in a Swiss Direct-Democratic Campaign." *Political Communication* 27(2): 141-157.
- Harbridge, Laurel and Neil Malhotra. 2011. "Electoral Incentives and Partisan Conflict in Congress." *American Journal of Political Science* 55(3): 494-510.
- Hetherington Marc. 2008. "Turned Off or Turned On." In *Red and Blue Nation? Vol. 2* ed. David Brady and Pietro Nivola. Washington, DC: Brookings
- Hetherington, Marc. 2009. "Putting Polarization in Perspective." *British Journal of Political Science*. 39:413-448
- Holm, Else Marie. 2012. *Emotions as Mediators of Framing Effects*. Aarhus: Politica.
- Houston, David A. and Russell H. Fazio. 1989. "Biased Processing as a Function of Attitude Accessibility" *Social Cognition* 7(1): 51-66
- Iyengar, Shanto, Gurav Sood, and Yphtach Lelkes. N.d. "Fear and Loathing in Party Politics." *Public Opinion Quarterly*. Forthcoming.
- Jacobson, Gary C. 2008. *A Divider, Not a Uniter*. New York: Pearson.
- Jerit, Jennifer. 2009. "How Predictive Appeals Affect Policy Opinions." *American Journal of Political Science* 53 (2):411-26.
- Johnson, Dominic D.P., and James H. Folwer. 2011. "The Evolution of Overconfidence." *Nature* 447: 317-320.
- Kahan, Dan M., Donald Braman, Paul Slovic, John Gastil, and Geoffrey Cohen. 2009. "Cultural Cognition of the Risks and Benefits of Nanotechnology." *Nature Nanotechnology* 4: 87-90.
- Keith, Bruce E. 1992. *The Myth of the Independent Voter*. Berkeley and Los Angeles, CA: University of California Press.
- Krauss, Clifford, and John M. Broder. 2012. "Oil Drilling in the Gulf Rebounds As Prices Promote Exploration." *New York Times*, March 5, A1, A3.
- Kunda, Zva. 1990. "The Case for Motivated Reasoning." *Psychological Bulletin* 108 (3):480-98.
- Lascher, Edward L. and John L. Korey. 2011. "The Myth of the Independent Voter, California Style." *California Journal of Politics and Policy* 3(1)
- Lavine, Howard, Christopher Johnston, and Marco Steenbergen. N.d. *The Ambivalent Partisan*. Oxford University Press. Forthcoming.
- Lau, Richard R., and David P. Redlawsk. 2006. *How Voters Decide*. New York: Cambridge University Press.
- Levendusky, Matthew S. 2009. *The Partisan Sort*. Chicago: University of Chicago Press.

- Levendusky, Matthew S. 2010. "Clearer Cues, More Consistent Voters." *Political Behavior* 32: 111-131.
- Lupia, Arthur. 2006. "How Elitism Undermines the Study of Voter Competence." *Critical Review* 18 (1):217-32.
- Mackie, Diane M., Leila T. Worth, and Arlene G. Asuncion. 1990. "Processing of Persuasive In-Group Messages." *Journal of Personality and Social Psychology* 58: 812-822.
- Mansbridge, Jane. 1983. *Beyond Adversary Democracy*. Chicago: University of Chicago Press.
- McCarty, Nolan, Howard Rosenthal, and Keith T. Poole. 2006. *Polarized America*. Cambridge, MA: The MIT Press
- Nicholson, Stephen P. 2011a. "Dominating Cues and the Limits of Elite Influence." *Journal of Politics* 73: 1165-1177.
- Nicholson, Stephen P. 2011b. "Polarizing Cues." *American Journal of Political Science* 56: 52-66.
- Nir, Lilach. 2011. "Motivated Reasoning and Public Opinion Perception." *Public Opinion Quarterly*. 75(3): 504-532
- New York Times*. 2011. "Immigration and the Campaign." *Editorial*, February 21, 2012: A20.
- O'Keefe, Daniel J. 2002 *Persuasion*. Thousand Oaks, CA: Sage Publications, Inc.
- Page, Benjamin I. and Robert Y. Shapiro. 1992 *The Rational Public*. Chicago, IL: The University of Chicago Press.
- Payne, John W., James R. Bettman, and Eric J. Johnson. 1993. *The Adaptive Decision Maker*. New York: Cambridge University Press.
- Petersen, Michael Bang, Rune Slothuus, and Lise Togeby. 2010. "Political Parties and Value Consistency in Public Opinion Formation." *Public Opinion Quarterly* 74 (3):530-50.
- Petersen, Michael Bang, Rune Slothuus, Rune Stubager, and Lise Togeby. 2011. "Deservingness versus Values in Public Opinion on Welfare." *European Journal of Political Research* 50(1): 24-52.
- Peterson, Erik. 2011. "Competitive Partisan Issue Framing." Undergraduate Honors Thesis, Northwestern University.
- Petrocik, John R. 2009. "Measuring Party Support." *Electoral Studies* 28(4): 562-572.
- Prior, Markus. 2007. *Post-Broadcast Democracy*. New York: Cambridge University Press.
- Redlawsk, David. 2002. "Hot Cognition or Cool Consideration." *Journal of Politics* 64(4): 1021-1044.
- Schattschneider, E. E. 1960. *The Semisovereign People*. Hinsdale, IL: Holt, Rinehart and Winston.
- Slothuus, Rune. 2010. "When Can Political Parties Lead Public Opinion?" *Political Communication* 27(2): 158-177.

