How Predictive Appeals Affect Policy Opinions

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When political actors debate the merits of a public policy, they often focus on the consequences of a bill or legislative proposal, with supporters and opponents making stark but contradictory predictions about the future. Building upon the framing literature, I examine how rhetoric about a policy's consequences influences public opinion. I show that predictive appeals work largely by altering people's beliefs about the impact of a policy. Following in the tradition of recent framing research, this article also examines how opinions are influenced when people are exposed to opposing predictions. The analysis focuses on two strategies that are common in real-world debates—the direct rebuttal *(in which an initial appeal is challenged by a statement making the opposite prediction) and the* alternate frame *(which counters an initial appeal by shifting the focus to some other consequence). There are important differences in the effectiveness of these two strategies—a finding that has implications for the study of competitive framing and the policymaking process more generally.*

"Allowing individuals to invest a portion of their Social Security in private holdings is likely to result in more money for their retirement." —U.S. Representative Jay Dickey (R), 4th District, Arkansas, *Arkansas Democrat-Gazette*, September 19, 1998

"...[S]ome investors may lose money in a downturn in the market or in a bad investment." —Judy Smith, Candidate for 4th District (D), Arkansas, *Arkansas Democrat-Gazette*, September 19, 1998

"No matter how you cut it, the Bush Social Security privatization plan loses money for people unless your private account has an amazingly high rate of return." —Senator Charles Schumer (D-NY), quoted in the *Milwaukee Journal Sentinel*, February 21, 2005

"Young workers who elect [to have] personal accounts can expect to receive a far higher rate of return on their money than the current system could ever afford to pay them." —Vice President Dick Cheney, quoted in the *Washington Post*, February 27, 2005

As the preceding quotations illustrate, the debate over Social Security privatization has featured two competing visions of the future, one projecting that millions of people will lose money in the stock market, the other predicting they will get a better return (Krugman 2005; Porter 2005; also see Rudolph and Popp 2007). This kind of "he said-she said" rhetoric is not unusual. When political actors deliberate about the merits of a public policy, they often focus on its consequences, with supporters and opponents making contradictory predictions about the future. During the 1993–94 debate over health care reform, for example, opponents of the Clinton bill predicted that the employer mandate would "cripple" the economy and result in "massive job loss." In response, the Clinton White House countered that the president's plan would alter America's unemployment rate by "no more than half a percentage point" and that employment actually would increase over time (Benac 1993; Jerit 2008). Indeed, Lau, Smith, and Fiske write that "the most frequently attempted [rhetorical]

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manipulation—and the one to which [policy] advocates devote most of their creative energy and time—is the formulation and presentation of 'interpretations' of various policy proposals," where an interpretation "consists of a set of arguments about the *consequences* of a policy proposal" (1991, 645, emphasis added).

Although such dueling predictions are a common feature of many policy debates, we know almost nothing about how citizens react to this kind of rhetoric. What little we do know comes from behavioral decision theory, where the experimental treatments do not resemble the give-and-take of real-world policy debates. For instance, the work of Kahneman and Tversky (1979; Tversky and Kahneman 1981) has shown that different, but logically equivalent, depictions of a policy—saying "90% employment" rather than "10% unemployment"—can have a dramatic effect on people's preferences.[1] Yet, it is rare for rival political arguments to be logically equivalent to one another as they are in these experiments (Sniderman and Theriault 2004). In fact, decades of framing studies are based on nearly the opposite premise—namely, that elites influence opinion by highlighting *different* (i.e., nonequivalent) policy goals or values (e.g., Nelson, Oxley, and Clawson 1997). The framing literature, for its part, has made great advances in explicating the mechanisms by which political communication affects opinions (e.g., Brewer 2001; Chong and Druckman 2007a; Nelson and Oxley 1999), but the phenomenon of predictive appeals has been largely overlooked.

Using the case of Social Security privatization, this article examines a common yet understudied type of "frame"—specifically, an argument that highlights the consequences (or impact) of a policy. I do more than simply document another type of frame, however. Recent research has shown that it is essential to study how people react when they are exposed to *combinations* of frames. This entails placing subjects in competitive, rather than one-sided, contexts—the idea being that in actual public policy debates, people generally are exposed to arguments from both sides (Brewer and Gross 2005; Chong and Druckman 2007b; Sniderman and Theriault 2004). I extend this work by analyzing competitive conditions involving predictive appeals. More specifically, I examine two rhetorical strategies often seen in real-world policy debates: the *direct rebuttal*, which counters an initial predictive appeal with a statement making the opposite prediction, and the *alternate frame*, which answers a predictive appeal by highlighting some other consequence of the proposal at hand. Thus, in addition to casting light on a style of rhetoric that is ubiquitous but not well understood, this study also advances our understanding of competitive framing.

[1]Druckman (2004) calls these formulations "equivalency frames."

Political Rhetoric, Beliefs, and Opinion

According to Druckman and Nelson, 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" (2003, 730; also see Nelson, Clawson, and Oxley 1997). Putting this in terms of an expectancy-value framework (e.g., Ajzen and Fishbein 1980), an attitude is a weighted sum of a series of evaluative beliefs about an object:

$$\text{Attitude} = \sum_{i=1}^{n} v_i * w_i$$

where v_i represents an evaluation of the object on attribute i and w_i corresponds to the weight of that attribute.[2] It is now widely accepted that one of the ways frames influence attitudes is by increasing the *weight* of a particular attribute—in effect, making it a more important "ingredient" in the person's overall attitude (e.g., Chong 1996).

But as Nelson, Oxley, and Clawson observe, "the weight parameter . . . may be conceptualized in different ways" (1997, 226). In particular, they acknowledge that the weight parameter may instead "correspond to the *subjective probability of a particular outcome*," such as the perceived likelihood of higher unemployment following an increase in the minimum wage (Nelson, Oxley, and Clawson 1997, 226, emphasis added). Here, "weight" reflects the likelihood that a person attaches to a specific outcome occurring (e.g., events that seem more likely have a higher weight; Ajzen and Fishbein 1980). Accordingly, another way frames may affect policy opinions is by shaping people's beliefs about the probability of various outcomes (see Levin, Schneider, and Gaeth 1998 for a related discussion). It is possible, of course, that some frames influence opinions by altering the importance people attribute to a particular value or goal, while others do so by affecting individuals' beliefs about the impact of a policy (see Nelson and Oxley 1999, 1041 for discussion).

Yet, arguments about the consequences of a policy have some strategic advantages compared to other types of frames. Few political actors—not even experts—know

[2]Chong and Druckman (2007a, 107, note 6) note that i may be thought of as a dimension, consideration, value, or belief.

what the precise effects of a policy will be. Moreover, the length of time that it takes to experience the impact of most policies can be years or even decades. All of this makes for weak feedback mechanisms (Lupia and Menning 2009), and gives political actors both the opportunity and the incentive to influence people's beliefs about the outcome of policy change. Thus, elites who seek to reduce support for a legislative proposal may make drastic predictions about the negative consequences of the bill. Supporters of a proposal might forecast grand benefits as a way of generating support, or they may make dire claims about what will happen in the *absence* of change. William Riker came to a similar conclusion nearly two decades ago when he made this observation about rhetoric in policy debates: "campaigners on each side emphasize the dreadful consequences of the failure (or success) of the motion they advocate (or oppose)" (1990, 58).[3] The next section outlines five hypotheses regarding the influence of predictive appeals.

