

Priming Risk and Policy Change

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Abstract

Public opinion plays an important role in affecting policy outcomes; yet, we know little about how citizens deal with risk when forming attitudes on political issues. In this project, we examine how priming individuals to consider risk affects the political opinions expressed by citizens. We use a survey experiment where all respondents were asked for their views on four policy proposals, but half received a risk prime as they answered these questions while the other half did not. We find that even a subtle risk prime induces significant changes in attitudes on some policy issues and that the effect is particularly pronounced for individuals with less political knowledge and less tolerance for risk.

Citizens routinely make decisions that require them to think carefully about risk. These decisions may include where to invest money, whether to undergo a particular medical treatment, or even whether to drive over the speed limit. Most political decisions also entail risk, such as whether a candidate will actually follow through with her promises or whether a proposed policy will work as intended. Yet, while risk has been studied extensively in economic, health, and technological contexts, we know less about how citizens deal with risk when formulating political opinions. Given that most citizens do not think extensively about political issues before offering their opinions, it may be the case that they pay little attention to risk in some contexts and too much attention in others.

In this paper, we examine the effect of risk on public opinion. We posit that when individuals think more about risk, they will become less certain about their opinions on policy proposals and less likely to support policy change. We expect that this effect will be particularly pronounced for those who think less about political issues and are less tolerant of risk. To test these expectations, we analyze the results from an experiment imbedded on a module to the 2008 Cooperative Congressional Election Study (CCES). As expected, less politically knowledgeable and less risk tolerant respondents who were primed to think about risk became less supportive of several policy proposals.

We begin this paper by discussing the role of risk in affecting public opinion. Our discussion then turns to considering whether individuals can be primed to take risk into account when making political decisions. We then describe our survey experiment in greater detail before presenting our findings. We conclude by considering the importance of gaining a better understanding of how citizens deal with risk when offering their opinions on policy proposals and the implications for policy change in general.

Risk and Public Opinion

Despite the important role that public opinion plays in affecting policy outcomes (Erikson, Mackuen and Stimson 2002; Page and Shapiro 1983) political scientists generally view citizens' attitudes as ill-formed and malleable (Converse 1964). As Chong and Druckman note, "In the public opinion literature, high-quality opinions are usually defined as being stable, consistent, informed, and connected to abstract principles and values. The general conclusion among scholars is that such opinions are rare in the mass public" (2007: 103). Attitude instability can be explained by an understanding of cognitive processing under conditions of low information. When asked to provide their opinions on an issue, citizens tend to forego an exhaustive search for information and rely instead on considerations that are most accessible to them at that moment (Tversky and Kahneman 1981; Kahneman, Slovic and Tversky 1982; Iyengar 1991). Based on this perspective, people may hold different attitudes on the same issue at different points in time because different considerations are more or less accessible to them at that moment, not necessarily because their underlying attitudes have changed (Zaller 1992).

Among the many considerations that may influence a citizen's opinions at a given point in time is risk. Economists have long studied how individuals deal with risk when making decisions. This research has demonstrated that individuals faced with risky propositions often act in irrational ways depending on considerations such as their wealth, the size of the potential gambles, or even the framing of the gamble (Thaler, Kahneman, Tversky). Such fallibilities explain why we see an individual buy an insurance policy to protect his home in the event of a fire and also engage in casino gambling. The former behavior is one of a risk averter attempting to remove the risk (at an unfair price) associated with his home burning down while the latter behavior is that of a risk seeker purposely engaging in an unfair gamble.

While the influence of risk on decision making has been extensively studied in the economic and public health fields, individuals must deal with risk in nearly every aspect of their lives, including the political realm. For example, voters must consider the risk that a particular candidate may not deliver on his/her campaign promises once in office. Citizens also must consider the risk that a particular policy may not work as intended once enacted (or the risks involved in failing to enact a particular policy). Yet, only a handful of studies have directly examined the influence of risk on public opinion (Berinsky and Lewis 2007; Morgenstern et al. 2001; Nardeau et al. 1999; Berinsky 2000; Peterson and Lawson 1989; Ehrlich and Maestas 2008). Recent work in this area indicates the important role that risk may play in affecting individuals' attitudes on political issues. For example, Ehrlich and Maestas (2008) demonstrate that an individual's propensity to be risk averse depresses his or her support for free trade policies, particularly if that person is at greater risk of being negatively affected by such policies (i.e. those with low job skills).