- Slothuus, Rune. 2011. "Assessing the Influence of Political Parties on Public Opinion." Presented at the Annual Meeting of the International Society of Political Psychology.
- Slothuus, Rune and Claes H. de Vreese. 2010. "Political Parties, Motivated Reasoning, and Issue Framing Effects." *The Journal of Politics* 72: 630-645.
- Smith, Eric R.A.N. 2001. *The Role of Knowledge in the Public's Trust in Science and Offshore Oil and Gas Development*. Report to the Minerals Management Service, U.S. Department of the Interior, October, 2001.
- Smith, Eric R.A.N. 2002. *Energy, the Environment, and Public Opinion*. Boulder, Colorado: Rowman & Littlefield.
- Smith, Joanne R., Deborah J. Terry, Timothy R. Crosier, and Julie M. Duck. 2005. "The Importance of the Relevance of the Issue to the Group in Voting Intentions." *Basic and Applied Social Psychology* 27(2): 163-170.
- Sniderman, Paul and Sean M. Theriault. 2004. "The Structure of Political Argument and the Logic of Issue Framing." In *Studies in Public Opinion: Attitudes, Nonattitudes, Measurement Error, and Change*, ed. W. E. Saris and P. M. Sniderman. Princeton: Princeton University Press.
- Sniderman, Paul M., and Edward H. Stiglitz. 2012. *The Reputational Premium*. Princeton, NJ: Princeton University Press.
- Taber, Charles S., and Milton Lodge. 2006. "Motivated Skepticism in the Evaluation of Political Beliefs." *American Journal of Political Science* 50 (3):755-69.
- Tetlock, Philip E. 2002. "Theory-Driven Reasoning about Plausible Pasts and Probably Future in the World Politics." In Thomas Gilovich, DalkeGriffin, and Daniel Kahneman, eds., *Heuristics and Biases*. New York: Cambridge University Press.
- Transue, John E., Daniel J. Lee, and John H. Aldrich. 2009. "Treatment Spillover Effects across Survey Experiments." *Political Analysis*. 17(2): 143-161.
- Ura, Joseph Daniel, and Christopher R. Ellis. 2012. "Partisan Moods." *Journal of Politics* 74: 277-291.
- Visser, Penny S., George Y. Bizer, and Jon A. Krosnick. 2006. "Exploring the Latent Structure of Strength-Related Attitude Attributes." In *Advances in Experimental Social Psychology* 38. Ed. M. Zanna. San Diego, CA: Academic Press
- White, Jonathan, and Lea Ypi. 2011. "On Partisan Political Justification." *American Political Science Review* 105: 381-396.
- Wyer, Natalie A. 2010. "Selective Self-Categorization." *The Journal of Social Psychology*. 150: 452-470.
- Zaller, John. 1992. *The Nature and Origins of Mass Opinion*. New York: Cambridge University Press.

**Table 1a
Drilling Frames**

	Supportive (Pro)	Opposed (Con)
Strong	Economic Benefits	Worker and Maritime Life
Weak	Technological Developments	Regulation

**Table 1b
DREAM Act Frames**

	Supportive (Pro)	Opposed (Con)
Strong	Beneficiaries	Overburdening the System
Weak	Public Support	Politics

**Table 2
Experimental Conditions**

	Pro Strong Frame Con Strong Frame	Pro Strong Frame Con Weak Frame	Pro Weak Frame Con Strong Frame	Pro Weak Frame Con Weak Frame
No-Party Endorsements	(2) N (drilling) = 48 N (DREAM) = 46	(3) N = 55 N = 55	(4) N = 51 N = 49	(5) N = 46 N = 50
Non-Polarized Party Endorsements <i>For drilling → Rep = Pro Dem = Con</i> <i>For DREAM → Rep = Con Dem = Pro</i>	(6) N = 51 N = 51	(7) N = 49 N = 44	(8) N = 50 N = 56	(9) N = 51 N = 50
Polarized Party Endorsements <i>For drilling → Rep = Pro Dem = Con</i> <i>For DREAM → Rep = Con Dem = Pro</i>	(10) N = 54 N = 52	(11) N = 49 N = 52	(12) N = 45 N = 50	(13) N = 50 N = 44

Note: Ns vary across issues due to non-response. Both experiments included a control condition (1) (N = 47) which received only a brief description of each policy before answering the dependent variables.

Table 3a
Democratic Evaluations of Drilling Frames

Frames (Condition)	Cues	Pro Frame	Con Frame	Difference	N
Pro-Stg - Con-Stg (2)	No Parties	4.26 (std. dev. = 1.72)	4.37 (1.31)	-0.11 (2.69)	27
Pro-Stg - Con-Wk (3)	No Parties	4.68 (1.58)	3.39 (1.62)	1.29*** (2.66)	38
Pro-Wk - Con-Stg (4)	No Parties	3.30 (1.23)	4.89 (1.48)	-1.59*** (2.22)	27
Pro-Wk - Con-Wk (5)	No Parties	3.50 (1.45)	3.27 (1.76)	0.23 (2.34)	26
Pro-Stg - Con-Stg (6)	Non- Polarized	4.15 (1.19)	4.46 (1.30)	-0.31 (2.19)	26
Pro-Stg - Con-Wk (7)	Non- Polarized	4.44 (1.58)	3.74 (1.48)	0.70* (2.54)	27
Pro-Wk - Con-Stg (8)	Non- Polarized	3.73 (1.66)	4.80 (1.54)	-1.07** (2.88)	30
Pro-Wk - Con-Wk (9)	Non- Polarized	3.60 (1.12)	3.68 (1.18)	-0.08 (1.47)	25
Pro-Stg - Con-Stg (10)	Polarized	3.65 (1.50)	4.96 (1.30)	-1.30*** (2.38)	23
Pro-Stg - Con-Wk (11)	Polarized	3.63 (2.01)	4.89 (1.45)	-1.26** (3.18)	19
Pro-Wk - Con-Stg (12)	Polarized	3.52 (1.53)	4.92 (1.29)	-1.40*** (2.08)	25
Pro-Wk - Con-Wk (13)	Polarized	3.48 (1.48)	4.79 (1.57)	-1.31*** (2.16)	29

