# Does Answering Survey Questions Change How People Think About Political Issues? A Test of Whether Political Attitudes Are Pre-Existing or Constructed

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#### Abstract

Does answering survey questions change a person's set of available considerations about an issue? A unique double-blind randomized survey experiment provides an answer to this question. At the beginning of a sample survey, respondents answered an open-ended question asking them to list the issues that came to mind when thinking about one of eight randomly assigned issues. Respondents answered the same question at the end of the survey, but for a different issue from the set. Between the open-ended questions, respondents answered closed-ended questions about thirteen political issues, including some questions that explicitly linked issues. Responses to the open-ended question at the beginning of the survey are no different from responses at the end of the survey. The results cast doubt on theories that political attitudes are constructed at the time of a survey and support theories that political attitudes exist prior to the survey. Do people have real opinions when answering public opinion surveys, or do they express "doorstep" opinions made up at the time of the survey or even created by the survey? This question has puzzled social scientists for decades and sits as the crossroads of most of the important theories of human behavior in all social sciences. The question arises from widespread evidence of inconsistency and instability in survey responses (Converse 1964). People often express seemingly contradictory opinions in surveys, such as the desire for lower taxes, greater spending on public programs, and balanced government budgets. People often give different responses to the same survey question asked years or even weeks apart. Changing the order of questions in a survey can produce significant differences in responses.

Some researchers believe that response inconsistency and instability indicate that political attitudes are formed at the time of a survey (Wilson and Hodges 1992; Zaller and Feldman 1992; Zaller 1992) or nonexistent (Converse 1964). To others, response instability indicates a problem with survey instruments (Achen 1975). Resolving these competing views of survey responses has been difficult due to the challenges of measuring people's attitudes, manipulating the relevant variables in their social context, and controlling all of the variables that may determine the ways in which social context and individual-specific variables interact. Even worse, researchers may have no valid way to find out whether an attitude exists before measuring it.

One critical disagreement between the competing theories of survey response is whether the ideas, considerations, attitudes, or preferences people hold are easily changed by the survey itself. This paper offers a novel survey experiment to adjudicate this longstanding disagreement. To test whether surveys change respondents' available

considerations on important political issues, a survey experiment presented respondents with an open-ended question near the beginning of the survey asking them to list issues that came to mind when they thought about another issue chosen randomly from a set. During the next 15 to 20 minutes, respondents answered questions about more than a dozen political issues. At the end of the survey, respondents again answered an openended question asking them to list issues that came to mind when they thought about another issue chosen randomly from a set. Responses to the first open-ended question in the survey serve as a control group measuring people's considerations before exposure to the survey treatment. Responses to the second open-ended question are the treatment group. Comparing the set of considerations mentioned on issues at the beginning of the survey with the considerations mentioned on the same issue at the end of the survey tests whether the survey changes how and what people think about political issues.

Section 1 distills the many competing theories of survey response, focusing on the line of demarcation between pre-existing attitudes and constructed attitudes. Section 2 describes the unique survey experiment. Section 3 presents the results from the experiment, first comparing changes in considerations listed by all of the respondents to the survey, then comparing changes for only the least informed half of respondents, which many theories of constructed attitudes claim should be the most susceptible to having ideas put in their heads by the survey. Section 4 explores the implications of the findings for theories of mass political attitudes and survey responses.

#### Are Attitudes Pre-existing or Constructed?

Allport (1929) offered one of the earliest definitions of political attitudes in a pioneering study of college students during the 1928 election. Allport defined an attitude as a "disposition to act which is built up by the integration of numerous specific responses of a similar type, but which exists as a general neural 'set,' and when activated by a specific stimulus results in behavior that is more obviously a function of the disposition than of the activating stimulus" (Allport 1929:221). Critical to the definition is that attitudes exist independently of social context or stimuli and are uncoverable by asking people questions in a survey format. In the context of a survey, an opinion is a verbal report of an attitude. A social context may activate or interact with attitudes, but a person's attitudes, and, by extension, their opinions, are more a function of their predispositions than of the context or stimuli. The importance of Allport's article lay in its implication that attitudes exist prior to answering survey questions and are determined primarily by individual-specific rather than context-specific variables. Individualspecific variables include political experiences, social group membership, and socialization as well as psychological traits. Allport's research also justified the use of public opinion surveys to measure political attitudes.

Converse offered one of the first systematic critiques of the pre-existing attitudes theory, concluding "large portions of an electorate simply do not have meaningful beliefs" (1964:245). The majority of the mass public gives survey responses that are not a product of any sort of true opinions but more a function of things put in their heads by the survey or by the latest message they heard from political elites or the media. Doubts about the existence and stability of attitudes have spread throughout psychology, political

science, marketing, and economics (e.g, Bertrand and Mullainathan 2001).

Converse provided an original empirical account of response instability. But his influential article lacked a theoretical explanation for vacillating survey responses, other than to assert that people's attitudes may not exist. If attitudes are non-existent, presumably a person's survey responses are random draws from the available responses. Converse believed that survey responses are often random, particularly over-time. But, randomness in survey responses cannot explain other interesting empirical findings, such as question order effects. Converse's non-attitudes thesis lacks a mechanism to explain why non-attitudes produce responses that are not just randomly unstable, but systematically varying according to manipulations such as question order, response order, wording, and the information people receive before answering the questions. If question order and wording highly influence people's survey, there must be something in people's heads to influence in the first place.

Zaller and Feldman (1992) and Zaller (1992) bridge the gap between the *nonattitudes* and *pre-existing attitudes* theories while providing a mechanism to explain Converse's findings. The mechanism is that people answer survey questions by sampling from available considerations. A consideration in their model is any reason for taking a position on an issue. Considerations are more specific than attitudes as Allport defined them. A person may have multiple considerations on any attitude. According to Zaller and Feldman, most people possess opposing considerations on most issues and could have an attitude or opinion on either side of an issue. People answer survey questions by sampling and averaging across the considerations salient to them at the moment of response. Considerations thought about more recently are more likely to be sampled.

