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Abstract

In the past decade, access to the Internet has substantially increased, and now various commercial software packages provide the means for researchers to readily design and create online surveys in a short period of time. The purpose of this dissertation is to demonstrate the utility and cost-effectiveness of conducting methodological experiments on survey question effects such as effects of not sure, don't know, and no opinion, tone of wording: forbid vs. allow, effects of middle response alternative, and response order effects.

Since political scientists rarely collect their own data, due to related cost issues, investigators are unable to easily test hypotheses due to their dependency on secondary data or small voluntary student samples. In this research, several classic experiments on question form, wording, and context were replicated using the Internet as a public opinion laboratory.

This study was conducted in two phases prior to 2000 presidential election using Internet technology at the University of Cincinnati. Respondents were randomly assigned to one of the two question forms, and the topics of survey questions in this study were focused on issues in the 2000 presidential election campaign adapted for self-administration on the Internet.

Six experiments were conducted examining the effects of no opinion, don't know, and not sure response alternatives. Except in one case, in which a large number

of respondents with a higher level of education expressed opinions about a fictitious issue, the results replicated earlier findings by Schuman and Presser (1981). Two experiments examined the selection of “forbid” vs. “not allow” showing the preference of respondents to choose “not allow” over “forbid.” However, we found a lower margin of difference in our experiments in comparison with those of Schuman and Presser (1981). Three experiments examining the effects of a middle response alternative clearly suggested that offering a “middle alternative” results in a significant increase in its selection. Examining the univariate distribution, a statistically significant difference based on response form was found in only one of three cases. The results suggest that middle response alternative effects may not be generalizable to all issues. The bivariate results were similar to findings of Schuman and Presser (1981) and Kalton, Roberts, and Holts (1980) showing that the inferences about the relationship between background variables and attitude items are not affected by the presence or absence of a middle alternative. Finally, three experiments were conducted to examine the response order effects. Only one of the experiments showed a strong primacy effect, with the other two producing less robust results.

Overall, this research confirms that this new mode of data collection utilizing the Internet technology can be effectively utilized to create and/or replicate various methodological experiments in an efficient and cost-effective manner as well as stimulate the development of new hypotheses on survey question effects.

Behzad J. Jabbari

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CHAPTER 1

INTRODUCTION

The Growth of Internet Access

As computer technology has evolved and come into the grasp of the every day consumer, the World Wide Web has become the preferred medium of communication, commerce, data collection and distribution around the world. The Internet is the fastest growing medium in history. It took radio 38 years to reach 50 million users, TV 13 years, Cable 10 years, and the Internet 5 years (Morgan Stanley Technology Research, 1998).¹ During the late 1995-96, Internet traffic doubled every 100 days. However, since 1997, Internet traffic has roughly doubled every year.² Today, the average computer user can access the Internet for a nominal fee³ and Electronic Mail (e-mail), personal homepages, and file transfers are virtually free of charge for the Internet user.⁴ The Internet offers the ability to manage sophisticated graphics, motion picture, high quality audio, and text. These capabilities have mesmerized Internet users to the point that many of them tend to prefer time spent utilizing the World Wide Web over watching TV, using a phone, sleeping, exercising, reading, watching movies, socializing or doing household work (GVU 10th user survey, 1998)⁵.

¹ <http://makara.phys.cmu.edu/~kavan/cyberspace/trends.html>

² http://www.economist.com/surveys/PrinterFriendly.cfm?Story_ID=2098913

³ Internet connection fees via Internet Service Providers range from \$7 to \$45 a month (2004).

⁴ Yahoo, Hotmail, and Excite are among many companies providing free e-mail service to the general public.

⁵ http://www.gvu.gatech.edu/user_surveys/survey-1998-10/

The number of computer and Internet users has been increasing rapidly. BBC News reported in February of 2002 that more than half of America's households were connected to the Internet. According to U.S. Census, as of September of 2001, 54% of the population was using the Internet, up 33% over three years ago. Every month during this period, two million people were going online for the first time. The level of Internet usage is even higher among younger people. Nine out of ten school children have access to computers either at home or at school. In 2001, 45% of Americans used e-mail, 36% searched for product and service information online, and 39% made online purchases.⁶

According to the Pew Internet and American Life Project, 63% of Americans 18 and over used the Internet, which amounts to 47% growth between March of 2000 and August of 2003. As of December 29, 2003, 79.5% of Americans used the Internet and 63% use the World Wide Web, 17% use wireless Internet, 52% of rural residents had gone online, and 88% of Americans believed that Internet plays a major role in their life.⁷

The United States embassy in Japan reported in April of 2003 that Internet usage among Americans between 2001 and 2003 remained steady between 57 and 61 percent. The report stated that "the American online population is fluid and shifting." It found 24 percent of Americans "truly offline" with no direct or indirect

⁶ BBC News – Internet in half US households - <http://news.bbc.co.uk/1/hi/world/americas/1805746.stm>, Feb. 7, 2002.