Hypotheses

I expect, first, that people's opinions will shift in response to predictive appeals about the consequences of a specific policy proposal. Thus, when elites make predictions about the negative (or positive) consequences of a policy, public support for that policy will decrease (increase) (H1). In the context of this study, being exposed to an argument about losing (gaining) money with private accounts should decrease (increase) support for Social Security privatization. Although some scholars argue such one-sided framing scenarios are unrealistic (Sniderman and Theriault 2004), it is important to establish that respondents' opinions are in fact altered by predictive appeals (see, e.g., Druckman and Nelson 2003). Following past studies of framing (e.g., Nelson and Oxley 1999; Nelson, Clawson, and Oxley 1997), I expect that predictive appeals will affect people's policy opinions by influencing their beliefs about the likelihood of various outcomes (H2). Thus, when people are exposed to arguments that stress the specific consequences of a policy change, they will base their opinions on what they think of the probable outcomes. Once again, I will examine this hypothesis in conditions that include a single (i.e., one-sided) frame. My primary goal is to demonstrate that the mechanism underlying the effect of future-oriented frames is analogous to the process identified in previous studies. I will show that rhetoric about a policy's consequences affects people's beliefs and that these beliefs in turn influence policy opinions.

At this point, however, the distinction between future *gains* and future *losses* becomes important. McDermott observes that "Most people place different weights on the same degree of positive or negative outcome, such that negative ones carry much more psychological weight" (2004, 139; also see Lau 1985). In fact, one of the central tenets of prospect theory is that people are more sensitive to prospective losses (Tversky and Kahneman 1981; also see Levy 1992)—or that "losses hurt more than equal gains please" (Druckman and McDermott 2008, 317). Therefore, people should give greater weight to negative information relative to equally extreme positive information (e.g., Cobb and Kuklinski 1997; Pratto and John 1991; Soroka 2006). In the context of the privatization debate, I expect that people will view the prospect of future losses (i.e., losing money with private accounts) as more likely than future gains (i.e., gaining money) (H3). This asymmetry has important implications for rhetorical strategy. It represents an opportunity for political actors who seek to take advantage of the public's loss aversion. It also means, however, that it can be difficult to generate support for a policy once people believe there will be negative consequences.

Past research on framing has shown that it is important to examine competitive conditions—that is, those involving arguments from both sides of an issue. One of the most striking findings to emerge in recent years is that the framing effects observed in one-sided contexts often vanish when subjects are exposed to a contrary frame (Sniderman and Theriault 2004). This occurs, Chong and Druckman (2007b) argue, because the competitive context causes people on opposite sides of an issue to moderate their opinions.[4]

I extend this work by analyzing competitive conditions involving predictive appeals. Thus, in addition to showing how future-oriented frames affect opinions (e.g., Hypotheses 1 and 2), I also will examine what happens when people are exposed to *opposing* predictions. In one of the competitive conditions examined here, an initial claim is rebutted by a statement predicting that the exact opposite will occur (i.e., a direct rebuttal). In the other, an initial claim is opposed by a frame that makes an entirely different prediction (one pertaining to the proposal,

[3]This does not mean that elites can make wild predictions any time they choose. Clearly, some claims are so unrealistic as to be unbelievable. The journalistic community, often skeptical of the motives of political leaders (Bennett 2005; Jacobs and Shapiro 2000), also acts as a restraint.

[4]More precisely, intermediate opinions are the result of a process in which "individuals respond to the comparative strengths of the competing frames" (Chong and Druckman 2007b, 650). This conclusion applies to contexts with two "strong" frames (i.e., both frames stress available or applicable considerations).

but not a direct rebuttal). Both conditions represent important scenarios that occur in actual policy debates. The direct rebuttal conditions are designed to mimic the dueling predictions that appear in the opening of this article. The alternate frame conditions represent the well-known tactic of shifting the focus of a debate (e.g., Jones 1994; Riker 1996). The central question is whether one of these tactics is more effective at responding to an initial predictive appeal. After all, political elites seek to do more than offset the opponent's arguments and create moderate opinions—they want to "win" policy debates by swaying public opinion to their side.

That being the case, what is the best way to counter a predictive appeal? The direct rebuttal makes a contrary prediction, and in so doing, directly attempts to alter a person's beliefs about the likelihood of a particular outcome. By contrast, the alternate frame seeks to shift the focus of debate. This tactic does little to challenge a person's beliefs regarding the initial claim and thus leaves them largely intact. It follows, then, that when people believe a particular outcome is likely to occur, a direct rebuttal will have less influence on public opinion than an alternate frame (H4). Conversely, when individuals do not have firm beliefs about the likelihood of an event occurring, either strategy should influence opinion (H5).

Experimental Design and Procedures

I test these hypotheses with an experiment that was embedded in a national survey conducted over the Internet.[5] Survey-based experiments have several advantages. Chief among them is the ability to simultaneously control exposure to the treatment *and* make causal statements that generalize to the U.S. population. But like any mode of inquiry, there are potential disadvantages. One concern is the potential for "pretreatment" from real-world rhetoric about Social Security reform (Gaines, Kuklinski, and Quirk 2007). In this case, content analyses show that there was relatively little media coverage of private accounts in the fall and winter of 2006, while the KN survey was being fielded. However, one year earlier, the issue received fairly extensive news coverage after President Bush highlighted private accounts in his 2005 State of the Union address (see Chong and Druckman 2009 for a content analysis of this debate). It is possible, then, that respondents were familiar with some of the arguments for and against private accounts. If anything, this should make it more difficult to observe treatment effects.

Study Design

In this experiment, respondents were randomly assigned to one of seven conditions (six experimental conditions plus a control group). Everyone received a common introduction, which stated: "A proposal has been made that would allow people to invest some of their Social Security taxes in the stock market." Individuals in the treatment conditions then read either one or two arguments pertaining to the issue before answering a question about their support for private accounts. People in the control group answered the opinion question immediately after reading the introduction.[6] In addition to soliciting people's opinions about private investment accounts, I measured their beliefs about the impact of this policy change. Following Ajzen and Fishbein (1980; Fishbein and Ajzen 1975), respondents were asked, "If people are allowed to invest some of their Social Security taxes in the stock market, how likely is it that you will end up with [less/more] money for retirement—extremely likely, very likely, somewhat likely, not too likely, or not at all likely?"[7]