Priming Risk

While an individual's orientation to risk may affect their attitudes on particular policy proposals, it is likely the case that risk is not always given the same level of consideration when formulating these opinions. Indeed, a great deal of research has demonstrated that individuals do not deal consistently with the notion of risk. Bernstein (1996: p. 272) summarizes much of what the research has found:

We have trouble recognizing how much information is enough and how much is too much. We pay excessive attention to low-probability events accompanied by high drama and overlook events that happen in routine fashion. We treat costs and uncompensated losses differently, even though their impact on wealth is identical. We start out with a purely rational decision about how to manage

our risks and then extrapolate from what may be only a run of good luck.

As evidence that individuals do not always give equal consideration to risk, one study found that priming people to think about risks (and to consider risks differently) significantly affected the decisions they made about activities such as holiday travel, buying a car, and gambling when they were primed to think about risk-seeking rather than risk-avoidance (Erb, Bioy, and Hilton 2002). However, it is not clear whether citizens can be similarly primed to give more weight to risk in a political context.

The accessibility of particular concepts or considerations can be influenced by how frequently or how recently those concepts have been activated in the person's mind (Kuklinski and Hurley 1994; Lau 1989; Tourangeau and Rasinski 1988; Zaller 1992; Zaller and Feldman 1992). The activation of such considerations by external stimuli essentially defines the process of priming. For example, Valentino (1999) finds that when news coverage presents crime stories with non-white suspects it makes racial attitudes more accessible to respondents relative to when the suspects in these stories are white. Likewise, when issues are featured more prominently during campaigns, citizens are more likely to use those issues to evaluate candidates (Iyengar 1991; Schaffner 2005).

Political scientists generally focus on how priming citizens to think about particular issues will influence how they evaluate politicians (e.g. Iyengar and Kinder 1987; Schaffner 2005). However, one can also prime some considerations in the minds of individuals when they are evaluating policy proposals. Such a process is closely related to "emphasis framing," where some aspects of an issue are given more weight than others (Druckman 2001). For example, Cobb demonstrates that when the risks of nanotechnology were emphasized, public support for the technology declined (2005). This happens because framing the issue as risky primes citizens to give more weight to risk when formulating their opinions. Similarly, Eckles and Schaffner (2008) use a survey experiment from 2002 to find that when the risk of U.S. casualties was emphasized, citizens expressed significantly less support for military

intervention in Iraq compared to those asked the same question without the emphasis on the chance of casualties.

The case of the Social Security privatization debate also offers a telling example of how public opinion can be influenced by framing a proposal as risky. Opponents of privatization appealed to risk perceptions of the public by promoting privatization as a “risky” alternative. In fact, one Democratic polling firm noted that when debating the privatization proposal, arguments should stress that “The Bush plan undermines retirement security by cutting guaranteed benefitsrisky privatization accounts won’t make up the difference.” The success of this framing strategy was evident in the polling conducted on the issue as respondents were far more opposed to privatization when questions made note of the risks involved. As Cook and Jacobs note (2002), “The public seems to favor some form of partial privatization of Social Security in the abstract, but their support is replaced by ambivalence and then opposition as they are informed of the costs and risks associated with it” (Cook and Jacobs 2002). Thus, as risk became a more prominent consideration for the public, opinion on the privatization proposal changed significantly.