⁷ Pew Report on Internet Usage – <http://www.itfacts.biz/index.php?id=P524>, Dec. 29, 2003.

Internet access. The same survey found that 56% of non-Internet users do not think they will ever go online and demographically, non-users tend to be poorer, older, white, female, retired, and living in rural areas.⁸

Growth in usage of the Internet has been even more accelerated in other parts of the world. For instance, between 2000 and 2005, Internet use in Latin America and the Middle East grew more than 210%, compared with 104.9% growth in North America. In 2005, the largest number of Internet users in the world lived in Asia (34.0%) followed by Europe (29.2%) and North America (24.9%). However, the largest percentage of people using the Internet in a single continent is in North America (67.4%) followed by Oceania/Australia (48.6%) and Europe (35.5%). Table 1.1 shows the world Internet usage based on population data contained in the website [gazetteer.de](http://www.gazetteer.de) and Internet usage information published by Nielsen//NetRating, International Telecommunications Union, NIC, and InternetWorldStats.com.

⁸ United States Embassy – Tokyo, Japan – Survey Shows Ever-Changing Patterns in U.S. Internet Use - <http://japan.usembassy.gov>

Table 1.1 – World Internet Usage and Population Statistics

World Regions	Population (2005 Est.)	Population % of World	Internet Usage, Latest Data	Usage Growth 2000-2005	Penetration (% Population)	World Users %
<u>Africa</u>	900,465,411	14.0 %	13,468,600	198.3 %	1.5 %	1.5 %
<u>Asia</u>	3,612,363,165	56.3 %	302,257,003	164.4 %	8.4 %	34.0 %
<u>Europe</u>	730,991,138	11.4 %	259,653,144	151.9 %	35.5 %	29.2 %
<u>Middle East</u>	259,499,772	4.0 %	19,370,700	266.5 %	7.5 %	2.2 %
<u>North America</u>	328,387,059	5.1 %	221,437,647	104.9 %	67.4 %	24.9 %
<u>Latin America/Caribbean</u>	546,917,192	8.5 %	56,224,957	211.2 %	10.3 %	6.3 %
<u>Oceania / Australia</u>	33,443,448	0.5 %	16,269,080	113.5 %	48.6 %	1.8 %
WORLD TOTAL	6,412,067,185	100.0 %	888,681,131	146.2 %	13.9 %	100.0 %
Note: Internet Usage and World Population Statistics were updated on March 31, 2005. Source: www.internetworldstats.com						

Given the central role that the Middle East has played in recent global politics, the region's growth of over 200 percent in Internet use in the early part of this century may have significant geopolitical implications. Latin America and Africa also substantially exceed the world average in Internet-use growth rates, which must be seen as a positive contribution to those regions' economic development.

Survey Research on the Internet

The number of surveys conducted over the Internet has increased dramatically in recent years as well. Conducting survey research via telephone is becoming more difficult. Many individuals avoid the contact by call screening or just simply

refusing to be interviewed (Maisel, 1995). The Internet provides an alternative to both telephone and traditional paper-and-pencil questionnaires. Pilon and Craig (1988) documented a “novelty effect” suggesting an increased response rate utilizing Computer Self-administered questionnaires (CSAQs) over pencil/paper questionnaires.

Today, computers play a critical role in survey research. Utilizing computers in survey research dates back to 1971, when Chilton Research Services conducted the first computer-assisted telephone interviewing (CATI) survey, which has become one the most commonly used methods for data collection in the U.S. and Europe. CAPI or computer-assisted personal interviewing is used for conducting face-to-face interviews. Survey programs are loaded onto a laptop machine and utilized in data collection at the respondent’s home or office location. Other methods for computerized, self-administered questions include voice recognition entry (VRE), touch-tone-data-entry (TDE), prepared data entry (PDE), audio computer-assisted self-administered interviews (ACASI), and the Internet survey.