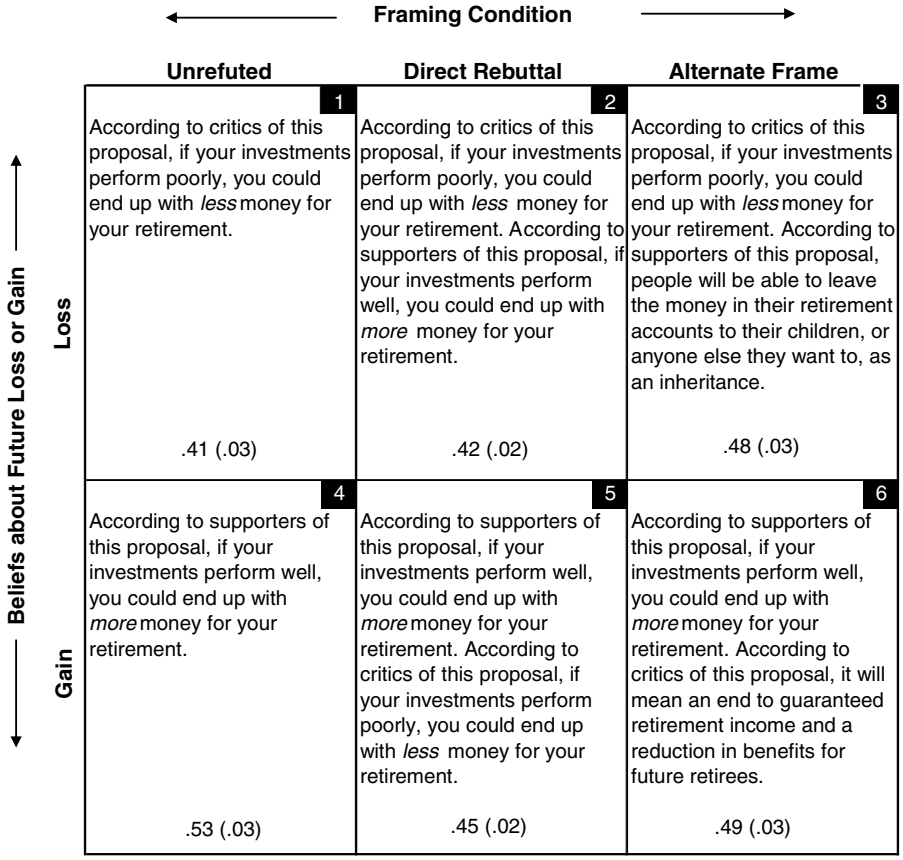
Figure 1 shows the study design along with a description of the experimental stimuli. In the top row, an initial argument is attributed to "critics of the proposal." Beginning with the top-left box (e.g., the cell numbered "1"), respondents are exposed to a single, unrefuted argument from a privatization opponent. Moving on to the top-middle, the opponent's argument is directly rebutted by a supporter of the proposal. In the top-right cell, the supporter responds with a prediction, but one that is not a direct rebuttal. The bottom three cells follow the same structure, but now the initial argument is attributed to "supporters of the proposal" (and the second argument, if there is one, is credited to "critics"). At the bottom of

[5]The survey was conducted by Knowledge Networks (KN) as part of the Time-sharing Experiments for the Social Sciences (TESS) program. The survey was in the field from December 27, 2006, to January 4, 2007 ($N = 1{,}154$). The completion rate was 70.5%. The response rate using the American Association for Public Opinion Research (AAPOR) definition (Response Rate 3) was 25.8%. The analyses use data that have been weighted to be nationally representative (though similar results are obtained with unweighted data).

[6]The question read, "How do you feel about this proposal? Do you strongly support it, support it somewhat, neither support nor oppose it, oppose it somewhat, or strongly oppose it?"

[7]According to Ajzen and Fishbein, such items measure "the strength of [a] person's beliefs that performing [a] behavior will lead to [a particular consequence]" (1980, 67). Ajzen and Fishbein's use of the word "strength" is distinct from attitude researchers (e.g., Petty and Krosnick 1995), who employ the term in a somewhat different manner. Hereafter, I use the term "belief likelihood" to reduce confusion. Thus, a person's belief likelihood is "high" if he or she thinks a particular outcome is likely to occur.

FIGURE 1 Study Design and Description of Experimental Stimuli



Note: Before the stimulus, participants received the following introduction: "A proposal has been made that would allow people to invest some of their Social Security taxes in the stock market." Afterward they were asked, "How do you feel about this proposal? Do you strongly support it, somewhat support it, neither support nor oppose it, oppose it somewhat, or strongly oppose it?" Participants in the control condition read the introduction and then were asked the "How do you feel. . ." question. Cells include mean opinion (scaled to the 0–1 interval) for each condition along with the standard error in parentheses. In the control group, mean opinion was .45 (s.e. = .03).

each cell is mean support for private accounts (scaled to the 0–1 interval), with the standard error in parentheses.

As the horizontal axis label in Figure 1 indicates, there are three basic framing conditions in this experiment. The cells with unrefuted arguments correspond to one-sided framing conditions, while the remaining cells represent competitive framing conditions (e.g., Chong and Druckman 2007b). The vertical axis label in Figure 1 corresponds to the belief question that respondents later received. People in the top three cells were asked to state how likely it was that they would *lose* money with private accounts; those in the bottom cells (along with the control group in the KN survey) were asked how likely it was that they would *gain* money. In essence, then, this question captures the extent to which people's beliefs were influenced by the initial argument to which they were exposed.[8]

As for the stimuli, the arguments in this study were based on actual statements made by political actors in the national media, giving the treatments high external validity (Cook and Campbell 1979). Before conducting the experiment, the arguments were pretested to ensure that

[8]Naturally, respondents had a wide range of beliefs going into the experiment. Random assignment ensures that the people in each condition were, on average, similar in terms of the beliefs about the consequences of private accounts. Auxiliary analyses indicate that randomization was successful. There were no significant differences across respondents in the seven conditions on a range of demographic variables. Thus any difference in beliefs across experimental groups can be attributed to the treatment.

they were of comparable effectiveness.[9] In an attempt to show that the findings hold across different combinations of Social Security arguments, I include data from another survey experiment. The second experiment was identical to the KN study with the exception of the second argument appearing in the alternate frame condition. Thus, I am able to compare the effectiveness of direct rebuttals and alternate frames across two experiments, both involving nationally representative adult samples. This reduces the likelihood that the results I present below are idiosyncratic reactions to a particular combination of frames.[10]

Finally, the decision to examine the case of Social Security reform was deliberate. As America's largest federal program, Social Security is viewed as an important issue both by citizens and their elected representatives (Cook, Barabas, and Page 2002). This means that most people probably have some familiarity with the program as well as with proposals to create private investment accounts.[11] While the issue of Social Security reform is not new, political elites (and even experts) disagree about the impact of shifting to a system with private accounts (e.g., Aaron and Shoven 1999). By studying how different rhetorical strategies affect policy opinions, I hope to illuminate the conditions for successful political action—on this issue and many others. I consider how the findings might generalize to other issues later, in the discussion.

[9]Nearly a dozen pro and con arguments were pretested in a separate study with different subjects (see Chong and Druckman 2007b for a similar procedure). Participants were asked to rate arguments on a 5-point scale indicating the degree to which they supported the creation of private investment accounts for Social Security. They also were asked to rate the effectiveness of each argument on a 5-point scale (see the appendix for question wording). In the pretest, all pro arguments were rated as more supportive than the con arguments ($p < .001$). Importantly, however, pro and con arguments were indistinguishable in terms of their effectiveness. Thus, no con argument was more or less effective than any of the pro arguments (p values range from .24 to .53). All tests were two-tailed; *df* range from 67 to 69.