The cornerstone of this theory is that survey responses are the result of respondents sampling stochastically from a mental database that includes considerations on both sides of an issue.

In contrast to the non-attitudes model, Zaller and Feldman's model implies that people do have something in their heads on most issues. Unlike the pre-existing attitudes model, people cannot reach into a mental file and pick out an existing attitude about an issue. Instead, they sample from a few considerations made salient at the moment. Over-time changes in survey responses are explainable since a person's available considerations may be changed by the media, real events, or conversations with others. In order to explain question order effects within a survey, a necessary condition for Zaller and Feldman's model is that a person's available considerations are changed by the questions in a survey. An important implication of this mechanism is that public opinion surveys unintentionally manipulate the considerations that respondents use to construct their response to a question. Surveys may create rather than uncover the political attitudes that researchers hope to study.

Zaller and Feldman's (1992) and Zaller's (1992) theory of public opinion is closer in spirit and implications to constructed attitudes than to pre-existing attitudes. Their model implies that the answer to any question is at least as much a function of the stimuli in the survey as it is the attitudes that people might have in memory when the survey begins. According to Zaller, "most of what gets measured as public opinion does not exist except in the presence of a pollster" (1992:265).

Several theories based on pre-existing attitudes also explain response instability. Achen (1975) argues that over-time variation in survey responses is due to measurement

error in questions. Ansolabehere, Rodden, and Snyder (2008) agree with the measurement error theory and show that combining questions on multiple issues reduces apparent over-time fluctuations in responses and strengthens the explanatory power of issues in vote choice models.

Measurement error is less viable as an explanation for question order effects and other manifestations of response instability. Variation in multiple responses to the same question over time may indicate a problem in the reliability of the survey instruments. Systematic differences in responses due to the order of questions suggest something more than measurement error is behind response instability.

Measurement error is not the only theory of response instability rooted in the idea that people start a survey with a relatively stable set of attitudes. Alvarez and Brehm (2002) argue that a person's predispositions, especially their core values and beliefs, filter stimuli that a person might receive in a survey, including question wording and order. Response instability is due to widespread ambivalence, or conflicting considerations as in Zaller's model, that cause people to change their understanding of which core values and beliefs are relevant to a survey question. This model also implies that people have something in their heads at the start of the survey. When answering survey questions, respondents "figure it out on the spot" (Alvarez and Brehm 2002:9) using their preexisting considerations rather than "making it up as they go along" based on considerations that change during the survey.

Another theory compatible with pre-existing attitudes that also implies response instability is based on the idea that people have nonseparable preferences on issues. Lacy (2001a, 2001b) demonstrates that people who have nonseparable preferences across

issues — their preference on one issue depends on the outcome of another issue — will give different responses depending the order of questions in a survey even though their underlying set of preferences remain unchanged. In this theory, preferences are synonymous with opinions and represent verbal reports of latent attitudes across issues. Nonseparable preferences also explain over-time instability in survey responses since people change their induced preference on one issue as their perception of the status quo changes on related issues. Testing whether a person's preferences are nonseparable has involved the use of survey instruments that explicitly link two or more issues (see Lacy 2001a). But survey instruments linking issues may put considerations in respondents' heads that were not there before the survey. Nonseparable preferences may be constructed by the very survey questions designed to uncover them.

The debate about whether attitudes are pre-existing or constructed is far from settled. The widespread acceptance of attitudes as temporary constructions creates a conundrum for survey researchers. On one hand, most theories of survey response hold that few people have real attitudes on most issues. Much empirical evidence to date generally supports theories that attitudes are constructed at the time people answer survey questions and are mostly non-existent before then. On the other hand, the large community of researchers spends millions of dollars on the American National Election Studies and other surveys whose purpose is to uncover people's political attitudes, which presumably exist prior the survey. Recent studies showing that political attitudes and behavior are partially determined by genetics (Alford, Funk, and Hibbing 2005; Fowler, Baker, and Dawes 2008) and personality (Jost 2006, Hetherington and Weiler 2009) also imply that something stable must be lurking under responses to public opinion surveys.

The pre-existing attitudes versus constructed attitudes debate clearly holds important implications for fundamental theories in the social sciences.

#### **Testing Whether Attitudes are Pre-existing or Constructed**

Much of the evidence supporting theories of non-attitudes (Converse 1964) or constructed-attitudes (Zaller 1992) in survey responses are the phenomena the theories explain: over-time instability, question order effects, and inconsistent opinions. Yet competing theories of pre-existing attitudes based on measurement error (Achen 1975; Ansolabehere, Rodden, and Snyder 2008) core beliefs and values (Alvarez and Brehm 2002) or nonseparable preferences (Lacy 2001) purport to explain the same phenomena. Since several theories can explain the same phenomena, over-time response instability, question order effects, and inconsistent survey responses are not clear evidence of constructed attitudes.

Additional evidence in favor of the constructed attitudes model comes primarily from analysis of over-time changes in public opinion on a variety of issues, especially in the face of changes in elite discourse or media coverage (Zaller 1992). But these tests are a few steps removed from the core premise of the constructed attitudes model that people make up their survey responses at the time of the survey. Many other things may account for over-time changes in survey responses, including real attitude change (Krosnick 1988). Several studies show examples in which public opinion did not change over time even with significant changes in elite discourse and media coverage (Dobryznska and Blais 2008; Zaller 1998).