Since the Internet provides an inexpensive, efficient method to access millions of citizens, considerable growth can be expected in the area of Internet survey development. This method allows for collection of a large amount of data from respondents (Dillman, 1999). Internet surveys can be developed in a short period of time and uploaded to web-sites accessible around the globe. Survey

programming on the web has reached a technical level in which complex branching, response validation, and question/answer randomization are easily programmable (Sarıs, 1991; Batagelj and Vehovar, 1998).

The Internet Survey approach can be divided into two distinct techniques: e-mail based interviewing and browser based interviewing (Batagelj and Vehovar, 1998). E-mail based interviewing can be conducted in various ways. In e-mail only interviewing, the interviewer simply sends an e-mail message to the respondent and requests answers to the survey questions presented in the body of the message. The respondent inserts answers into the original mail and sends it back to the researcher. In this method, organizing answers can be a difficult task requiring a secondary data-entry effort.

Disk by e-mail is a method in which a computer program is shipped to the respondent via e-mail. The respondent runs this program on the local computer and ships the results back to the requestor. This method is cumbersome for the respondent as well as the researcher, but it allows for sophisticated designs such as random selection of questions and the use of complex skip patterns.

Browser-based interviewing⁹ is the most flexible method and it can be utilized to collect data in an interactive session with a respondent. A variety of programming languages such as Java-scripts, CGI-scripts, VB-scripts, as well as Active-X routines in combination with HTML code can be used to customize

⁹ Microsoft Internet Explorer and Netscape are examples of Browser software.

survey forms. Browser-based interviewing (electronic questionnaires) can also provide immediate on-line feedback to the respondent. Help windows can be set up to assist the respondents along the way. Even error checking can be done as users fill out the questionnaire on-line in real time mode and questions can be tailored as users proceed through the electronic survey form.

Browser-based interviewing obviously eliminates the need for having an interviewer. Therefore, all errors and costs associated with the interviewer are eliminated. For example, in an Internet survey respondents type the answers to open-ended questions themselves, which is more likely to be accurate in comparison to those answers collected by an interviewer over the phone (Flemming, 1999). In addition, Internet surveys can collect and transfer data directly to database systems eliminating errors associated with secondary data entry effort.¹⁰ On-line polling thus creates an environment in which public opinion can be gathered quickly and utilized as a powerful tool in the policy-making process.

It is important to point out that many researchers utilize e-mail technology to promote browser-based interviewing efforts. Informing the participants is usually done by placing "banners" in high-traffic search engines and information sites on the web, in addition to directly contacting them via e-mail services. This approach is currently being employed by Harris-Black International, Ltd., a polling

¹⁰ ActiveX scripts in combination with HTML codes can send collected data to database systems for further processing.

organization that is engaged in forecasting statewide elections via the Internet. Excite, Inc. drives Internet traffic to the Harris-Black web-site and respondents are encouraged to register and participate in on-line polls. Researchers from the Political Science Department of the University of Rochester conduct the statistical analysis of the collected data (Black, Terhanian, 1998).

Issues in Internet Survey Research

An important question confronting the field today is whether or not the current on-line population is a seriously biased sample of the electorate. According to Warren Mitofsky, little has changed since the days of Literary Digest disaster. "Instead of sampling from recruited panels that respond by mail, we now have recruited Internet panels that respond by e-mail" (Mitofsky, 1999) and these panels do not represent any larger group. "The people recruited into panels are self-selected, with characteristics that differ from the target population. People on the Internet do not represent the adult population of the country, and the Internet panelists do not even represent people on the Internet (Mitofsky, 1999)." He warns that even though people who conduct these polls are aware of these limitations, they believe that weighting and other data processing can convert their sample into representative results.

A Wall Street Journal article entitled "Are Political Polls Via Internet Reliable? Yes? No? Maybe?" by John Simons (1999) questions the validity of on-line polls. In this article, Gordon Black, chairman of Harris-Black is quoted as saying that

"all research is going to migrate to the Internet," even though most researchers as of now see Web polls as being flawed. The majority of Internet users are male, white, higher-income, educated and technology-oriented. Simons points out that "there are small but important political differences between wired Americans and those who remain unplugged." According to February 1999 data, for instance, a slight plurality of Internet users (34%) claimed to be "independent" voters, 31% said they were Democrats and 29% called themselves Republicans. But among all registered voters, Democrats have the edge: 35% claimed to vote Democratic, compared to 29% who said they vote Republican and 28% who called themselves independent."¹¹

Along the same line, a GVO study (8th survey, 1997) showed that 47% of the online population has a college education and are generally more affluent than the national population. In addition, one of the major findings reported by the GVO study was that approximately 40% of online users falsified their personal information. This can be quite problematic to survey researchers who would like to utilize demographic information in their evaluations of Internet survey data. But, sample representativeness is not the only challenging issue confronting Internet survey researchers. They must also guard themselves against hackers who can significantly affect data quality by changing data (Fisher, Resnick, Margolis, Bishop, 1995).