[10]The second survey was conducted by Polimetrix, and it was fielded in October 2006 ($N = 1{,}000$) as part of the Cooperative Congressional Election Study (CCES). The stimuli in this study also were subject to pretesting. See the appendix for question wording for these and other measures. To provide balance, control group respondents in the Polimetrix study were asked how likely it was they would *lose* money (the KN controls were queried about gains). In the analyses that follow (including Figure 1), I combine the two samples. The results were largely the same in analyses examining each sample separately (available from the author upon request).

[11]For example, in a May 2005 Pew survey, over 80% of the public stated that they had heard something (either "a little" or "a lot") about proposals to invest a portion of their Social Security taxes in private retirement accounts (Roper Center for Public Opinion Research, USPEW2005-05NII, May 11–15, 2005).

Empirical Results

By way of setting the stage for the investigation of competitive framing effects, I begin by presenting an analysis of the conditions with one-sided frames. This involves the comparison of the two unrefuted conditions (cells 1 and 4 in Figure 1) with the control condition. As one can see from the cell means in Figure 1, when respondents are presented with a single unrefuted predictive appeal, their policy opinions reflect the message conveyed by the frame. Support for privatization is .41 for respondents receiving the Lose Money frame while it is .53 in the Gain Money frame, a difference that is significant ($|t| = 2.84$; $df = 625$; $p < .01$). In the control group the mean level of support is .45, which falls between mean support in the one-sided framing conditions. Opinion in the control group is significantly different from opinion in the Gain Money condition ($|t| = 2.51$; $df = 642$; $p < .05$), but not in the Lose Money condition.[12]

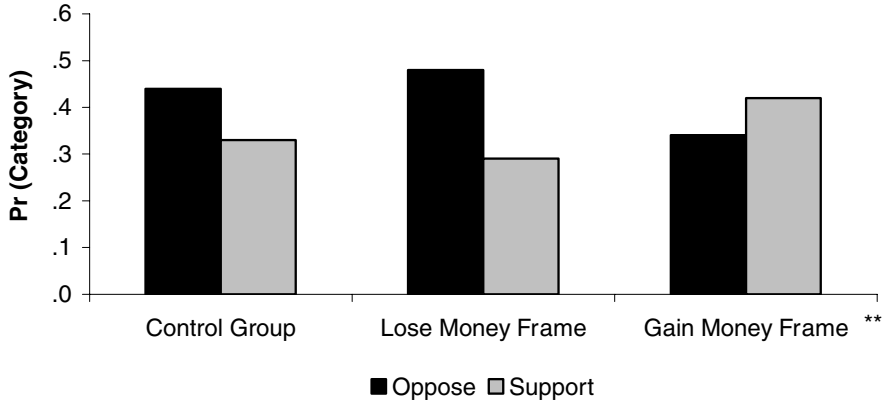
These conclusions are confirmed in an ordered probit analysis in which the dependent variable is support for Social Security private accounts. The independent variables include dummy indicators for the two unrefuted conditions (Lose Money, Gain Money) along with a variable denoting whether the respondent was in the KN or Polimetrix sample.[13] Relative to the control condition, the Gain Money frame increased support for privatization (coeff = .25; $p < .05$), while the Lose Money frame worked in the opposite direction (but was only marginally significant at $p = .12$). The substantive meaning of these effects becomes clearer in Figure 2, which shows the predicted probabilities from this model.[14]

[12]This illustrates the importance of including a control group in studies of framing (also see Chong and Druckman 2007b or Grant and Rudolph 2003). Although the difference in opinion across the Lose and Gain Money conditions is statistically significant, the independent effect of the Lose Money frame, in comparison to the control group, is modest.

[13]In a comparison of the control group respondents across the two samples, Polimetrix respondents were slightly more supportive of private accounts ($|t| = 1.65$; $df = 316$; $p = .10$, two-tailed). People in the two surveys were otherwise similar (e.g., demographic characteristics). In all the analyses reported below, I include an indicator for sample group (1 = KN respondents). This controls for any differences (measured or unmeasured) across the two samples.

[14]Predicted probabilities were computed using *Clarify* (Tomz, Wittenberg, and King 2003). Here I combine the probabilities for the "strongly oppose" and "oppose" categories, as well as the "strongly support" and "support" categories (probabilities and standard errors for individual categories are available upon request). Support for the middle option was similar across all conditions (about .24), so that category is omitted from the figure. An asterisk indicates a significant effect relative to the control condition (based on the model in Table 1).

FIGURE 2 Support for Privatization in One-Sided Framing Conditions



Note: Columns represent predicted probabilities from an ordered probit model in which support for Social Security private accounts is the dependent variable. See the text for model details.
**p < .05 (two-tailed).

Focusing first on the control group, there is a .44 chance of voicing opposition to private accounts and .33 chance of expressing support. Thus, when respondents are asked to state their opinion of private accounts (and not given any reasons to support or oppose the policy), attitudes run in the antiprivatization direction. Moving on to the next set of columns, we see that opinion in the Lose Money condition is essentially indistinguishable from the controls. I will have more to say about this pattern later, when I examine respondents' beliefs about the likelihood of losing and gaining money. In the rightmost set of columns in Figure 2, we see the distribution of opinion in the Gain Money condition. When respondents are presented with an unrefuted Gain Money frame the probability of supporting private accounts is .42, while there is only a one-third chance of opposing them. Relative to either the Lose Money condition or the control group, opinion about private accounts is effectively reversed by the Gain Money frame.

Consistent with Hypothesis 1, the analysis has shown that when respondents are presented with a single unrefuted predictive appeal, their policy opinions reflect the message conveyed by the frame, particularly for respondents in the Gain Money condition. But what is the mechanism underlying this result? According to Hypothesis 2, predictive appeals work through a mediational process in which the frame shapes people's beliefs and beliefs in turn affect opinion. Still focusing on the Lose Money, Gain Money, and control conditions, I evaluate H2 with a Sobel-Goodman test, a commonly used method for showing evidence of mediation (e.g., Brader, Valentino, and Suhay 2008). These analyses indicate that nearly 60% of the total condition effect is mediated by the beliefs measure ($p < .05$ for all tests).[15] Consistent with the ordered probit analyses, when I examine the Gain and Lose

TABLE 1 Ordered Probit Analysis of Privatization Opinions in One-Sided Framing Conditions

	Coefficient
Lose Money	−.13
	(.09)
Gain Money	.25**
	(.08)
Sample Group (1 = KN)	−.24**
	(.07)
LR chi^2	30.62**
Log likelihood	−1488.52
N	945

Note: The dependent variable is support for private accounts (higher values = more support). Cell entries represent ordered probit coefficients with standard errors in parentheses. Ancillary cutpoint parameters have been suppressed.
**p < .05 (two-tailed).

[15] For this part of the analysis I combined both versions of the belief question and reversed the coding on the "gain" question so that both items were scaled in the same direction. Other factors, such as the importance a person attributes to security and decision-making autonomy, do not mediate the effects shown in Figure 2 ($p > .40$ in Sobel-Goodman tests).