Expectations

While people can access any range of information or considerations when asked to evaluate a particular policy proposal, priming them to consider risk will significantly affect their attitudes compared to if they are relying on other factors in their evaluations. In particular, we expect that priming individuals to consider risk will decrease their likelihood of supporting any policy change. Psychological research has demonstrated that individuals tend to be more willing to accept known risks over unknown (or new) risks. For example, Slovic et al. (1985) found that the public perceived greater risks inherent in relatively new DNA technology compared to objects they were more accustomed to such as automobiles and handguns. Drawing from a survey of students, Peterson and Lawson show that “the usual orientation

toward risk is associated with a preference for the status quo and a ‘cover yourself’ view of politics” (1989: 335). Indeed, individuals primed to consider risk will likely become more opposed to such changes since they are more comfortable with risks they are familiar with (i.e. those from status quo policies) than those that would be new (i.e. those from the proposed policies).

In addition to being averse to risks that are new or unknown, individuals also tend to be more concerned by risks that involve fairly dramatic consequences (Slovic et al. 1979). As Iyengar notes, the public has a tendency to “overestimate the importance of sensationalized events (such as fires and traffic accidents) as causes of death and to underestimate the importance of quiet risks such as heart disease and stroke” (1991: p. 132). These risks can be thought of as those that the individual feels no sense of control over and that have catastrophic, sensational and/or fatal consequences. We expect that support for proposals that entail dramatic risks will diminish significantly when individuals are primed to think more about risk.

Of course, not all individuals will be susceptible to priming effects. Individuals who give more thought to issues tend to be more likely to access similar considerations when they are asked to evaluate those issues (Iyengar 1991). After all, these citizens are likely to have already formulated opinions on the issues by carefully weighing various considerations, including the risks involved in such policies. Accordingly, we expect that respondents who are more politically informed will be less affected by priming risk compared to those with less political information.

Priming will also be more influential when the consideration being primed is more salient to the respondent. For example, the priming of women’s issues during campaigns has a greater effect on how women vote relative to men (Schaffner 2005). Additionally, priming individuals to think about racial considerations has a different affect on policy opinions depending on whether the person has liberal or conservative views on race relations (Hurwitz

and Peffley 2005). We expect a similar pattern for risk priming. Indeed, Nadeau and his colleagues (1999) demonstrate that individuals who are less accepting of risk tend to give more weight to the worst possible outcome when faced with a proposal for political change. This pattern suggests that individuals who are less tolerant of risk will be less supportive of any policy change when they are primed to consider risk.

The Survey Experiment

We seek to answer two primary questions: does priming individuals to think about risk reduce their support for policy proposals and which individuals are most affected by priming risk? To answer these questions, we embedded an experiment in a module of the 2008 CCES, a national internet survey of 1,000 American adults conducted through Polimetrix. Each respondent answered identical questions about four policy proposals (for the full text of questions see Appendix 1). The sample was randomly divided into control and treatment groups. The control group's questions were prefaced by the following statement at the top of the screen:

“Please indicate whether you approve or disapprove of the proposals:”

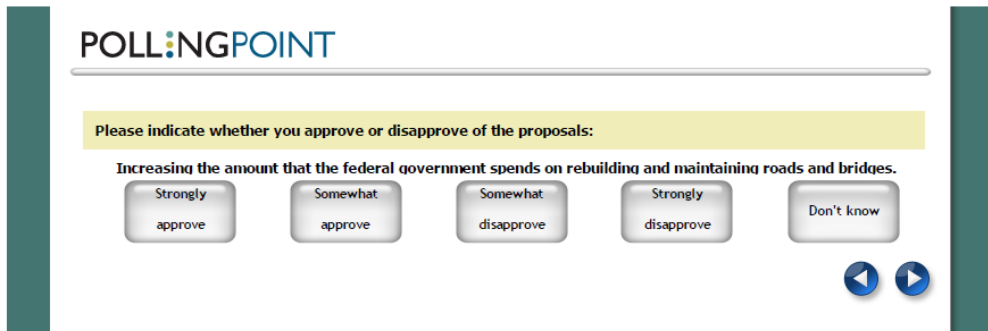
The treatment group received a slightly different version of this preface which attempted to subtly prime the respondents to think about risk before they answered the questions:

“Keeping in mind that policies always involve some amount of risk, please indicate whether you approve or disapprove of the proposals.”