*** $p \leq .01$; ** $p \leq .05$; * $p \leq .10$ for one-tailed tests (within-condition differences).

Table 3b
Republican Evaluations of Drilling Frames

Frames (Condition)	Cues	Pro Frame	Con Frame	Difference	N
Pro-Stg - Con-Stg (2)	No Parties	5.43 (1.16)	4.86 (1.68)	0.57 (2.25)	21
Pro-Stg - Con-Wk (3)	No Parties	5.29 (1.53)	3.12 (1.83)	2.18*** (2.58)	17
Pro-Wk - Con-Stg (4)	No Parties	3.75 (1.62)	4.75 (1.59)	-1.00** (2.78)	24
Pro-Wk - Con-Wk (5)	No Parties	3.75 (1.74)	3.40 (1.39)	0.35 (2.35)	20
Pro-Stg - Con-Stg (6)	Non- Polarized	5.36 (1.32)	3.64 (1.66)	1.72*** (2.46)	25
Pro-Stg - Con-Wk (7)	Non- Polarized	5.23 (1.45)	3.00 (1.15)	2.23*** (1.88)	22
Pro-Wk - Con-Stg (8)	Non- Polarized	3.70 (2.20)	4.60 (1.76)	-0.90* (2.99)	20
Pro-Wk - Con-Wk (9)	Non- Polarized	5.27 (1.28)	3.38 (1.36)	1.88*** (2.21)	26
Pro-Stg - Con-Stg (10)	Polarized	5.61 (1.38)	3.19 (1.85)	2.42*** (3.03)	31
Pro-Stg - Con-Wk (11)	Polarized	5.67 (1.35)	3.07 (1.44)	2.60*** (2.18)	30
Pro-Wk - Con-Stg (12)	Polarized	5.35 (1.66)	2.75 (1.52)	2.60*** (2.66)	20
Pro-Wk - Con-Wk (13)	Polarized	5.10 (1.55)	3.19 (1.63)	1.90*** (2.45)	21

*** $p \leq .01$; ** $p \leq .05$; * $p \leq .10$ for one-tailed tests (within-condition differences).

Table 4a
Democratic Evaluations of DREAM Act Frames

Frames (Condition)	Cues	Pro Frame	Con Frame	Difference	N
Pro-Stg - Con-Stg (2)	No Parties	4.59 (1.62)	4.21 (1.68)	0.38 (2.87)	29
Pro-Stg - Con-Wk (3)	No Parties	5.03 (1.72)	3.35 (1.66)	1.68*** (2.82)	31
Pro-Wk - Con-Stg (4)	No Parties	3.58 (1.73)	4.85 (1.30)	-1.27*** (2.49)	33
Pro-Wk - Con-Wk (5)	No Parties	3.76 (1.56)	3.84 (1.57)	-0.08 (2.52)	25
Pro-Stg - Con-Stg (6)	Non- Polarized	4.74 (1.53)	4.19 (1.51)	0.55 (2.59)	31
Pro-Stg - Con-Wk (7)	Non- Polarized	5.26 (1.05)	2.78 (1.24)	2.48*** (2.11)	23
Pro-Wk - Con-Stg (8)	Non- Polarized	3.67 (1.43)	4.50 (1.32)	-0.83** (1.95)	24
Pro-Wk - Con-Wk (9)	Non- Polarized	4.20 (1.47)	3.60 (1.63)	0.60* (2.39)	30
Pro-Stg - Con-Stg (10)	Polarized	4.75 (1.73)	3.71 (1.73)	1.04** (3.06)	24
Pro-Stg - Con-Wk (11)	Polarized	4.96 (1.61)	3.08 (1.57)	1.88*** (2.97)	26
Pro-Wk - Con-Stg (12)	Polarized	4.67 (1.27)	3.29 (1.71)	1.38*** (2.48)	24
Pro-Wk - Con-Wk (13)	Polarized	4.86 (1.52)	3.09 (1.48)	1.77*** (2.05)	22

*** $p \leq .01$; ** $p \leq .05$; * $p \leq .10$ for one-tailed tests (within-condition differences).

Table 4b
Republicans Evaluations of DREAM Act Frames

Frames (Condition)	Cues	Pro-Statement	Con-Statement	Difference	N
Pro-Stg - Con-Stg (2)	No Parties	4.53 (1.42)	4.94 (1.78)	-0.41 (2.24)	17
Pro-Stg - Con-Wk (3)	No Parties	4.25 (1.80)	3.75 (1.39)	0.50 (2.30)	24
Pro-Wk - Con-Stg (4)	No Parties	3.69 (2.21)	5.31 (1.89)	-1.63* (3.69)	16
Pro-Wk - Con-Wk (5)	No Parties	3.52 (1.98)	3.68 (1.46)	-0.16 (2.43)	25
Pro-Stg - Con-Stg (6)	Non- Polarized	4.15 (1.57)	5.15 (1.46)	-1.00* (2.73)	20
Pro-Stg - Con-Wk (7)	Non- Polarized	4.33 (1.71)	3.67 (1.49)	0.67 (2.96)	21
Pro-Wk - Con-Stg (8)	Non- Polarized	3.28 (1.30)	4.94 (1.70)	-1.66*** (2.15)	32
Pro-Wk - Con-Wk (9)	Non- Polarized	3.00 (1.30)	3.95 (1.43)	-0.95** (2.11)	20
Pro-Stg - Con-Stg (10)	Polarized	3.36 (1.68)	5.18 (1.42)	-1.82*** (2.67)	28
Pro-Stg - Con-Wk (11)	Polarized	3.00 (1.79)	4.96 (1.66)	-1.96*** (3.18)	26
Pro-Wk - Con-Stg (12)	Polarized	2.85 (1.76)	4.92 (1.38)	-2.08*** (2.76)	26
Pro-Wk - Con-Wk (13)	Polarized	2.77 (1.69)	5.00 (1.63)	-2.23*** (2.72)	22

*** $p \leq .01$; ** $p \leq .05$; * $p \leq .10$ for one-tailed tests (within-condition differences).

Table 5a
Shift in Attitude Importance of Drilling Opinions
(Relative to Control Group)

Frames (Condition)	Cues	Democrats	Republicans
Pro-Stg - Con-Stg (2)	No Parties	-2.3 %	-4.5 %
Pro-Stg - Con-Wk (3)	No Parties	3.2 %	7.7 %
Pro-Wk - Con-Stg (4)	No Parties	-1.0 %	0.7 %
Pro-Wk - Con-Wk (5)	No Parties	-2.4 %	-6.3 %
Pro-Stg - Con-Stg (6)	Non- Polarized	-0.5 %	14.6 %***
Pro-Stg - Con-Wk (7)	Non- Polarized	3.9 %	-4.4 %
Pro-Wk - Con-Stg (8)	Non- Polarized	5.3 %	7.1 %
Pro-Wk - Con-Wk (9)	Non- Polarized	2.1 %	8.8 %**
Pro-Stg - Con-Stg (10)	Polarized	11.6 %***	15.1 %***
Pro-Stg - Con-Wk (11)	Polarized	12.9 %***	16.3 %***
Pro-Wk - Con-Stg (12)	Polarized	10.8 %**	13.8 %***
Pro-Wk - Con-Wk (13)	Polarized	12.4 %**	13.8 %***