TABLE 2 Belief Likelihood across Conditions

	Belief Likelihood		
	Lose Money	Gain Money	Mann-Whitney Test
Unrefuted	.57	.49	$\|z\| = 2.75^{***}$
Alternate Frame	.53	.45	$\|z\| = 3.42^{***}$
Direct Rebuttal	.52	.41	$\|z\| = 4.98^{***}$
Control Group	.52	.37	$\|z\| = 3.91^{***}$

Note: In the first two columns, cell entries are means on the *Beliefs* measure (scaled to the 0–1 interval). The table also shows the results for a series of Mann-Whitney tests where the comparison is across columns.
$^{***}p < .01$.

Money conditions separately, the Sobel-Goodman results are weaker for the Lose Money frame ($p = .11$ compared to $p < .05$ for the Gain Money condition).

One can see additional evidence for the second hypothesis in Table 2, which shows the mean value on the original belief measure across all experimental conditions. This variable is scaled to the 0–1 interval with higher values indicating that a respondent thinks an outcome (losing or gaining money) is more likely. Much as one would expect, beliefs about consequences vary in a predictable way across the conditions. Belief likelihood for either outcome is highest in the unrefuted condition (the top row of Table 2). It drops in both of the competitive framing conditions (the second and third rows of Table 2) and is lowest in the direct rebuttal conditions, where respondents were exposed to an argument that directly challenged the initial claim about losses or gains. Thus, people's beliefs about future losses and gains are influenced by the particular combination of frames appearing in the stimulus (see Druckman 2004, 674 for a related discussion).

At the same time, if one looks at the extent of the change in belief likelihood across the treatment conditions, beliefs about losses seem less susceptible to predictive appeals than beliefs about gains.[16] Moreover, as the final row of Table 2 shows, belief likelihood for losses already is fairly high (at .52) among control group respondents. In fact, when it comes to the likelihood of *losing* money, there is no difference between respondents in the unrefuted condition and the controls ($|t| = .203$; $df = 451$; $p = .84$). If we view the control group as telling us something about "baseline" opinion, this suggests that the typical respondent entered the survey experiment thinking it was likely he or she would lose money with private accounts. This pattern seems consistent with prospect theory, which holds that people are more sensitive to information about losses rather than gains. The third hypothesis puts this proposition to a formal test. It predicts that people should have a higher expectation of losing rather than gaining money with private accounts across the one-sided and competitive framing conditions.

I evaluate H3 with a series of Mann-Whitney tests, reported in the final column of Table 2.[17] The first of these tests compares belief likelihood across the two unrefuted conditions (cells 1 and 4 in Figure 1). If it is the case that people think losses are more likely than gains, there should be a significant difference in belief likelihood across these two conditions. Note that in both cases, respondents were exposed to a single, unrefuted argument, so we may think of these cases as representing the maximal possible effect of either frame. Recall, too, that both arguments were shown to be equally effective in the pretest. As expected, however, belief likelihood is significantly higher in condition 1 versus condition 4 ($|z| = 2.75$; $p < .01$). Thus, even when a predictive appeal goes unchallenged, beliefs about losses are in some sense "stronger" than beliefs about gains.

What about the more typical situation where there is some type of counterargument? I answer this question by comparing belief likelihood across the alternate frame conditions (cells 3 and 6 in Figure 1). Here, subjects were exposed to an initial predictive appeal and then a frame that highlighted a completely different potential outcome. Like the previous comparison, there was a significant difference in belief likelihood here as well ($|z| = 3.42$; $p < .01$). Finally, the third row in Table 2 compares belief likelihood across the direct rebuttal conditions (cells 2 and 5 in Figure 1). Here, subjects were exposed to an initial argument and then a direct rebuttal. More important for my purposes, the content across the two conditions was *identical* except for the order in which the frames were presented.[18] Nevertheless, mean belief likelihood was significantly higher for people queried about prospective losses versus prospective gains ($|z| = 4.98$; $p < .01$). Finally, even in the control group (where respondents were not exposed to any arguments), respondents think losses are more likely than gains ($|z| = 3.91$; $p < .01$).

[16]For beliefs about gains, a one-way ANOVA shows significant differences in belief likelihood across the three treatment groups, $F(2, 887) = 3.28$; $p < .05$. For beliefs about losses, the differences across treatment groups are not significant, $F(2, 941) = .05$; $p = .96$. Similar results are obtained when I include the control condition or add an indicator for the sample group.

[17]I use Mann-Whitney tests because the beliefs measure is ordinal; however, I obtain identical results with unpaired *t*-tests.

[18]The order of the two arguments was reversed so that the belief question corresponded to the initial argument received by respondents in each condition.

TABLE 3 Ordered Probit Analysis of Privatization Opinions in Competitive Framing Conditions

	Coefficient High Belief Likelihood	Coefficient Low Belief Likelihood
Direct Rebuttal	.05	−.26**
	(.09)	(.09)
Alternate Frame	.23**	−.15*
	(.09)	(.09)
Sample Group	−.16**	−.11
(1 = KN)	(.07)	(.07)
LR chi^2	12.82**	11.31**
Log likelihood	−1478.65	−1403.90
N	941	886

Note: The dependent variable is support for private accounts (higher values = more support). Cell entries represent ordered probit coefficients with standard errors in parentheses. Ancillary cutpoint parameters have been suppressed.
**p < .05, *p < .10 (two-tailed).

It is clear, then, that people's orientation to the status quo (e.g., are they thinking about future gains or losses?) affects their sense of how *probable* that outcome is. The next two hypotheses explore how this asymmetry in belief likelihood for losses and gains bears upon rhetorical strategy—that is, the choices made by political elites. According to Hypothesis 4, when belief likelihood for an outcome is high, direct rebuttals will be less effective than alternate frames. In contrast, Hypothesis 5 states that either strategy should be effective when belief likelihood is low. The next series of analyses provides evidence for both hypotheses. I begin with Table 3, which shows the results of an ordered probit analysis in which support for privatization is the dependent variable and the independent variables are condition indicators (Direct Rebuttal, Alternate Frame) and an indicator for the sample group. The first column shows the results when belief likelihood is high (as was the case with beliefs about losing money). Consistent with the fourth hypothesis, a direct rebuttal has no effect on opinion, while an alternate framing strategy works in the expected direction (i.e., it increases support in response to an initial argument about losing money). In the second column, we see that either strategy affects opinion when belief likelihood is low, as predicted by the fifth hypothesis. Here, however, since the initial argument is about gaining money, both strategies should decrease support for privatization. Because the substantive meaning of the coefficients is best portrayed graphically, I turn to the predicted probabilities shown below in Figure 3.

The figure shows how support for privatization changes when an initial predictive appeal is challenged by a direct rebuttal versus when it is countered with an alternate frame. Once again, an asterisk indicates a significant effect relative to the condition with a single, unrefuted frame (based on the model in Table 3). In Panel A, the initial argument is the Lose Money frame (so the analysis compares support across cells 1, 2, and 3 from Figure 1). Because belief likelihood for losses is higher than it is for gains, the expectation is that the alternate framing strategy will be more effective at increasing support for privatization compared to the direct rebuttal.