A more direct test is needed to determine whether people have pre-existing attitudes at the time of a survey or construct their attitudes during the survey. Such a test should occur as an experiment in order to minimize the intrusion of the outside world and the potential confounding variables it brings. The experiment should also attempt to measure what people think at the start of the survey, before the survey itself becomes a confounding variable. The experiment could focus on over-time changes in survey responses in a panel format. However, it is difficult to measure or control for a respondent's real world experience between the waves of a panel. The experiment should focus on changes in people's considerations about an issue within a survey, especially since the strongest and most unsettling implication of the constructed attitudes model is that a survey itself can change people's considerations about an issue. If survey responses are door-step constructs, then the question wording and question order in a survey should be capable of changing a respondent's set of considerations on an issue.

Many different experimental designs could test whether attitudes are pre-existing or constructed. Asking respondents to answer closed-ended questions at the start and end of a survey is one approach. But, changes in responses to closed ended questions in a survey are touted as evidence of constructed attitudes (Zaller 1992), measurement error (Achen 1975), and nonseparable preferences (Lacy 2001a). Open-ended questions are a better test of what people have in their heads at the start and end of a survey. The openended question could be broad, such as "what comes to mind when you think about this issue?" However, an overly broad question at the start and end of the survey runs the risk that respondents at the start will offer all sorts of responses but at the end will focus their responses on issues that appeared in the survey simply because they have a different

understanding of the context and meaning of "what comes to mind when you think about this issue?" What is in their head may not have changed during the survey, but their understanding of what the survey is about may change their interpretation of the open-ended question.

We focus instead on a more specific open-ended question that clarifies the scope of the question and also matches the stimuli in the survey itself, which are issues in an election campaign. The survey experiment appeared on a three-wave panel study conducted by Knowledge Networks during 2004.<sup>1</sup> Near the beginning of the first wave of the survey,<sup>2</sup> respondents answered the following open-ended question:

<sup>&</sup>lt;sup>1</sup> Knowledge Networks recruited over 50,000 subjects nationwide to participate in surveys administered by WebTV. The computer format of the survey allows respondents to complete surveys at their leisure, and often results in more reliable and valid responses than telephone interviews (Chang and Krosnick 2009). A random sample of the Knowledge Networks panel was chosen to participate in a three-wave survey, with Wave 1 conducted April 27-May 31 (N=1308); Wave 2, September 17-October 7 (N=947); and Wave 3, November 19-December 3, 2004 (N=717). A sample of 211 new respondents also completed interviews in Wave 3. Completion rates were 76 percent in Wave 1, 85 percent in Wave 2, and 77 percent in Wave 3.

<sup>&</sup>lt;sup>2</sup> Respondents first answered questions asking their party identification, ideology, evaluation of the economy and war in Iraq, feeling thermometer ratings of the candidates, likelihood of voting in the upcoming presidential election, and their likely choice of

"When you think about the issue of {spending on national defense, spending on education, immigration, allowing gay and lesbian couples to adopt children},

what other issues come to your mind? You may list as many as you like." Respondents saw only one of the four issues in brackets chosen randomly. Respondents typed their answers in a textbox. The purpose of the question is to focus respondents on political issues rather than other considerations they might list, such as personal experiences or recently-seen news stories, which the survey experiment cannot manipulate. Respondents may begin the survey with many different considerations on an issue. The experiment was designed to solicit a specific subset of those considerations that are potentially manipulable in the survey.

For the next 15 to 20 minutes, respondents answered questions about thirteen political issues, including the four possible issues in the open-ended question (See Appendix for question wording). At the end of the issue questions, respondents saw a grid listing all of the issues and asking the respondent to rate how much she knows about each issue and how important each issue is to her. The list also served as a reminder to respondents about the issues in the survey. Following the issue questions, respondents once again answered the open-ended question about what other issues come to mind, this time for another issue from the set. No respondent answered an open-ended question

candidates in the election. All issue questions appeared after the first open-ended question.

about the same issue at both the beginning and end of the survey.<sup>3</sup>

In the second wave of the survey, fielded four months later, the same experiment was performed with a different question wording and a different set of issues. The openended question from the second wave of the survey read:

"When you think about the issue of {taxes, fighting terrorism, Social Security, allowing gay and lesbian couples to be married}, what other issues come to your mind? In particular, what other issues are related to or relevant to {issue}? You may list as many as you like."

The remainder of the survey was very similar to wave one, with questions about the same thirteen political issues, issue knowledge, and issue importance before respondents once again saw the open-ended question about the other issues that come to mind.

<sup>3</sup> An alternative research design would ask open-ended questions about the same issue at the beginning and end of the survey to test whether individuals change their open-ended responses. Such a design is unnecessary since random assignment of respondents to different issues at the end of the survey means that aggregate responses can be compared to show whether the content of responses to a question change depending on whether it is at the start or end of the survey. Furthermore, asking a question about the same issue at the start and end of the survey would be undesirable. We pilot tested such a design and found that significant numbers of respondents either did not answer the second question about an issue or responded "I already answered this question." Respondents may also seek to provide similar answers to the question at the end of the survey and at the beginning in order to appear consistent in their responses.

If the set of considerations a person has about an issue can be changed by the survey, then we should expect respondents to be more likely to mention at the end of the survey some of the issues contained in the survey. If a person begins a survey with a pre-existing set of considerations about which issues are linked to which other issues, then we should expect them to list those issues at the very beginning of the survey as an indication that they have something in their heads about the issue before constructing opinions on the doorstep. We should further expect that asking people a battery of questions about issues, including some questions that explicitly link issues, should not change the kinds of issues they mention as relevant to other issues.