*** $p \leq .01$; ** $p \leq .05$; * $p \leq .10$ for one-tailed tests (relative to the control group).

Table 5b
Shift in Attitude Importance of DREAM Act Opinions
(Relative to Control Group)

Frames (Condition)	Cues	Democrats	Republicans
Pro-Stg - Con-Stg (2)	No Parties	2.0 %	1.6 %
Pro-Stg - Con-Wk (3)	No Parties	0.9 %	-4.2 %
Pro-Wk - Con-Stg (4)	No Parties	-4.1 %	7.6 %
Pro-Wk - Con-Wk (5)	No Parties	6.8 %	7.6 %
Pro-Stg - Con-Stg (6)	Non- Polarized	7.4 %	5.6 %
Pro-Stg - Con-Wk (7)	Non- Polarized	4.3 %	3.2 %
Pro-Wk - Con-Stg (8)	Non- Polarized	-9.0 %*	7.1 %
Pro-Wk - Con-Wk (9)	Non- Polarized	8.1 %	1.4 %
Pro-Stg - Con-Stg (10)	Polarized	16.0 %**	18.1 %***
Pro-Stg - Con-Wk (11)	Polarized	12.3 %**	17.1 %***
Pro-Wk - Con-Stg (12)	Polarized	12.6 %**	17.1 %***
Pro-Wk - Con-Wk (13)	Polarized	9.8 %*	12.4 %*

*** $p \leq 0.01$; ** $p \leq 0.05$; * $p \leq 0.10$ for one-tailed tests (relative to the control group).

Figure 1a: Drilling Support, No Party Cues

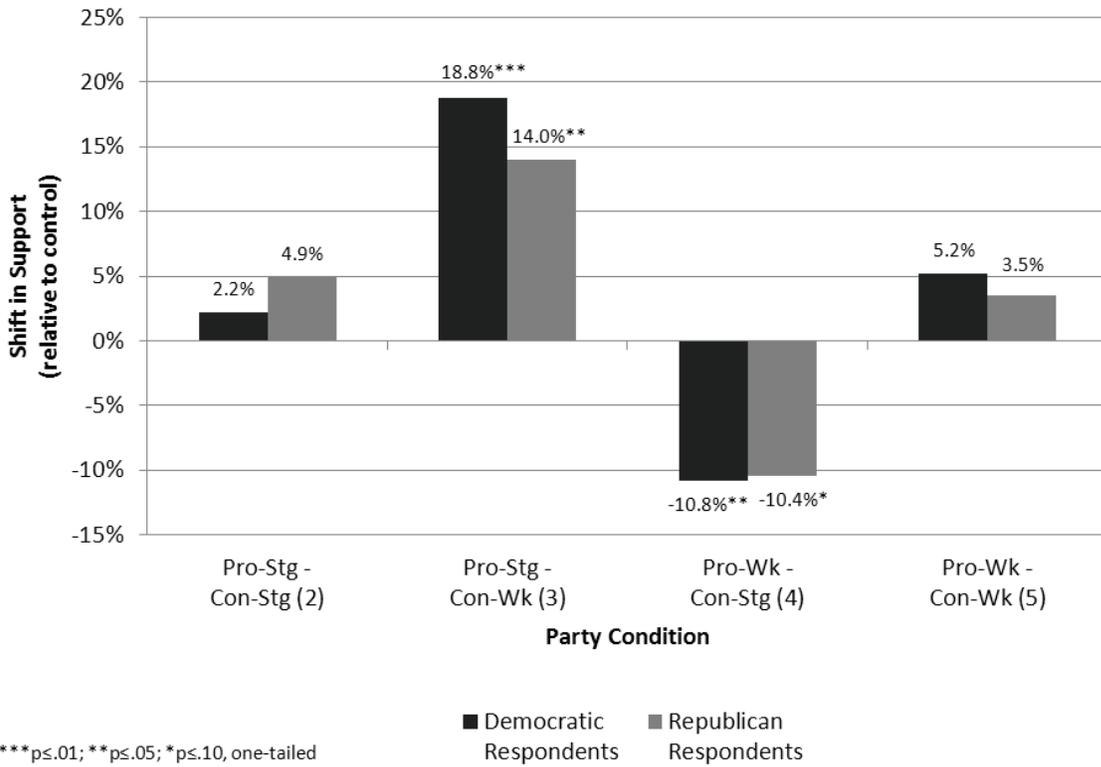
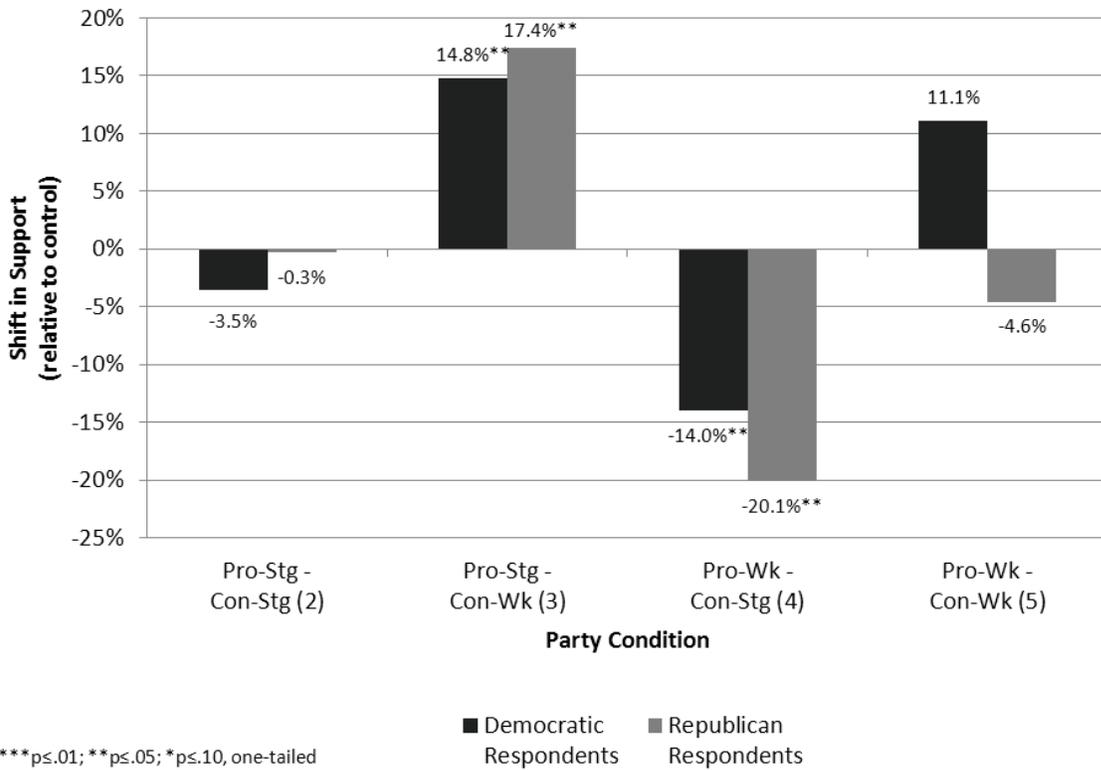
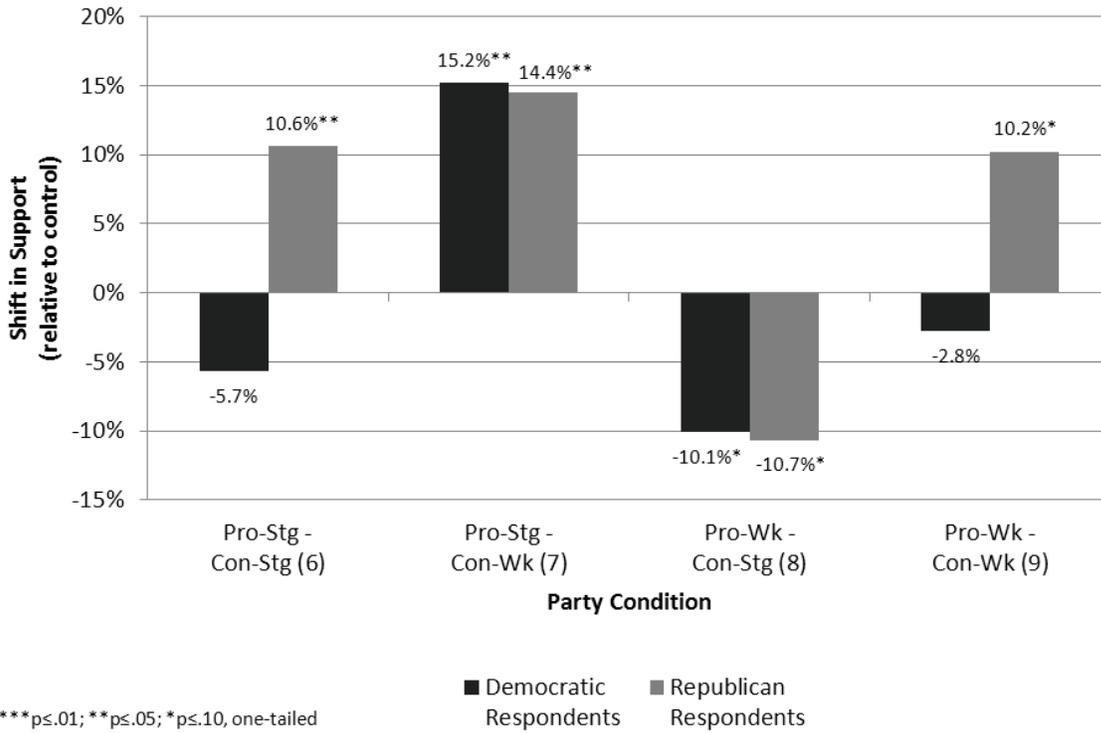