¹¹ Wall Street Journal, April 13, 1999 issue:
<http://interactive.wsj.com/public/current/articles/SB923957499521692.htm>

The design of Internet questionnaires raises still other issues. Dillman, Tortora, Conradt, and Bowker (1999) reported the results of an experiment comparing a sophisticated questionnaire to a simple version of the questionnaire. “The advanced questionnaire used color, graphics for headers, html tables, and a format that departed significantly from that used in most paper and pencil questionnaires.” The results obtained in this experiment suggested that using a questionnaire without color and html tables required less transmission time, produced higher response rates, and was more likely to be fully completed. The study also showed that respondents took less time to complete the questionnaire; therefore, the advanced page layout in creating web questionnaires “does not translate to higher completion rate and better quality of data” (Dillman, 1999). Of course, technology is changing rapidly. High-speed processors such as Intel Pentium D, Intel Pentium Extreme Edition 840, and Athlon 64 3400+ are capable of processing data quickly. The new wireless technology and high-speed lines allow for extremely fast data transmission. Technology is reaching a point where pages are transmitted instantaneously and use of color, fancy graphics and page layouts do not cause transmission delays leading to poor response rates.

Zukerberg, Nichols, and Tedesco (1999) also examined design challenges while adapting a paper self-administered questionnaire to an Internet self-administered questionnaire. Their report is based on a pretest of a National Library Media Center Survey, which the U.S. Bureau of the Census conducts on behalf of the

National Center for Education Statistics. Two navigational strategies were implemented in this study as well as two item-level edit procedures. They reported that minor changes in wording or formatting can have a large impact on how respondents interact with Internet Surveys (Zukerberg, Nichols, Tedesco, 1999).

New programs such as mrInterviewTM by SPSS provide a complete data collection software solution for managing Web-based projects. Through mrInterviewTM, researchers can incorporate security, access, permissions, and features they need and readily make results available through a Web browser. Other programs such as Survey Select TM, programming languages such as Questionnaire Markup Language (QML), and utilities which allow for automatic transformation from QML to CATI, CASI, and CADI formats (Vehovar and Battagelj, 1999), have been developed to make this development process easier for Internet survey researchers.

Studies performed by Turner (1998), and by Tourangeau and Smith (1996) suggest that a self-administered, computer-assisted questionnaire yields a higher level of response rates in comparison to written questionnaires, especially when dealing with sensitive issues. The Pew Research Center also reports a higher rate of participation among volunteers on the Internet polls than those recruited through national telephone surveys. "About one-third of potential respondents recruited in telephone interviews participated in subsequent Internet poll - 35% in the pre-election online poll, and 33% in the millennium on-line poll. In contrast,

fully 61% of the webpage volunteers completed the millennium online survey (Flemming and Sonner, 1999)."

It is evident that self-administration removes errors associated with an interviewer, such as a variable tone of voice suggesting specific answers. On the other hand, the interviewer interaction also provides the respondents with cues about the meaning of the questions (Schwarz, 1996; Schwarz, Strack, Hippler, & Bishop, 1991). In addition, many other factors not associated with interviewers play a role in influencing the respondent, such as question wording and format and the order of response categories. Design and layout of the instrument can potentially influence responses as well. Studies suggest that this can be observed comparing computer assisted polling and paper-and pencil questionnaires (Baker, Bradburn & Johnson, 1995; Bergman, Kristiansson, Olofsson, & Sjöström, 1994), but such differences do not seem to be substantive (Nicholls, Baker, & Martin, 1986). Nonetheless, changes in screen design that may seem to be insignificant can convey different messages to the respondent.

Conducting survey research on the Internet is not an easy technical task. Many problems such as software breakdowns due to internal bugs, hardware failures, and security issues must be carefully considered. Principles for improving the design of Web Surveys have previously been suggested by Dillman, Tortora, & Bowker (1998). Despite the empirical evidence on the importance of such design, little research has been done in regard to Internet surveys.

Computer assisted surveys allow for a wide range of designs. Text layout, font, color, graphic icons, scrolling, input devices all can be under design control. Still pictures, animated graphics, full-motion video images can influence the results. Simple design changes such as changes in color, placing high-lighted items, and placing the answers in a box can easily affect the completion of web surveys (Dillman, Tortora, and Bowker, 1998).