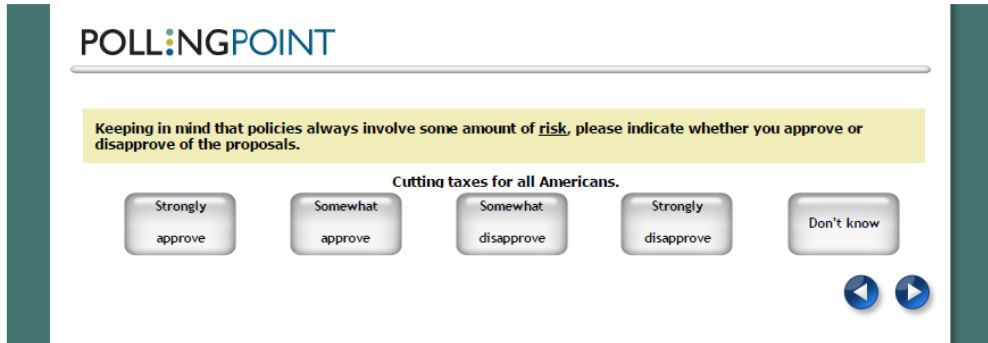
The actual screen shots from the control and treatment instruments are presented in Figure 1. We refer to this as a priming treatment rather than a framing treatment since the statement was designed to prime the concept of risk in the minds of respondents, but the concept was

Figure 1: Screen Shots From Survey Experiment

Panel A: Control Group (No Prime)



Panel B: Treatment Group (Risk Prime)



not explicitly linked to the issues in any way. It is also important to note that the treatment employed in this experiment was fairly weak. The addition of a phrase referring to risk is only a slight change to the instrument that control group respondents were exposed to. Furthermore, this alteration was confined to the instructions that appeared at the top of the page, something that many respondents might only glance quickly at as they worked through the 20 minute survey battery. Thus, on one hand, it would not be surprising to find limited differences between respondents in the control and treatment groups. On the other hand, if risk is as powerful a determinant of decision making as much of the literature suggests, then even a subtle treatment should induce significant differences.

As noted above, we asked individuals about four different policy proposals; two of these proposals were chosen because they involved risks with dramatic consequences while the other two did not. This distinction may be important because, as we noted above, Slovic

et al. (1979) find that perception of risk is significantly influenced by the characteristics of the hazard that the individual is evaluating. A hazard with high levels of dread is one that would have catastrophic, sensational and fatal consequences; and one which the individual feels no sense of control over. In our survey experiment, respondents were asked if they would approve of the relaxation of airport security measures and if they approved of sending troops to Darfur. The risks inherent in each of these policy proposals are potentially catastrophic (i.e. they involve the potential for massive loss of life). The fact that these proposals have such dramatic risks should mean that priming risk will have a particularly strong effect on opinions.¹

Of course, some policies have risks that are not likely to be viewed as catastrophic. Respondents to this survey were asked about whether they would approve of cutting taxes for all Americans and whether they supported spending more money to build and maintain roads and bridges. Unlike reducing airline security and sending troops to Darfur, the risks inherent in these proposals are hardly sensational. Therefore, we expect that the risk prime will have a smaller effect for these issues since individuals may not be concerned with the less catastrophic risks regardless of whether they are primed to think about them.

As noted above, we are also interested in determining which individuals are most susceptible to risk priming. In particular, we expect that those with less political information will be more influenced by the priming condition. The CCES asked respondents several factual questions about politics including which party controlled each chamber of Congress, and which party their House member, senators, and governor belonged to. On average, respondents answered 4.3 of the 6 questions correctly and 39.2% got all 6 questions correct. Thus, we divide our sample between those who got all six questions correct and those who did not.

¹Of course, it is also possible that a policy proposal with dramatic risks will automatically cause individuals to give consideration to risk when formulating their opinions. If this is the case, then we would not expect the risk prime to have a significant effect on responses.