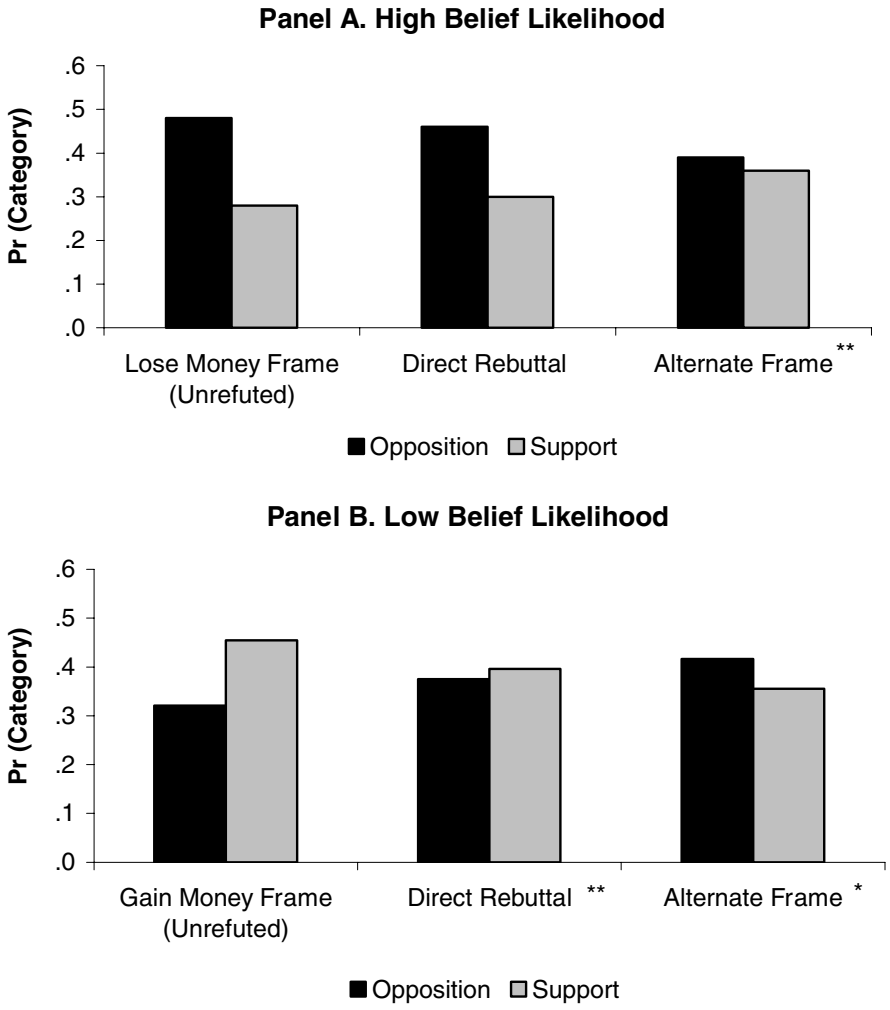
As Panel A shows, even when respondents are presented with a direct rebuttal of the claim that they may lose money, opposition to private accounts remains high. Indeed, responding with a direct rebuttal is equivalent to not responding at all (recall the coefficient on *Direct Rebuttal* was statistically insignificant in the first column of Table 3). By contrast, responding with an alternate frame is a more compelling tactic. Opposition to private accounts drops from .48 to .39 and support rises from .28 to .36. Thus, opinion goes from being decidedly antiprivate accounts to an almost even split between support and opposition.

Panel B shows the probability of support and opposition when the initial argument is the Gain Money frame (here the comparison is across cells 4, 5, and 6). In the leftmost set of columns, we see the basic pattern established in Figure 2: high support for private accounts when people are exposed to a one-sided frame highlighting the potential for gaining money. But because people do not think there is a high likelihood of gaining money with private accounts, support drops in either of the two competitive framing conditions. Regardless of whether respondents are confronted with a direct rebuttal or an alternate frame, support declines by a significant amount across both treatment conditions (changes of .06 and .10, respectively).[19]

One implication of the analyses reported so far is that even though direct rebuttals are a common feature of the rhetorical landscape, they are not effective when belief likelihood is high. This is readily seen in Figure 4, where

[19] In this part of the analysis, I treat respondents in the top three cells of Figure 1 as having high belief likelihood and those in the bottom three cells as having low belief likelihood (see Table 2 for rationale). Alternative empirical strategies provide support for my argument. For example, among respondents with low belief likelihood for either losses *or* gains, both the direct rebuttal and alternate framing strategies are an effective response to an initial predictive appeal, as expected. That is, irrespective of whether one was asked about gains or losses, among those with low belief likelihood, there is no difference in support for private accounts across the two competitive conditions ($|t| = .313$; $df = 138$; $p = .75$).

FIGURE 3 The Effect of Direct Rebuttal and Alternate Framing Strategies on Privatization Opinions



Note: Columns represent predicted probabilities from an ordered probit model in which support for Social Security private accounts is the dependent variable. See the text for model details. **$p < .05$, * $p < .10$ (two-tailed).

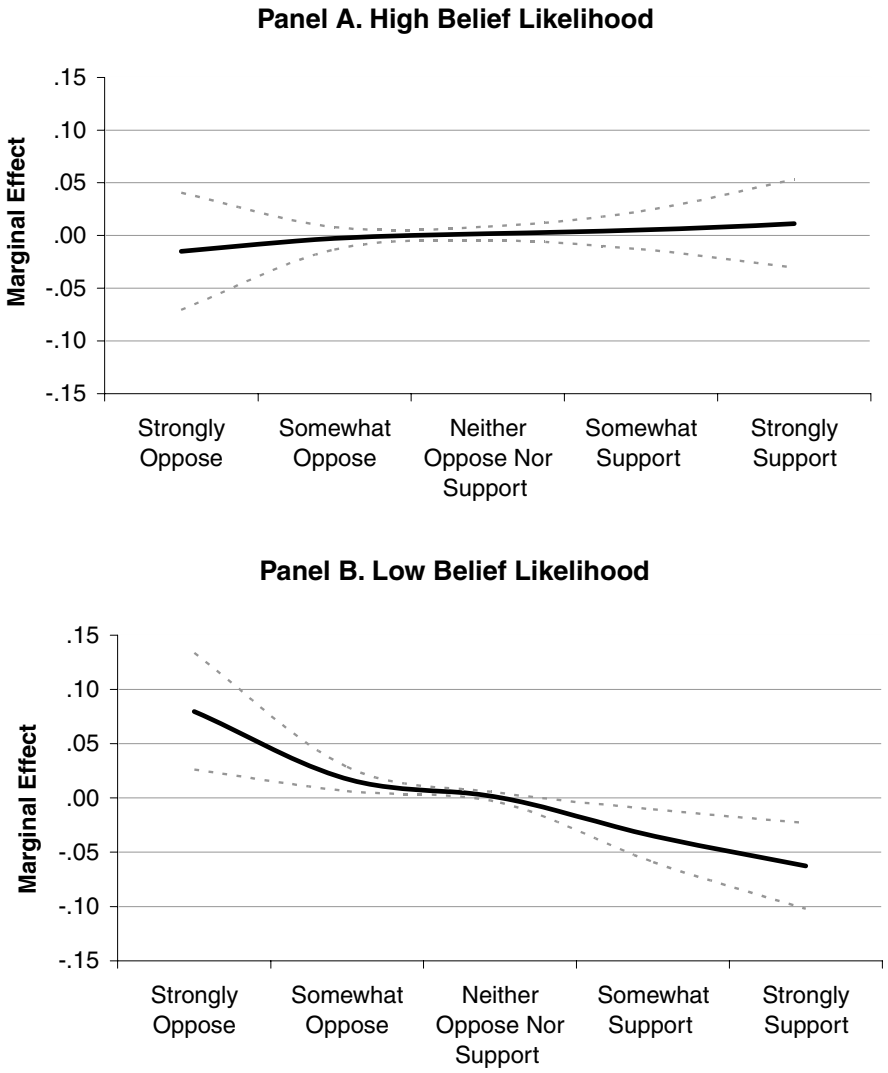
the marginal effect of *Direct Rebuttal* on support for privatization is plotted for each of the five response options. The top panel in Figure 4 shows the marginal effect of *Direct Rebuttal* when belief likelihood is high. Here, the initial claim was about losing money, so one might expect that exposure to a counterargument would increase support for privatization (and decrease opposition). As Panel A shows, however, a direct rebuttal had no effect. The line is essentially flat and the 95% confidence interval overlaps zero for every response option.[20]