Figure 1b: DREAM Act Support, No Party Cues



**Figure 2a: Drilling Support, Non-Polarized Party Cues
(Republicans Pro, Democrats Con)**



**Figure 2b: DREAM Act Support, Non-Polarized Party Cues
(Democrats Pro, Republicans Con)**

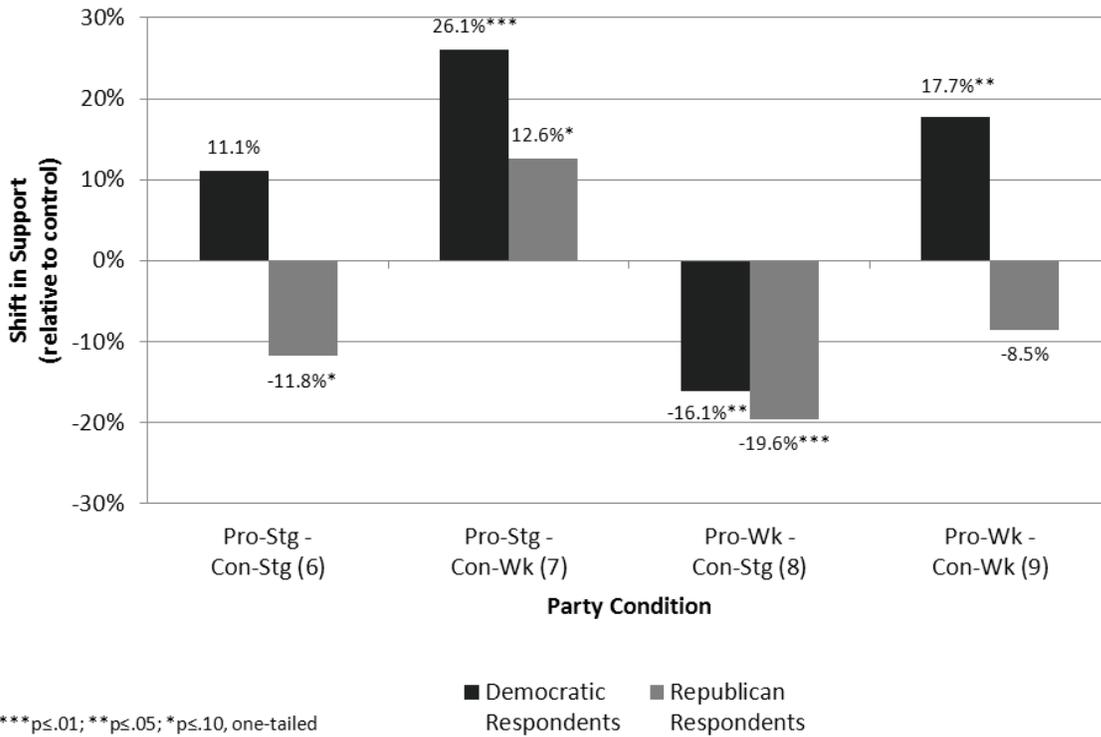


Figure 3a: Drilling Support, Polarized Party Cues
(Republicans Pro, Democrats Con)