We also expect that an individual’s tolerance for risk will affect how susceptible they are to the risk prime. Specifically, we expect those who are least tolerant to risk will be most influenced by the priming condition. To capture risk tolerance, we employed a survey instrument developed and tested by Barsky et al. (1997). Respondents were given an initial question and then a follow up question to determine the different circumstances under which they would be willing to take a new job (the full text of the battery is available in Appendix 2). The result of this battery is a four point scale of risk tolerance ranging from 0 (very low tolerance for risk) to 3 (high tolerance for risk). A majority (55%) of respondents scored lowest on the scale of risk tolerance while 16% had the highest level of risk tolerance.² In the analysis that follows we expect to find particularly strong risk priming effects for those who scored a 0 on this scale.

Results

Table 1 presents the differences in responses for those in the control and treatment conditions among all respondents to the survey. For each proposal, respondents were given the option of answering that they strongly approved, somewhat approved, somewhat disapproved, strongly disapproved, or did not know. To simplify the analysis, we combined the strongly and somewhat categories so that the table simply presents those that approved, disapproved, or did not know. However, the substantive findings were no different when we analyzed all five categories.

The first thing to note in Table 1 is that opinions vary significantly across the four different proposals. There is a great deal of support for building and repairing roads and bridges and cutting taxes across both the control and treatment groups. Support for intervening in Darfur is also fairly high, though this question also elicited the largest share of respondents answering “don’t know.” Finally, only a third of the respondents expressed support for

²The distribution of respondents on this scale closely mirrors that found by Barsky et al. in their survey.

Table 1: Effect of Risk Prime on Issue Preferences (Full Sample)

	No Risk Mention	Risk Prime	Difference
<i>Relax Airport Security</i>			
Approve	.35	.34	-.01
Disapprove	.60	.60	.00
Don't Know	.05	.07	.02
<i>Troops to Darfur</i>			
Approve	.56	.56	.00
Disapprove	.31	.27	-.04
Don't Know	.13	.17	.04
<i>Improving Infrastructure</i>			
Approve	.78	.73	-.05**
Disapprove	.17	.19	.02
Don't Know	.04	.08	.04**
<i>Cut Taxes</i>			
Approve	.64	.65	.01
Disapprove	.32	.30	-.02
Don't Know	.04	.05	.01
Respondents in Condition	483	509	

Two-tailed difference of proportions test: *p<.10, **p<.05, ***p<.01.

relaxing airport security measures while over 60% opposed such a proposal.

The most important figures presented in Table 1 are in the column presenting the differences in opinions expressed by individuals in the control and treatment groups.³ These differences were relatively small for each of the issues and in only one case—improving transportation infrastructure—did the risk prime generate statistically significant differences. Respondents who received the risk prime were 5% less likely to approve of an increase in funding for building roads and bridges and 4% more likely to say that they did not know whether they approved or disapproved of the proposal. While these differences are not large, they are in the direction we expected—priming individuals to consider risk depressed support for the proposal and increased respondents’ uncertainty.

The differences between control and treatment groups among all respondents were small and for three of the four issues were not statistically significant. However, we expect that the effect of priming risk will be more pronounced for less politically knowledgeable respondents. Thus, Table 2 limits the comparison to those respondents who failed to get all six of the political knowledge questions correct.⁴

When limiting the comparison to these respondents we find somewhat stronger effects for the improving infrastructure proposal. Less knowledgeable respondents who received the risk prime were 5% more likely to answer “don’t know” and 10% less likely to support spending more on building and repairing roads and bridges. There was also a statistically significant difference for the question about sending troops to Darfur. Less knowledgeable respondents who received the risk prime were 7% more likely to answer “don’t know” compared to those who answered the question without any mention of risk. The increased uncertainty among the treatment group came at the expense of support for the proposal, which declined under

³Since respondents were randomly assigned to the control and treatment groups, it should not be necessary to control for other factors. However, when we did use multivariate measures to include such controls, our findings did not differ substantively from those we present here.