[20]These results are consistent with Barabas's (2004) analysis of opinion change in the area of Social Security. He finds that opinion change is least likely to occur when people have strongly held views about policy reform options.

In contrast, Panel B shows the marginal effect of *Direct Rebuttal* in the opposite case (i.e., low belief likelihood). This panel corresponds to conditions in which respondents were exposed to an argument about gaining money. Thus, a direct rebuttal should decrease support for privatization and increase opposition, and this is exactly what is observed in Panel B. More generally, the patterns in Figure 4 suggest that when large segments of the public believe that a particular outcome is the likely result of a policy change, challenging those beliefs with a direct rebuttal may have little effect on policy opinions.

To sum up, this study has shown that predictive appeals can be understood in much the same way that we think of conventional framing effects. That is, predictive

FIGURE 4 The Marginal Effect of Direct Rebuttals on Opinion



Note: Black lines represent the marginal effect of the *Direct Rebuttal* condition indicator from the models reported in Table 3. The dotted lines represent the 95% confidence interval.

appeals affect opinions by shaping people's beliefs about the *impact* of specific policies. Consistent with prospect theory, people appear to overweight information about losses and have higher expectations for negative, as opposed to positive, outcomes. This asymmetry has important implications for rhetorical strategy, as we saw in the analysis of the competitive framing conditions. When belief likelihood for a particular outcome is high, certain rhetorical strategies (e.g., the direct rebuttal) have *no* effect on public opinion.[21]

Discussion

Even though the empirical analysis provided support for my theoretical argument, the decision to conduct a survey experiment on a single issue raises a variety of concerns about external validity. To paraphrase Cook and Campbell's (1979) classic question, to what extent do the causal relationships documented here hold over

[21]Although direct rebuttals appear to influence opinion under a limited set of circumstances, this strategy might have effects on other aspects of public opinion. At a minimum, being exposed to contradictory claims about the impact of a policy might induce ambivalence, or maybe even distrust, among mass audiences. Such conclusions would stand out against the usual interpretation of framing, which is depicted as causing individuals to deliberate over the importance of competing considerations (e.g., Nelson, Clawson, and Oxley 1997).

variations in persons, settings, and treatments? Answering the first part of the question is straightforward. Because the analyses draw upon two national public opinion surveys (administered by different organizations), I feel confident in stating that the findings from this study extend to the larger adult population. But what about the generalizability across different political issues or combinations of frames?

Generalizability to Policy Debates on Other Topics

Regarding the generalizability of the findings across other policy debates, I would expect to observe similar results whenever elite deliberation focuses on specific policy *alternatives* (e.g., privatization) as opposed to broader issues and social problems (e.g., the need for entitlement reform). For example, in the mid-2000s, the American public witnessed debates about a proposal to implement a guest worker program for some illegal immigrants, as well as a debate over subsidized health insurance for children of the working poor. In the future, the U.S. Congress is likely to consider a bill that limits carbon emissions in virtually all sectors of the economy (Stolberg and Knowlton 2008). In these and other cases, claims about the effects of specific pieces of legislation, as well as the consequences of failing to act, figure prominently on the rhetorical landscape. In this respect, predictive appeals may not be the province of any particular issue(s). Instead, this style of rhetoric might simply reflect a process by which topics become prominent on the governmental agenda, and once they do, specific policy alternatives become the subject of national debate (see Kingdon 1995 for an account of this process). When political actors get down to the business of debating particular pieces of legislation, it is only natural for their attention to turn to the potential consequences of policy change (Dunn 1994).[22]

At the same time, issues *do* differ in terms of their longevity, and this can be important if belief likelihood is different for "old" as opposed to "new" issues. Consider the issue of health care reform, which has been on the political agenda for decades. Any attempt to provide universal health care coverage must confront the prediction that it will lead to socialized medicine (e.g., Boffey 2007). Thus, on longstanding issues, people's beliefs about the consequences of specific policy alternatives may already have been influenced by elite rhetoric. In addition, beliefs often are buttressed by a person's policy preferences (e.g., Kuklinski et al. 2000). In these instances, belief likelihood will be high and a strategy of direct rebuttals will not be successful in shaping public opinion.

External Validity of the Experimental Treatment

The final element of external validity, and one that often goes neglected, is the external validity of the experimental treatment (Barabas and Jerit 2008). One concern raised by scholars is that the stimuli appearing in survey experiments may be overly strong (Gaines, Kuklinski, and Quirk 2007), and that the context in which respondents receive treatments—i.e., the sterile environment of the survey experiment—reinforces this problem (Kinder 2007). From this standpoint, the effects reported here might overstate the magnitude of effects that would occur in an actual policy debate.[23] On the other hand, in the natural world, there is the potential for reinforcement through repetition of information in the media and interpersonal discussion. Moreover, the stimuli that people encounter in a survey experiment are devoid of the contextual information that gives meaning to an argument and makes it persuasive (Druckman 2001; Gilens 2002). This suggests that the treatments found in survey experiments might be *less* compelling than the rationales embodied in real-world political rhetoric. There are, in other words, a variety of ways in which the arguments in a survey experiment are different than those embedded in media coverage. But these differences may cut in opposite directions—with some potentially overstating the power of experimental treatments and others potentially understating them.

As for the context in which the treatments were received, this study has a high degree of realism in at least one respect. Decades of research on political behavior have shown that the typical person does not pay much attention to political affairs. Thus, in the absence of any overt motivation to think deeply about the questions in a public opinion survey (e.g., Prior and Lupia 2007), the respondents in these surveys probably acted in a manner

[22]This is not to suggest that political elites do not debate broad principles or seek to represent themselves in terms of a comprehensive worldview (e.g., Sniderman 2000). More often than not, though, the argument and counterargument of major policy debates have to do with the consequences of specific policy alternatives (Jerit, Kuklinski, and Quirk n.d.).

[23]Identifying arguments from real-world debates and pretesting them is essential for ensuring that the stimuli are not too strong (see note 9), but it does not guard against the second problem—the fact that "the artificially clean environment of the survey question makes treatment easier to receive than in real life" (Gaines, Kuklinski, and Quirk 2007, 15).

that was similar to how ordinary people confront the political world.