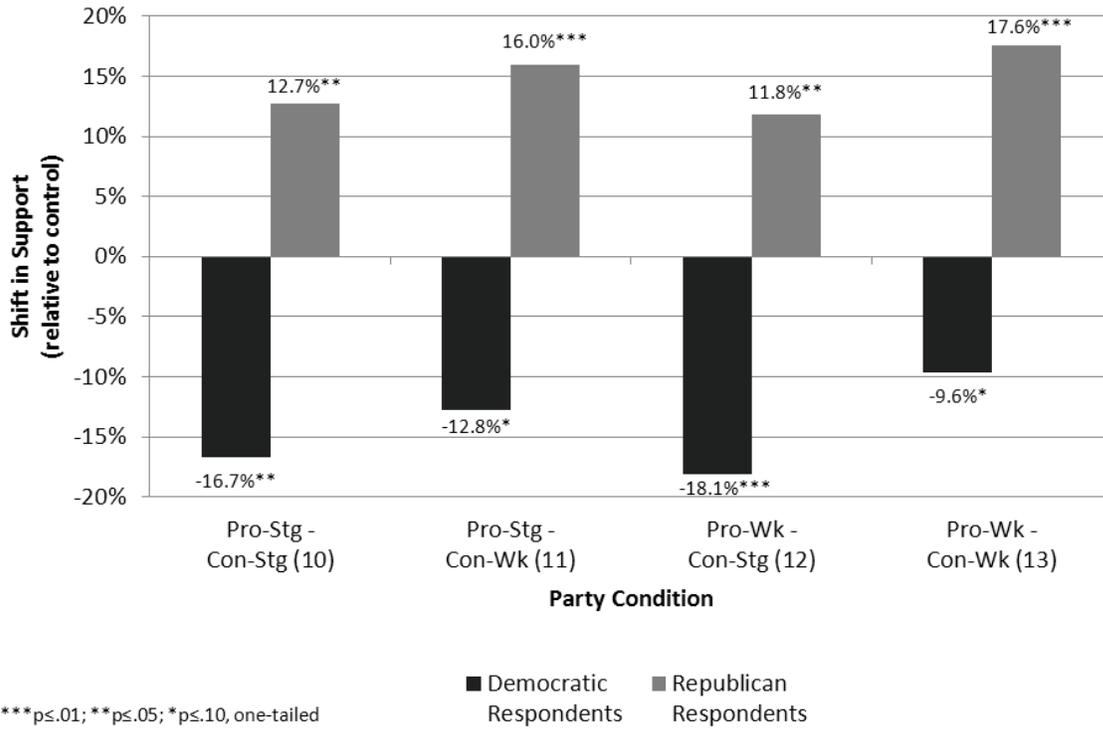
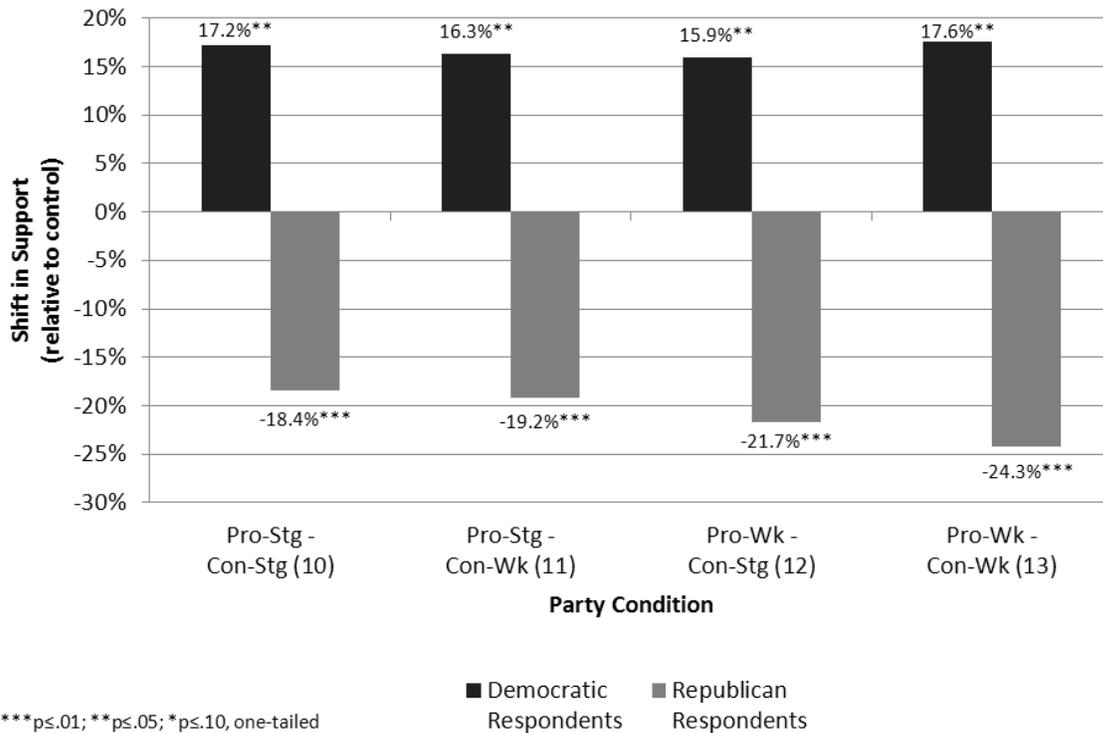


Figure 3b: DREAM Act Support, Polarized Party Cues
(Democrats Pro, Republicans Con)



ONLINE APPENDICES

Appendix A Experimental Stimulus Material

A.1 Experimental Stimulus on Drilling Issue

[All:] There has been a lot of recent discussion about whether to allow drilling for oil and gas off the Atlantic Coast and in the eastern Gulf of Mexico.