⁴There were no statistically significant differences between the control and treatment groups among respondents who got all of the political knowledge questions correct.

Table 2: Effect of Risk Prime on Issue Preferences (Less Knowledgeable Respondents)

	No Risk Mention	Risk Prime	Difference
<i>Relax Airport Security</i>			
Approve	.35	.31	-.04
Disapprove	.60	.61	.01
Don't Know	.06	.08	.02
<i>Troops to Darfur</i>			
Approve	.54	.48	-.06
Disapprove	.30	.29	-.01
Don't Know	.16	.23	.07**
<i>Improving Infrastructure</i>			
Approve	.77	.67	-.10***
Disapprove	.17	.22	.05
Don't Know	.06	.11	.05**
<i>Cut Taxes</i>			
Approve	.65	.69	.04
Disapprove	.30	.24	-.06
Don't Know	.05	.07	.02
Respondents in Condition	291	309	

Two-tailed difference of proportions test: *p<.10, **p<.05, ***p<.01.

the treatment condition (though this difference was not statistically significant).

Table 3 presents the comparisons for those respondents who are less knowledgeable about politics and least tolerant to risk (about one-third of the sample). When it comes to relaxing airport security and improving infrastructure, limiting the analysis to this group leads to stronger effects. Respondents given the risk prime were 10% less supportive of the proposal to relax airport security measures. However, rather than an increase among those responding “don’t know,” opposition to the measure increased by 10%.

It is not surprising to find that priming risk significantly influences views on relaxing airport security among less knowledgeable respondents with less tolerance for risk. After all, the potential consequences of such an action (in the form of another 9/11-style terrorist attack) are quite dramatic. Even though support for this proposal was already quite low in the control group, priming individuals to think about risk led to a further erosion of support.

As with the results in Tables 1 and 2, a priming effect was also evident for the infrastructure question among risk intolerant respondents. In fact, the priming effect was largest for this group of respondents. The group exposed to the risk prime was 12% less likely to approve of the proposal and 8% more likely to indicate uncertainty by answering “don’t know.” The persistent priming effect for this issue is notable, particularly given the fact that there are few obviously dramatic risks involved with building and repairing roads and bridges.⁵

Ultimately, the largest and most consistent priming effects occurred for proposals to improve the nation’s transportation infrastructure and relax airport security while the effects were smaller or non-existent for sending troops to Darfur and cutting taxes. We believe that the explanation for these differing effects has to do with the extent to which respondents may have thought about each of these issues prior to taking the survey.⁶ Debates over cutting

⁵If anything, the recent bridge collapse in Minneapolis would suggest that there are more dramatic consequences for failing to improve the nation’s transportation infrastructure.

⁶Unfortunately, we did not ask questions on the survey that allow us to directly test this explanation.

Table 3: Effect of Risk Prime on Issue Preferences (Less Knowledgeable, Risk Intolerant Respondents)

	No Risk Mention	Risk Prime	Difference
<i>Relax Airport Security</i>			
Approve	.33	.23	-.10*
Disapprove	.61	.71	.10*
Don't Know	.06	.06	.0
<i>Troops to Darfur</i>			
Approve	.55	.48	-.07
Disapprove	.28	.31	.03
Don't Know	.17	.21	.04
<i>Improving Infrastructure</i>			
Approve	.79	.67	-.12**
Disapprove	.16	.20	.04
Don't Know	.05	.13	.08**
<i>Cut Taxes</i>			
Approve	.67	.71	.04
Disapprove	.28	.23	-.05
Don't Know	.05	.06	.01
Respondents in Condition	166	161	

Two-tailed difference of proportions test: *p<.10, **p<.05, ***p<.01.

taxes are quite frequent in contemporary politics and the 2008 campaign was no different. Indeed, during the closing months of the campaign, Obama and McCain engaged in a heated debate over whether (and for whom) taxes should be raised or cut. Thus, respondents had likely thought a great deal about the issue and formulated fairly consistent opinions as a result. This would explain why the risk prime did not generate statistically significant differences, even among less knowledgeable and less risk tolerant respondents. A similar explanation may explain the less consistent findings for sending troops to Darfur. While the situation in Darfur is a difficult one for most Americans, it also received a great deal of attention in 2008. On the other hand, improving transportation infrastructure and relaxing airport security were not major issues during the presidential campaign. As a result, citizens may have thought less about these issues prior to taking the survey making their opinions more susceptible to priming effects.