The battery of questions about the thirteen issues in the survey included several questions that linked pairs of issues. In wave 1, respondents answered a question on universal health insurance if immigration levels increased significantly and then if immigration levels decreased significantly. Similarly, respondents answered a question on immigration if the government provided universal health insurance and then if it did not. The issues in the open-ended questions were paired with other issues in the survey to detect nonseparable preferences. Respondents answered questions linking taxes and education spending, defense spending and health care, Social Security conditional and free trade, same sex marriage conditional and same sex adoption, and, in wave 2 only, immigration conditional and fighting terrorism (see Appendix for examples of question wording). Some of these issues may have clear linkages in policy debates, others may not. The purpose is to link some issues that make sense as relevant to each other as well as some issues that do not.

In each wave of the survey, between 71 and 77 percent of respondents answered

the open-ended question on each of the issues when it appeared at the start of the survey. Between 75 and 83 percent of respondents who answered the open-ended question at the start of the survey also wrote an answer to the open-ended question at the end of the survey. We do not include in these totals the respondents who wrote something in the text box but did not answer the question, including responses such as "no opinion," "nothing at this time," and "I'm not sure." Only a few respondents left the textbox completely blank.

Research assistants coded the content of each open-ended response, focusing on whether the respondent mentioned any of the other issues included in the survey. Some respondents wrote responses that could count under multiple issues. Some respondents listed issues that were not in the battery of questions that followed. Other respondents did not list any issues. Comparing the proportions of respondents who mention specific issues at the end of the survey to the proportions who mention those issues at the beginning of the survey tests whether the act of taking the survey puts issues or considerations into respondents' heads that were not there prior to the survey.

Specifically, the experiment tests the competing hypotheses:

*Hypothesis (Attitudes are Constructed)*: The proportion of respondents listing an issue at the end of the survey is larger than the proportion of respondents listing the issue at the beginning of the survey.

*Hypothesis (Attitudes are Pre-existing)*: The proportion of respondents listing an issue at the end of the survey is not larger than the proportion of respondents listing the issue at the beginning of the survey.

One concern that might arise from the hypotheses is that the null hypothesis is

that attitudes are pre-existing. Given that the hypotheses are competing, one theory must be associated with the null. In this case the null that attitudes are pre-existing is appropriate since the theory holds that we should not expect a change in the content of open-ended responses from the beginning to end of the survey. Theoretically, the preexisting attitudes hypothesis is appropriate as the null. The constructed attitudes model should stand as the alternative hypothesis since it claims that that content of respondents' attitudes will change as a function of the survey stimulus.

#### Results

The hypotheses are tested for the eight different issues that appeared in the openended questions. For those eight issues, research assistants coded 31 different response categories that correspond broadly to sets of the thirteen issues that appeared in the survey.<sup>4</sup> Other issues that appeared frequently in the open-ended responses but not in the remaining survey were also coded.

Table 1 presents the results, first for the issues in wave 1 of the survey, then for wave 2. The categories listed under each issue capture the content of the questions that followed in the survey. Issue categories appear in order from most frequently to least

<sup>&</sup>lt;sup>4</sup> Two research assistants coded the survey responses before learning the purpose of the coding or the hypotheses to be tested. Inter-coder reliability (K) on each of the 31 response categories ranged from .73 to .97, with a mean of .86. For the analysis we use one of research assistant's codings rather than merging them. None of the results that follow change depending on which coder we use.

frequently mentioned in the first open-ended question. A "+" next to an issue indicates issues linked to each other in the questions to detect nonseparable preferences. An issue with a "+" may be thought of as receiving a strong treatment since the survey questionnaire explicitly linked the two issues. A "#" represents an issue category that did not appear in the survey but that appeared frequently in the open-ended responses. The issue categories with "#" were not part of the treatment since no question in the survey should have stimulated respondents to think about the issue. The column *Start* indicates the proportion of respondents who mentioned the issue category in the open-ended question at the start of the survey. The column *End* is the proportion of respondents who mentioned the issue category at the end of the survey. Each column also lists the number of respondents who answered the question. The proportions of responses in each category are based on the number of respondents who answered the open-ended question.<sup>5</sup> The last column presents a difference in proportion stest for the difference

<sup>&</sup>lt;sup>5</sup> The proportions of respondents listing an issue in each open-ended question are calculated only for respondents who answered that open-ended question. About 15 percent of respondents who answered the open-ended question at the beginning of the survey did not answer the open-ended question at the end of the survey. Calculating the proportion of responses to the second open-ended question based on the number of respondents who answered the first open-ended question would bias the results against finding evidence for constructed attitudes since all of the proportions at the end of the survey would decrease due to the larger N in the denominator. Counting only respondents who answered both questions drops the N in the first column but increases

(*End Proportion – Start Proportion*) in the first row and its standard error in parentheses.<sup>6</sup>

#### [Table 1 About Here]

For only three of the 31 different issue categories listed by respondents did the proportions of mentions at end the survey exceed by significant margins the proportions of mentions at the start of the survey. These three issues, indicated by positive coefficients, are *English or language* mentioned in response to immigration in wave 1, *rights or privacy* mentioned in response to terrorism in wave 2, and *taxes* mentioned in

the proportions of mentions, also biasing the results against the constructed attitudes hypothesis. However, none of the alternative methods for calculating percentages of responses alters the results.

<sup>6</sup> Although the hypotheses are directional, we present two-tailed tests since the proportions of mentions in several categories declined during the survey. A two-tailed test allows an assessment of the statistical significance of responses that decrease as well as those that increase. Given the sample sizes in Table 1, the sensitivity of the difference in means test is .11 for a category with the median proportion of mentions at the start of the survey (.18). Some smaller changes, such as *English* under *immigration*, are statistically significant since the change in mentions is large relative to its baseline, in this case a .067 increase from a baseline of .049. The power of the t-test varies by the size of the effect, ranging from .99 for large changes such as *domestic spending* under Defense down to .20 for small changes such as *government spending* under *terrorism*. Statistical power is .84 for the median effect size in Table 1.

response to Social Security in wave 2. English or language barriers were never mentioned in the survey questionnaire. Despite this absence of a stimulus to mention English during the survey, less than 5 percent of respondents mentioned English in response to immigration at the start of the survey while nearly 12 percent did so at the survey's end.