[Non-polarized Party Cues:] Republicans in Congress tend to favor drilling and Democrats in Congress tend to oppose drilling. However, the partisan divide is not stark as the parties are not too far apart. Also, while Republicans tend to be in favor and Democrats opposed, members of each party can be found on both sides of the issue.

[Polarized Party Cues:] Republicans in Congress tend to favor drilling and Democrats in Congress tend to oppose drilling. Moreover, the partisan divide is stark as the parties are far apart. Also, not only do Republicans tend to be in favor and Democrats opposed, but most members of each party are on the same side as the rest of their party.

[Strong Pro Frame:] The main argument for those in favor of drilling is that drilling increases our oil supply, which leads to lower gas prices. It also generates employment opportunities and development.

[Weak Pro Frame:] The main argument for those in favor of drilling is that drilling encourages the development of new technologies, such as sound mitigation techniques. These technologies sometimes have general applications.

[Strong Con Frame:] The main argument for those opposed to drilling is that workers are required to learn new skills in order to protect themselves against the dangers of drilling. Marine life also must adapt to survive in the face of site construction and drilling.

[Weak Con Frame:] The main argument for those opposed to drilling is that government regulators oversee the drilling. These regulatory agencies recently have expressed being overwhelmed by oversight tasks.

A.B Experimental Stimulus on DREAM Act Issue

[All:] Since 2001, lawmakers have debated a new immigration law called the Development, Relief, and Education for Alien Minors Act (also called the DREAM Act). The law would allow undocumented immigrants to gain citizenship if they:

- entered the U.S. before the age of 16,
- maintained good moral character (e.g., no criminal record),
- earned a High School Diploma, and
- completed two years of college OR two years of military service.

[Non-polarized Party Cues:] Democrats in Congress tend to favor the DREAM Act and Republicans in Congress tend to oppose the DREAM Act. However, the partisan divide is not stark as the parties are not too far apart. Also, while Democrats tend to be in favor and Republicans opposed, members of each party can be found on both sides of the issue.

[Polarized Party Cues:] Democrats in Congress tend to favor the DREAM Act and Republicans in Congress tend to oppose the DREAM Act. Moreover, the partisan divide is stark as the parties are far apart. Also, not only do Democrats tend to be in favor and Republicans opposed, but most members of each party are on the same side as the rest of their party.

[Strong Pro Frame:] The main argument for those in favor of the DREAM Act is that it would provide young people with opportunities. They could go on to contribute as doctors, nurses, teachers, soldiers, and police officers.

[Weak Pro Frame:] The main argument for those in favor of the DREAM Act is that it has been a topic in several public opinion polls. These polls suggest support from many segments of the American population.

[Strong Con Frame:] The main argument for those opposed to the DREAM Act is that it encourages illegal immigration due to the expectation of benefits for children of immigrants. This could over-burden the system, leaving many vulnerable individuals.

[Weak Con Frame:] The main argument for those opposed to the DREAM Act is that it is not well-designed – it could be better. It was driven too much by political concerns in an effort to bring up a controversial issue.

Appendix B
Condition Means

Table B.1
Drilling Support by Experimental Condition

Experimental Condition	All	Democrats	Republicans
(1) Control group	4.34 (1.55, 47)	3.61 (1.37, 23)	5.04 (1.40, 24)
(2) Pro-Strong - Con-Strong No Parties	4.44 (std. dev. = 1.56, N = 48)	3.74 (1.58, 27)	5.33 (0.97, 21)
(3) Pro-Strong - Con-Weak No Parties	5.09 (1.65, 55)	4.74 (1.80, 38)	5.88 (0.86, 17)
(4) Pro-Weak - Con-Strong No Parties	3.65 (1.53, 51)	2.96 (1.40, 27)	4.42 (1.32, 24)
(5) Pro-Weak - Con-Weak No Parties	4.50 (1.75, 46)	3.92 (1.79, 26)	5.25 (1.41, 20)
(6) Pro-Strong - Con-Strong Non-Polarized Parties	4.45 (1.86, 51)	3.27 (1.66, 26)	5.68 (1.11, 25)
(7) Pro-Strong - Con-Weak Non-Polarized Parties	5.14 (1.79, 49)	4.52 (1.95, 27)	5.91 (1.23, 22)
(8) Pro-Weak - Con-Strong Non-Polarized Parties	3.56 (1.75, 50)	3.00 (1.58, 30)	4.40 (1.70, 20)
(9) Pro-Weak - Con-Weak Non-Polarized Parties	4.57 (1.72, 51)	3.44 (1.36, 25)	5.65 (1.29, 26)
(10) Pro-Strong - Con-Strong Polarized Parties	4.44 (2.18, 54)	2.61 (1.73, 23)	5.81 (1.30, 31)
(11) Pro-Strong - Con-Weak Polarized Parties	4.78 (2.14, 49)	2.84 (1.74, 19)	6.00 (1.31, 30)
(12) Pro-Weak - Con-Strong Polarized Parties	3.96 (2.14, 45)	2.52 (1.36, 25)	5.75 (1.48, 20)
(13) Pro-Weak - Con-Weak Polarized Parties	4.32 (1.91, 50)	3.03 (1.27, 29)	6.10 (1.00, 21)
Overall	4.41 (1.86, 646)	3.46 (1.72, 345)	5.50 (1.37, 301)

Note: Entries are mean policy support on a 1-7 scale, with standard deviations and number of cases in parentheses. Democratic party position is con, Republican party position is pro.