Conclusion

This study makes several important contributions to the literature on framing and public opinion. It focuses attention on a style of rhetoric—the predictive appeal—that is exceedingly common in real-world debates but rarely analyzed by scholars. In addition to showing how this kind of frame influences public opinion, I examined the effects of predictive appeals in one-sided framing conditions as well as competitive framing conditions, which generally are thought to be more realistic (Sniderman and Theriault 2004). Finally, this study is the first to compare the effectiveness of different rhetorical strategies (the direct rebuttal and the alternate frame) in competitive scenarios.

To date, most research on competitive framing has highlighted the tendency for "offsetting" effects (e.g., intermediate or moderate opinions). This study shows that even when people are exposed to arguments of comparable effectiveness, a much wider range of outcomes is possible than scholars have documented in the past (e.g., Figure 3). Sometimes opinion moderation does in fact seem to be the result. In other cases, however, the distribution of support and opposition reverses itself (e.g., responding with an alternate frame when belief likelihood is low). Moreover, the same strategy (a direct rebuttal) can have very different effects depending on people's beliefs about the consequences of a policy change. Because scholars have only recently started to examine competitive framing conditions, there is much to learn about how different rhetorical strategies influence public opinion (see Chong and Druckman 2007b, 650 for discussion).

Predictive appeals "matter" because people's beliefs about the impact of policy change constitute an important ingredient in their opinions. This fact, combined with findings regarding the asymmetry in belief likelihood for negative and positive outcomes, casts the policymaking process in a new light. In addition to the institutional constraints that make policy change difficult in the United States, there are rhetorical constraints. Even when respondents were exposed to the same exact information about the possibility of losing and gaining money with private accounts, people thought negative outcomes were more likely to occur. Thus, departures from the status quo do not come easily—not simply because of the checks and balances that are built into our Constitution, but also, apparently, because of the way people reason about the consequences of policy change.

This study has shown that predictive appeals can have a significant effect on public opinion, and this raises a host of normative questions about the health of our political system. Schattschneider described democracy as a 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*" (1960, 138, emphasis original). The question, then, is whether ordinary citizens—whose collective preferences often play an important role in the formation of public policy—are able to participate meaningfully in the decision-making process when predictive appeals abound. Claims about the future are not easily verified. Moreover, by the time predictive appeals can be proven right or wrong, the responsible parties may no longer be in power. In this way, predictive appeals have the potential to obscure democratic accountability.

Yet, several questions about this style of rhetoric remain unanswered. We know little, for example, about *when* this strategy is most profitably deployed in a policy debate (e.g., early versus late), or whether certain types of political actors (e.g., interest groups) have greater leeway when it comes to making predictive appeals. For those who want to promote the quality of representative democracy, these are important topics that scholars should be investigating.

Appendix

Survey Questionnaire (Knowledge Networks-TESS Study)

Unless otherwise noted, respondents received each question in identical form. Some variables were recoded, so the direction of the response options may differ from the questionnaire.

A proposal has been made that would allow people to invest some of their Social Security taxes in the stock market. [*Insert Experimental Treatment—see Figure 1.*] How do you feel about this proposal? Do you strongly support it, support it somewhat, neither support nor oppose it, oppose it somewhat, or strongly oppose it?

(a) Strongly support it
(b) Somewhat support it
(c) Neither support nor oppose it
(d) Somewhat oppose it
(e) Strongly oppose it

[RESPONDENTS IN CONDITIONS 1, 2, AND 3]

If people are allowed to invest some of their Social Security taxes in the stock market, how likely is it that you will end up with *less* money for retirement—extremely likely, very likely, somewhat likely, not too likely, not at all likely?

[RESPONDENTS IN CONDITIONS 4, 5, 6, AND 7]

If people are allowed to invest some of their Social Security taxes in the stock market, how likely is it that you will end up with *more* money for retirement—extremely likely, very likely, somewhat likely, not too likely, or not at all likely?

(a) Extremely likely
(b) Very likely
(c) Somewhat likely
(d) Not too likely
(e) Not at all likely

On the next few screens, you will see several thoughts or ideas that other people have expressed when describing their opinions about Social Security reform. Some of these ideas may seem important to you as you think about this issue, while others will seem less important.

On a scale of 1–10, with 1 being not important at all and 10 being very important, please indicate how important the following idea is to you when you think about the question of whether people should be allowed to invest some of their Social Security taxes in the stock market.

> Security and peace of mind of knowing that Social Security will be there when you and your family need it.

On a scale of 1–10, with 1 being not important at all and 10 being very important, please indicate how important the following idea is to you when you think about the question of whether people should be allowed to invest some of their Social Security taxes in the stock market.

> Being able to make your own financial decisions about the Social Security funds you've earned.

Survey Questionnaire (Polimetrix-CCES Study)

As mentioned in the text, the two surveys were identical in structure. The primary difference across the two studies is the *second* argument appearing in the alternate frame conditions (cells 3 and 6 in Figure 1). The alternate wordings are presented below:

> According to supporters of this proposal, the Social Security system is not financially sound and needs to be reformed. (corresponds to cell 3)

> According to critics of this proposal, it will cost as much as $2 trillion to switch over to the new system. (corresponds to cell 6)

There was one other minor difference across the two questionnaires. In the Polimetrix survey, the phrase "regular Social Security benefit" replaced "money for your retirement" in the experimental treatment. For example, in the KN study, respondents viewed this statement:

> According to critics of this proposal, if your investments perform poorly, you could end up with less money for your retirement.

In the Polimetrix study, respondents saw this one:

> According to critics of this proposal, if your investments perform poorly, you could end up with less than the regular Social Security benefit.

In pretesting, both wordings were indistinguishable in terms of effectiveness ($|t| = .26$; $df = 69$; $p = .80$).

There was an equivalent change for the Gain Money statements. KN respondents viewed this statement:

> According to supporters of this proposal, if your investments perform well, you could end up with more money for your retirement.

In the Polimetrix survey, respondents saw this one:

> According to supporters of this proposal, if your investments perform well, you could end up with more than the regular Social Security benefit.

Once again, the two versions were indistinguishable in terms of effectiveness ($|t| = 1.11$; $df = 69$; $p = .27$).

As mentioned in note 9, pretesting was used for the arguments in the Polimetrix survey. Like the KN survey, all pro arguments were rated as more supportive than the con arguments ($p < .001$). However, pro and con arguments were indistinguishable in terms of their effectiveness. Thus, no con argument was more or less effective than any of the pro arguments (p values range from .69 to .83). All tests were two-tailed; *df* range from 69 to 70.

Question Wording for the Pretest

The instructions on the pretest read as follows: "Lately, there has been a lot of discussion about Social Security reform. Some people have suggested allowing individuals to invest some of their Social Security taxes in the stock market. Below you will read a list of reasons for and against this proposal. Read each reason and answer the questions that follow each item."

Participants then evaluated a series of arguments. After each one, they were asked two questions. The first one read, "In your opinion, does this argument come across as supporting or opposing proposals to create investment accounts for Social Security?" Response options ranged from "definitely supports" to "definitely opposes." The second question read, "In your opinion, how effective is this argument?" Response options ranged from "definitely effective" to "definitely ineffective."

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