The increase in wave 2 of mentions of rights and privacy is clearly significant, with less than 3 percent of respondents mentioning them at the start of the survey while nearly 16 percent mentioned these issues at the end. The percentage of respondents mentioning taxes when asked about Social Security increased from less than 5 percent at the start of the survey to just over 10 percent at the end. In both cases only a small percentage of respondents mentioned these issues at the start of the survey.

Six issue categories show a significantly lower proportion of mentions at the end of the survey than at the beginning, indicated by negative coefficients. In wave 1, mentions of *other domestic spending* programs in response to education spending declined from 37 percent of responses to 16 percent. Mentions of *domestic spending* in response to defense spending also declined precipitously, from about 43 percent of responses to under 20 percent by the end of the survey. The wave 2 issues show significant declines in the mentions of *energy, globalization, trade, or the Middle East* in response to terrorism, a drop in the percentage of people mentioning *Medicare or health care* when asked about Social Security, and a slight drop in the proportion who mention *Social Security* or other benefits in response to same sex marriage.

A decrease in the proportion of respondents who mention an issue runs against the constructed attitudes hypothesis. Why would an issue have a much lower probability of

being mentioned by respondents when it should have been activated or retained in memory by a question in the survey? One explanation is that after answering questions about an issue during a survey, respondents may believe they have "said their piece" about it and no longer consider mentioning it in the closed-ended question at the end of the survey. Respondents mention the issue at the beginning of the survey since they have not yet had a chance to express their opinion on it, but by survey's end they drop the issue from their set of considerations.

The most important result is that 22 of 31 categories show no difference in the proportion of mentions between the start of the survey and the end.<sup>7</sup> This is compelling evidence that respondents' available considerations on an issue are unchanged by the survey. Respondents know when first asked in a very general open-ended question which issues they are thinking about when expressing an opinion on other issues. There is no evidence that asking people an extensive battery of questions on thirteen issues makes those issues more salient or relevant when respondents think about other issues in the open-ended question. The total of 22 issues with no change in mentions and the six issues with a decline in mentions all reject the hypothesis that attitudes are constructed. It is also important to note that the issue categories most frequently mentioned under each issue show either no change or a drop in responses between the first and second open-ended questions. The most common considerations, and probably the most important,

<sup>&</sup>lt;sup>7</sup> The results are not adjusted for multiple comparisons (e.g., a Bonferroni test) since this would serve only to reduce the number of statistically significant differences, biasing the results against finding evidence of constructed attitudes.

that respondents have at the start of a survey are unchanged by the survey.

The survey included some questions to detect nonseparable preferences. The survey instruments paired immigration and health care (wave 1 only), education spending and taxes, defense spending and domestic spending, same sex marriage and same sex adoption, Social Security and trade, and immigration and terrorism (wave 2 only). Of the issues paired in the nonseparable preferences questions, none show a significant increase in the percentages of respondents who believe the issues are relevant to each other, even after several survey questions explicitly linked the issues. At the start of the survey, substantial percentages of respondents linked some of these issue pairs even before answering survey questions that linked the issues. Including questions to detect nonseparable preferences does not create nonseparable preferences among survey respondents. Many issues are clearly linked in respondents' minds at the start of a survey.

Figure 1 summarizes the results graphically. The graph shows the distribution of changes in mentions from the start to the end of the survey for each of the 31 categories of responses in the wave 1 and 2 questions. The change in mentions across all 31 categories has a mean of -.028 and a median of -.007, neither significantly different from  $0.^8$  But the distribution is skewed to the left, showing that the rate of respondents

<sup>&</sup>lt;sup>8</sup> The graph of effects across all issues provides a better test for multiple comparisons than a Bonferroni adjustment. The graph shows that in aggregate the distribution of differences in proportions has a mean of zero, regardless of the (adjusted) standard error of each individual comparison.

mentioning issues contained in the survey declines for more issues than it increases. Theories of constructed attitudes hold that the rate of mentioning issues from the survey should increase from the start to the end of the survey.

The results may vary by a respondent's level of political sophistication. Some respondents may start the survey with so many considerations in their heads that the survey will have little effect on what they think. Other respondents may start the survey with few considerations on any issue. A generally accepted measure of the number of considerations a respondent may have on issues is the respondent's level of political information in memory (Zaller 1992, Delli Carpini and Keeter 1996). The survey included a list of five open-ended questions to gauge respondent's political information.<sup>9</sup> Half of the sample correctly answered three or fewer questions. Table 2 presents the same calculations as Table 1 for this least informed half of the sample.

#### [Table 2 About Here]

The results are remarkably similar to the results for the entire sample. For five issues the proportion of respondents who mention another issue in the survey is higher at the end of the survey than at the beginning, as predicted by theories that attitudes are constructed. Of these five, only one, adoption by same sex couples, was strongly treated since it was paired with same sex marriage in the questions that explicitly linked issues.

<sup>&</sup>lt;sup>9</sup> What job is currently held by Dick Cheney, which party has a majority in the House of Representatives, which party is more liberal, whose job is it to determine if a law is constitutional, and what percentage vote is required in Congress to override a presidential veto? (see Delli-Carpini and Keeter 1996)

For another five responses, the percentage of people mentioning an issue at the start of the survey is higher than at the end of the survey. This makes no sense in a world in which surveys construct attitudes. This does make sense, however, if respondents do not mention an issue at the end of the survey because they have answered a question about the issue in the survey and "have had their say" about it. For most issues there is no difference in responses at the end of the survey compared to the beginning. Particularly for the response categories mentioned frequently, there is no increase and often a decline in the percentage of people who offer the response at the end of the survey, despite having spent 20 minutes answering questions that linked issues.