Table B.2
DREAM Act Support by Experimental Condition

Experimental Condition	All	Democrats	Republicans
(1) Control group	3.55 (std.dev. = 2.11, N = 47)	4.17 (2.12, 23)	2.96 (1.97, 24)
(2) Pro-Strong - Con-Strong No Parties	3.59 (2.27, 46)	3.97 (2.37, 29)	2.94 (1.98, 17)
(3) Pro-Strong - Con-Weak No Parties	4.60 (1.91, 55)	5.06 (1.88, 31)	4.00 (1.82, 24)
(4) Pro-Weak - Con-Strong No Parties	2.82 (1.76, 49)	3.33 (1.71, 33)	1.75 (1.39, 16)
(5) Pro-Weak - Con-Weak No Parties	3.76 (2.24, 50)	4.84 (1.91, 25)	2.68 (2.04, 25)
(6) Pro-Strong - Con-Strong Non-Polarized Parties	3.82 (2.20, 51)	4.84 (1.95, 31)	2.25 (1.55, 20)
(7) Pro-Strong - Con-Weak Non-Polarized Parties	4.77 (1.87, 44)	5.74 (1.21, 23)	3.71 (1.90, 21)
(8) Pro-Weak - Con-Strong Non-Polarized Parties	2.39 (1.53, 56)	3.21 (1.82, 24)	1.78 (0.91, 32)
(9) Pro-Weak - Con-Weak Non-Polarized Parties	4.12 (2.31, 50)	5.23 (1.83, 30)	2.45 (1.93, 20)
(10) Pro-Strong - Con-Strong Polarized Parties	3.40 (2.29, 52)	5.21 (2.06, 24)	1.86 (0.97, 28)
(11) Pro-Strong - Con-Weak Polarized Parties	3.48 (2.27, 52)	5.15 (1.87, 26)	1.81 (1.10, 26)
(12) Pro-Weak - Con-Strong Polarized Parties	3.32 (2.25, 50)	5.13 (1.80, 24)	1.65 (0.98, 26)
(13) Pro-Weak - Con-Weak Polarized Parties	3.36 (2.23, 44)	5.23 (1.51, 22)	1.50 (0.80, 22)
Overall	3.60 (2.18, 646)	4.67 (1.99, 345)	2.38 (1.68, 301)

Note: Entries are mean policy support on a 1-7 scale, with standard deviations and number of cases in parentheses. Democratic party position is pro, Republican party position is con.

Table B.3
Shift in Attitude Importance of Drilling Opinions by Experimental Condition

Experimental Condition	All	Democrats	Republicans
(1) Control group	5.02 (std. dev. = 1.05, N = 47)	4.91 (1.04, 23)	5.13 (1.08, 24)
(2) Pro-Strong - Con-Strong No Parties	4.80 (1.53, 48)	4.78 (1.63, 27)	4.86 (1.42, 21)
(3) Pro-Strong - Con-Weak No Parties	5.25 (1.31, 55)	5.11 (1.33, 38)	5.59 (1.23, 17)
(4) Pro-Weak - Con-Strong No Parties	5.00 (1.28, 51)	4.85 (1.41, 27)	5.17 (1.13, 24)
(5) Pro-Weak - Con-Weak No Parties	4.76 (1.25, 46)	4.77 (1.24, 26)	4.75 (1.29, 20)
(6) Pro-Strong - Con-Strong Non-Polarized Parties	5.43 (1.25, 51)	4.88 (1.40, 26)	6.00 (0.76, 25)
(7) Pro-Strong - Con-Weak Non-Polarized Parties	5.02 (1.44, 49)	5.15 (1.29, 27)	4.86 (1.61, 22)
(8) Pro-Weak - Con-Strong Non-Polarized Parties	5.36 (1.60, 50)	5.23 (1.65, 30)	5.55 (1.54, 20)
(9) Pro-Weak - Con-Weak Non-Polarized Parties	5.35 (1.04, 51)	5.04 (0.98, 25)	5.65 (1.02, 26)
(10) Pro-Strong - Con-Strong Polarized Parties	5.85 (1.11, 54)	5.61 (1.27, 23)	6.03 (0.95, 31)
(11) Pro-Strong - Con-Weak Polarized Parties	5.94 (1.03, 49)	5.68 (1.00, 19)	6.10 (1.03, 30)
(12) Pro-Weak - Con-Strong Polarized Parties	5.73 (1.05, 45)	5.56 (1.12, 25)	5.95 (0.94, 20)
(13) Pro-Weak - Con-Weak Polarized Parties	5.78 (.02, 50)	5.66 (1.14, 29)	5.95 (0.80, 21)
Overall	5.34 (1.29, 646)	5.16 (1.32, 345)	5.54 (1.22, 301)

Table B.4
Shift in Attitude Importance of DREAM Act Opinions by Experimental Condition

Experimental Condition	All	Democrats	Republicans
(1) Control group	4.79 (1.83, 47)	4.91 (2.00, 23)	4.67 (1.69, 24)
(2) Pro-Strong - Con-Strong No Parties	4.93 (1.83, 46)	5.03 (1.72, 29)	4.76 (2.05, 17)
(3) Pro-Strong - Con-Weak No Parties	4.73 (1.68, 55)	4.97 (1.40, 31)	4.42 (1.98, 24)
(4) Pro-Weak - Con-Strong No Parties	4.82 (1.35, 49)	4.67 (1.47, 33)	5.13 (1.02, 16)
(5) Pro-Weak - Con-Weak No Parties	5.22 (1.15, 50)	5.32 (0.90, 25)	5.12 (1.36, 25)
(6) Pro-Strong - Con-Strong Non-Polarized Parties	5.22 (1.33, 51)	5.35 (1.31, 31)	5.00 (1.38, 20)
(7) Pro-Strong - Con-Weak Non-Polarized Parties	5.02 (1.32, 44)	5.17 (1.23, 23)	4.86 (1.42, 21)
(8) Pro-Weak - Con-Strong Non-Polarized Parties	4.79 (1.57, 56)	4.38 (1.69, 24)	5.09 (1.42, 32)
(9) Pro-Weak - Con-Weak Non-Polarized Parties	5.14 (1.20, 50)	5.40 (1.10, 30)	4.75 (1.25, 20)
(10) Pro-Strong - Con-Strong Polarized Parties	5.81 (1.07, 52)	5.88 (1.23, 24)	5.75 (0.93, 28)
(11) Pro-Strong - Con-Weak Polarized Parties	5.67 (1.31, 52)	5.65 (1.35, 26)	5.69 (1.29, 26)
(12) Pro-Weak - Con-Strong Polarized Parties	5.68 (1.25, 50)	5.67 (1.27, 24)	5.69 (1.26, 26)
(13) Pro-Weak - Con-Weak Polarized Parties	5.45 (1.32, 44)	5.50 (1.30, 22)	5.41 (1.37, 22)
Overall	5.17 (1.45, 646)	5.21 (1.44, 345)	5.13 (1.47, 301)