While priming risk did not significantly influence attitudes on all issues, the effect was evident on several issues, particularly for citizens with less political knowledge and less tolerance for risk. Even with a relatively subtle treatment, priming these citizens to think about risk reduced support for changing policies on transportation infrastructure and airport security.

Conclusion

Our findings have demonstrated the importance of understanding how citizens incorporate risk into their evaluation of policy proposals. Since much of the public does not pay a great deal of attention to politics, they may not automatically consider the risks involved in policy alternatives when they are asked to evaluate policy proposals. Interestingly, the most significant priming effects appeared for issues that had been less prominent on the campaign agenda (i.e. proposals on transportation infrastructure and relaxing airport security). On

the other hand, priming risk did not significantly influence opinions on cutting taxes, a proposal that attracts frequent attention. Thus, it appears that citizens are less likely to consider the risks of proposals that they have not previously given much thought to. If this is the case, then it suggests that elites may be able to defeat new policy proposals that initially seem popular simply by framing the proposal as risky. Indeed, the defeat of the Social Security privatization proposal is one example where such a technique was effectively employed.

A more complete understanding of how risk affects the political attitudes of Americans will ultimately generate an improved understanding of the types of policy proposals that are more or less likely to win (and maintain) public support. Scholars often note that the political system tends to inhibit significant policy change in favor of incrementalism (Lindblom 1979). While much of the explanation for this falls at the feet of the political institutions in the United States, our findings suggest that public opinion may thwart (or can be used by elites to thwart) substantial policy changes as well. A large share of the public is risk averse, particularly when it comes to new or unknown risks. Thus, novel and risky policy change may be difficult not only because of the nature of our political institutions, but also because such change is unlikely to win public approval once the public considers the risks involved in those proposals.

Appendix 1

The dependent variable for the analysis is an individual's approval or disapproval (or uncertainty) about four separate policy proposals. The control group was asked, "Please indicate whether you approve or disapprove of the proposals." The treatment group was asked, "Keeping in mind that policies always involve some amount of risk, please indicate whether you approve or disapprove of the proposals." The proposals were worded as follows for both groups and the order in which they were presented to respondents was randomized:

- Increasing the amount that the federal government spends on rebuilding and maintaining roads and bridges.
- Relaxing some of the security measures that have been used at airports since 9/11.
- Cutting taxes for all Americans.
- The use of US troops in Darfur as part of a multinational force to help end the ethnic genocide there.

Appendix 2

The measure of risk tolerance was developed from a two-question battery on the survey. These questions were asked later in the survey to assure that respondents' answers to these questions were not influenced by the earlier risk prime. All respondents were first asked the following question:

Suppose you are the only income earner in the family, and you have a good job guaranteed to give you income every year for life. You are given the opportunity to take a new and equally good job, with a 50-50 chance it will double your income and a 50-50 chance that it will cut your income by a third. Would you take the new job?

If the respondent reported that they would take the new job under these conditions, they were asked a follow-up:

Suppose the chances were 50-50 that it would double your income, and 50-50 that it would cut it in half. Would you still take the new job?

If the respondent answered no to the initial question, then they were asked this follow-up:

Suppose the chances were 50-50 that it would double your income and 50-50 that it would cut it by 20 percent. Would you then take the new job?

Respondents who answered yes to the initial question and also answered yes to the follow-up were classified as the most tolerant of risk. Respondents who answered no to the initial question and also answered no to the follow-up were classified as the least tolerant of risk.

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