A potential confound in the results may be the length of the answers that respondents offer to the open-ended questions at the end of the survey compared to the beginning. Respondents may suffer survey fatigue and write less at the end of the survey, causing the appearance of fewer responses. Comparing the total number of words per response at the start and end of the survey serves as a check for possible survey fatigue. Table 3 presents the average number of words per response for the entire sample. Responses average 24 words across all issues, with a range of 19 to 28 average words per issue. No significant differences appear in the number of words per response at the start and end of the survey for any issue. On four issues respondents write a few more words at the start of the survey, on four issues they write slightly fewer.

The experiment disconfirms the *constructed attitudes* hypothesis. The questions that appear in a public opinion survey, even when some questions explicitly link issues, do not change the set of issues or considerations that respondents think about during the survey. The extensive survey does not bring considerations to mind, even for the least

informed respondents. Respondents bring their considerations and attitudes on issues to the survey rather than forming them during the survey. The very fact that large percentages of respondents see connections across issues at the start of the survey supports theories of pre-existing attitudes. These connections are unchanged by an extensive battery of questions in a survey, further supporting the premise that survey respondents have pre-existing attitudes.

#### Conclusions

This paper serves four purposes. The first is to emphasize that the debate on whether political attitudes are pre-existing or constructed is far from settled. We do not yet have the research and perhaps not even the instrumentation to distinguish among the many competing theories of the survey response and public opinion more generally. Most of the competing theories are observationally equivalent. Measurement error (Achen 1975; Ansolabehere, Rodden, and Snyder 2008), nonseparable preferences (Lacy 2001a, 2001b), sampling from conflicting considerations (Zaller and Feldman 1992; Zaller 1992; Wilson and Hodges 1992), and non-attitudes (Converse 1964) all imply that survey responses may be unstable.

Second, until we are better able to understand the thoughts people have when answering survey questions, our best tool may be the in-depth interview (Lane 1967), or its cousin in mass surveys, the open-ended question. Open-ended questions, though far from perfect, reveal things that closed-ended questions may miss. It is surprising that so few studies use open-ended questions. As Geer (1991) points out, the data from openended questions are at least as valuable as from closed-ended questions.

Third, the findings support research showing that preferences may be linked across issues. People may have in mind a list of the conditions and contingencies under which their preferences on any one issue will hold. If the conditions change, such as the status quo on other issues, then a person will adjust her preferences accordingly. This does not mean that her preferences are contextual and constructed by the survey. It does mean that a person's pre-existing contextual or conditional preferences can be revealed by a survey.

Finally, we find no support for the proposition that people's political attitudes are constructed at the time they answer survey questions. Attitudes are more than doorstep opinions. Most respondents have lists of considerations and relationships among issues in their minds before they encounter survey questions. These considerations, attitudes, or preferences may be latent. Having real choices in an election or even hypothetical choices such as in a public opinion poll can activate the latent opinions. This does mean that the opinions are constructed. Many of the respondents to the survey may never have thought about what issues are related to education spending or immigration. After reading the open-ended question on the survey, over three quarters of the respondents could list issues that came to mind, even before those issues would have been activated in memory by a survey.

Attitudes and preferences on political issues are generally pre-existing rather than constructed. However, some people may not have an opinion on an issue. They may in surveys let us know that they have no opinion, or they may flip a mental coin and come up with a response. There is no doubt that some respondents in surveys give us little more than random responses, perhaps even intentionally changing their responses. In

panel surveys, over 75 percent of the over-time variation in responses is due to less than ten percent of the sample, whose responses fluctuate wildly from one side of an issue to another. The other ninety percent of respondents change less than three points on sevenpoint issue scales, which hardly indicates response instability. For instance, in the 1990-1992 American National Election Studies panel survey, only 5 to 8 percent of respondents changed their responses by more than 3 points on 7-point responses scales for questions about government services, defense spending, government guaranteed jobs, and aid to blacks. Yet this small percentage of respondents accounts for most of the over-time variation in responses and produces low over-time correlations in responses for the entire sample. Converse's (1964) finding of low over-time correlations across people's responses to the same survey item is due to less than 10 percent of the sample changing their responses from one side of the issue to the other. Even if changing survey responses indicate constructed attitudes, the range in which the construction occurs is narrow and within boundaries set by a person's pre-existing attitudes.

The findings from the survey experiment complement recent studies showing that many of the experiments producing large framing or informational effects in surveys are over-stated. Framing effects occur when two or more questions with different wording or context produce significantly different responses, though the underlying meaning of the questions is the same. Druckman (2004) shows that many framing effects disappear when people are allowed to deliberate or listen to expert opinions before answering questions. Another well-documented source of framing effects occurs when subjects in survey experiments receive new information or information from different sources before answering a question. Barabas and Jerit (2010) compare the results of information-

manipulation experiments in surveys to natural experiments in which the same information in the survey experiment was disseminated in real-world settings while a survey was in the field. The natural experiments show much smaller effects of information than the accompanying survey experiments. Survey experiments maximize respondents' exposure to political stimuli, probably artificially inflating the treatment effects often cited as evidence that attitudes must be constructed by the survey. The effects in these experimental manipulations of respondent information are probably shortlived (Gaines, Kuklinski, and Quirk 2007). This paper reaches the same conclusion by using a survey experiment to show that the general effect of surveys on respondents' attitudes is often over-stated. In the experiment, respondents ended the survey with the same considerations in mind as when they began the survey.

We do not interpret the findings as an across-the-board indictment of research showing that attitudes are constructed. It is clear to any student of survey research that question order, question wording, interviewer characteristics, survey mode, and many other variables influence survey responses. However, from these empirical regularities it is hard to conclude that most people most of the time have attitudes that are mostly constructed. Too many characteristics of individuals, from sociodemographic characteristics to political belief systems to real-world experiences, predict how people answer survey questions for us to reject the notion that attitudes are at least partly preexisting.

Most people most of the time have mostly pre-existing attitudes. Some people, though not a very large percentage of the population, do appear to lack political attitudes. Some of these non-attitudes may be the random responses of people who do not want to

be bothered by a survey or who do not take the survey seriously. Most of the public has real, pre-existing attitudes on most issues, though the attitudes may be latent. Once activated, these latent attitudes are predictable based on respondents' demographic characteristics, political beliefs, party identification, and other factors that are largely stable.

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Issue (Wave 1)	Start	End	Difference (Std Error)
Immigration	N-249	N-209	
	202	N-208	042
# 3005	.502	.200	042
Other domestic spending programs	223	290	(.042)
Other domestic spending programs	.225	.270	(039)
+ Health/medical care	168	147	(.037)
· Treatili, medical care	.100	.117	(033)
Terrorism	133	101	- 032
			(.030)
Taxes	.087	.121	.034
			(.027)
# English, language	.049	.116	.067*
			(.025)
Education Spending	N=235	N=185	
Other domestic spending programs	.370	.162	208*
			(.042)
Spending within education	.242	.270	.029
			(.042)
+ Taxes	.085	.108	.023
			(.029)
Defense Spending	N=242	N=182	
+ Domestic spending	.427	.187	241*
			(.044)
Spending within defense budget	.273	.324	.051
			(.045)
Taxes	.099	.071	028
			(.028)
Nature of threat (Iraq, Iran, N. Korea)	.070	.088	.018
			(.026)
Adoption by Same Sex Couples	N=246	N=202	
+ Same Sex Marriage	.463	.208	255*
			(.04)

Table 1: Differences in Issues Mentioned in Open-Ended Questions at the Start and End of the Survey, All Respondents

Entries are proportion of respondents listing an issue, with differences in proportions in far right column and standard errors in parentheses.

\* indicates p<.05, two-tailed. + indicates a "strong treatment" involving linked issues in the survey. # indicates issues never mentioned in the survey.

Issue (Wave 2)	Start	End	Difference (Std Error)
			(304 21101)
Terrorism	N=174	N=146	
# Security	.318	.295	023
			(.052)
Energy, Globalization, Trade, Middle East	.297	.158	139*
- · ·			(.047)
+ Immigration	.247	.260	.013
	100	107	(.05)
Government spending	.133	.137	.004
	000	1.50	(.038)
Rights, Privacy	.029	.158	.129*
T	012	021	(.031)
laxes	.012	.021	.001
			(.014)
Taxes	N=193	N=119	
Other domestic spending	.409	.303	107
5 5F			(.056)
+ Education spending	.238	.176	062
1 0			(.048)
# Types of taxes (e.g., income, property)	.161	.092	069
			(.040)
# Budget deficits, Debt	.115	.144	.029
			(.039)
Social Security	N=195	N=149	
Medicare Health care	523	331	- 191*
		1001	(.053)
Taxes	.047	.107	.060*
			(.028)
Defense spending	.021	.014	007
			(.014)
+ Trade, Globalization	.010	.000	010
			(.008)
Some Sou Marriage	NI_175	NI_1 <i>55</i>	
Same Sex Marriage	N=1/5	N=155	000*
Social Security, Other benefits	.293	.213	U8U* ( 049)
# Children (other than adaption)	120	104	(.048 <i>)</i> 061
	.132	.174	(041)
+ Adoption by same say couples	102	168	065
A respection by same sex couples	.102	.100	(037)
			(.037)

### Source: 2004 Knowledge Networks Survey.

Issue (Wave 1)	Start	End	Difference (Std Error)
Immicrotion	N-100	NI-79	
	IN-109	1N - 70	052
# JODS	.128	.077	032
Other domestic spending programs	103	256	(.040)
Other domestic spending programs	.195	.230	.004
+ Health/medical care	168	147	- 021
Theatth medical care	.100	.177	(033)
Terrorism	133	101	- 032
	.155	.101	(030)
Taxes	.087	.121	.034
			(.027)
# English. language	.049	.116	.067*
···			(.025)
Education Spending	N=96	N=84	
Other domestic spending programs	.417	.131	286*
			(.067)
Spending within education	.134	.298	.164*
			(.061)
+ Taxes	.031	.083	.052
			(.035)
Defense Spending	N=95	N=72	
+ Domestic spending	.457	.222	235*
			(.075)
Spending within defense budget	.200	.319	.119
			(.068)
Taxes	.099	.071	028
		_	(.028)
Nature of threat (Iraq, Iran, N. Korea)	.053	.069	.017
			(.037)
Adoption by Same Sex Couples	N=115	N=91	
+ Same Sex Marriage	.339	.209	130*
			(.063)

Table 2: Differences in Issues Mentioned in Open-Ended Questions at the Start and End of the Survey for Least Informed Half of Respondents

Entries are proportion of respondents listing an issue, with differences in proportions in far right column and standard errors in parentheses.

\* indicates p<.05, two-tailed. + indicates a "strong treatment" involving linked issues in the survey. # indicates issues never mentioned in the survey. Source: 2004 Knowledge Networks Survey.

Issue (Wave 2)	Start	End	Difference
			(Std Error)
Terrorism	N=77	N=56	
# Security	.318	.295	.023
			(.052)
Energy, Globalization, Trade, Middle East	.273	.089	183*
			(.063)
+ Immigration	.195	.268	.073
			(.073)
Government spending	.117	.125	.008
			(.057)
Rights, Privacy	.000	.089	.089*
_			(.033)
Taxes	.013	.018	005
			(.021)
Tayos	N-70	N-13	
Other domestic spending	320	250	070
Other domestic spending	.329	.230	(.086)
+ Education spending	215	091	- 124
Education spending	.213	.071	(071)
# Types of taxes (e.g. income property)	063	163	- 099
"Types of taxes (e.g., meenie, property)	.005	.105	(056)
# Budget deficits Debt	127	068	058
" Duaget delleta, Deet			(058)
			(
Social Security	N=72	N=58	
Medicare, Health care	.625	.362	263*
			(.088)
Taxes	.056	.102	.045
			(.047)
Defense spending	.000	.034	.034
			(.022)
+ Trade, Globalization	.000	.000	0
Same Sex Marriage	N=78	N=72	
Social Security, Other benefits	.182	.167	015
			(.062)
# Children (other than adoption)	.104	.250	.146*
		–	(.062)
+ Adoption by same sex couples	.064	.167	.103*
			(.052)

Table 3: Number of Words Per Open-Ended Response

Source: 2004 Knowledge Networks Survey





Content of Open-Ended Responses Does Not Change From Start to End of Survey

Change in Proportion of Mentions From Start to End of Survey (31 Categories, Mean=-.028, Median=-.007)

#### Supplementary Appendix: Survey Questions

#### **Issue Questions**

[Trade] Some people say that imports of products made in other countries cause American jobs to be lost, and they want the U.S. to raise taxes on imports to make foreign goods harder to sell here. Others say that imports bring in quality goods at lower prices, and they want to reduce taxes on imports to make foreign goods easier to sell here. How about you: Do you want products imported from other countries to be taxed

Response options: 7 points labeled from "a lot more" to "a lot less"

[Social Security] Do you want the government to allow people to put part of their Social Security taxes into their own private savings accounts, such as into stocks, bonds, or mutual funds?

Response options: "Yes" or "No"

[Defense Spending] Do you want the amount of money the U.S. spends on national defense to

Response options: 7 points labeled from "go up a lot" to "go down a lot"

[Medicare] Medicare is a government program that helps people over the age of 65 pay for some of their medical bills and prescription drugs. Do you want the amount of money the government spends on Medicare to

Response options: 7 points labeled from "go up a lot" to "go down a lot"

[Health Insurance] Do you want the government to create a national health insurance system so that everyone pays medical taxes to the federal government and the government pays everyone's medical bills?

Response options: "Yes" or "No"

[Immigration] Do you want the number of legal immigrants allowed into the United States each year to

Response options: 7 points labeled from "go up a lot" to "go down a lot"

[Same Sex Marriage] Do want gay and lesbian couples to be allowed to Response options: 3 points labeled

get married and have all of the same legal rights and benefits as any other married couples

be allowed to have domestic partnerships that provide some legal benefits such as inheriting money from a partner and receiving family health insurance, but not be allowed to have the legal status of marriage

not be allowed to get married or have domestic partnerships or anything else that makes the relationships legal [Adoption] Do you want gay and lesbian couples to be allowed to adopt children Response options: "Yes" or "No"

[Taxes] Do you want the amount of money that people pay in taxes to the U.S. government to

Response options: 7 points labeled from "go up a lot" to "go down a lot"

[Education] Do you want the amount of money the U.S. government spends on education to

Response options: 7 points labeled from "go up a lot" to "go down a lot"

[Abortion] Do you want abortion in the early months of pregnancy to

Response options: 4 points

by law, never be permitted

- be permitted by law only in case of rape, incest or when the woman's life is in danger
- be permitted by law for reasons other than rape, incest, or danger to the woman's life, but only after the need for the abortion has been clearly established

by law, always be permitted as a matter of personal choice

[Assault Weapons] Do you want the government to prohibit people in the U.S. from buying military-style assault weapons or machine guns?

Response options: "Yes" or "No"

[Background Checks] Do you want the government to require that anyone who sells a gun make sure that the person buying the gun is a U.S. citizen and has not been convicted of a violent crime?

Response options: "Yes" or "No"

#### **Questions to Detect Nonseparable Preferences:**

Note: The sample was split randomly into two groups. Group 1 answered four conditional questions to detect nonseparable preferences. Group 2 answered a ranking question. The questions for education spending and taxes appear below. To save space, we omit the similar questions for the other six pairs of issues: (1) foreign trade and social security, (2) terrorism and privacy, (3) immigration and health care, (4) defense spending and Medicare spending, (5) assault weapons ban and background checks for gun buyers, (6) same sex marriage and adoption by same sex partners.

Group 1: Conditional Questions

[Education-Taxes C1] If the government increases people's income taxes to 25% more than they pay now, then would you want the amount of money the government spends on education to

7 point response scale from "go up a lot" to "go down a lot"

[Education-Taxes C2] If the government reduces people's income taxes to 25% less than they pay now, then would you want the amount of money the government spends on education to

7 point response scale from "go up a lot" to "go down a lot"

[Education-Taxes C3] If the government increases the amount of money it spends on education to 25% more than it spends now, then would you want the amount of money that people pay in taxes to

7 point response scale from "go up a lot" to "go down a lot"

[Education-Taxes C4] If the government reduces the amount of money it spends on education to 25% less than it spends now, then would want the amount of money that people pay in taxes to

7 point response scale from "go up a lot" to "go down a lot"

Group 2: Ranking

[Education-Taxes R] The list below contains four different policies the government could adopt. The list may not include the policy you most want. Please select from the list the policy you approve of most.

The government reduces taxes and spends more money on education The government reduces taxes and spends less money on education The government increases taxes and spends more money on education The government increases taxes and spends less money on education

Of the remaining policies, please select the one you approve of most. Response options: Same as above, but omitting the respondent's first choice

Of the remaining policies, please select the one you approve of more Response options: Same as above, but omitting the respondent's first and second choices