In many situations, well-trained interviewers compensate for design flaws by assisting the user at the time of the interview. This is not possible when Internet surveys are employed. In general, respondents are not trained for this task and their familiarity with the equipment and the Internet can vary dramatically. Since the survey questionnaire must be understood in the same way by all respondents regardless of the access method, it creates a challenging environment for researchers. In addition, top six browsers, Microsoft Internet Explorer, Mozilla Firefox, Netscape, Apple Safari RSS, Opera, and Deepnet Explorer may not present the HTML files in the same format. The text and background colors can possibly vary on different Web-browsers. Therefore, there is a vital need for testing online questionnaires thoroughly prior to their release.

In the past few years, Internet has become readily accessible to the general public and conducting surveys online is now an inexpensive and quick way of gathering data. Recent technological improvements allow for increasingly sophisticated design possibilities. Now, web pages can be constructed using

various authoring tools incorporating audio and video components in a short period of time. Research scientists can expect continuous growth in online participation since the price of computer hardware has dropped dramatically. There are more computers at homes and offices and the level of proficiency of computer users has increased considerably in the past few years.

However, there are still many limitations associated with online surveys. Data collected on the Internet may not be a true representation of any population, and many online security issues still need to be addressed in order to protect the identity of the survey participants and safeguard collected data. Moreover, due to aging, design and user errors, computers can break down, Internet communication can fail, and programs may not perform as they were expected.

Focus of Present Investigation

Even though much advancement has been made to address these issues and the statistical validity of online surveys, one potentially valuable use for Internet data collection has been largely unexplored: experimental research to test methodological and theoretical hypotheses. The focus of this particular dissertation is to evaluate the Internet as a mode of data collection for conducting experimental methodological research in public opinion.

In this investigation the author demonstrates the feasibility and cost-effectiveness of the Internet as a mode of data collection by replicating several well-known survey question effects in the public opinion research literature.

CHAPTER 2

RESEARCH DESIGN

The purpose of this study is to use the Internet as an experimental laboratory for conducting methodological experiments on such issues as “no opinion,” question wording, effects of middle response alternatives, and response-order effects.

With sufficiently large, varied samples, Internet surveys can be used to conduct such methodological experiments rapidly and efficiently with multiple replications, and at a much lower cost than would be possible with other methods of data collection. However, we do not intend to employ web-based methodology to address sample representativeness or specific technical design issues.

In an attempt to search for patterns of multiple authorship by primary types of data collection, Fisher et al. (1998) discovered that over 95% of data-analysis in three leading political science journals (American Political Science Review, American Journal of Political Science, and Journal of Politics) is based on secondary data (Fisher, Cobane, Vander Ven, Cullen, 1998). Researchers rarely collect their own data due to cost issues. In the present study, several methodological experiments, particularly those carried out by Schuman and Presser (1981), have been replicated to demonstrate the utility of web-based surveys so that political scientists can now collect their own data rapidly and cost-effectively to test various theoretical and methodological hypotheses.

Our study was conducted in two separate phases using Internet technology at the University of Cincinnati. The initial phase of the experiment ran from October 8th through October 24th, 2000, and the second phase, in which some of the experimental conditions were modified, ran from October 24th through November 7th. Students at the University of Cincinnati were recruited as respondents by the faculty of computer science, political science and other Arts and Sciences departments. In addition, visitors to the University's homepage and to a local television station's website were asked to participate through a direct link that had been set up. In order to acquire a diverse set of respondents, announcements also were placed in two local weekly newspapers, City Beat and Citizen, as well as on the Internet list-serve, AAPORNET. The total number of responses during the 30-day period of data collection was 1,356.

Randomization and Administration Techniques

Respondents were randomly assigned to a question form based on "*odd-even second*" design, in which the computer clock was scanned to determine the exact second in which the respondent accessed the website. Those respondents who landed on the website on an odd-numbered second received Form A of the questionnaire, and those who landed on an even-numbered second received Form B (see Appendix A). The topics of the survey questions in this study were focused on issues in the 2000 presidential election campaign, and adapted for self-administration on the Internet.

In order to simulate previous experiments that used the telephone interview process, only one question was presented to the respondent in a separate interview window without any browsing capabilities. All movement buttons such as HOME, NEXT, BACK, and RELOAD were removed. Only after answering the current question, could the respondent move to the next question by clicking on the “Next Question” button placed at the bottom of the interview window. Using Java programming language, the researchers checked data entered by respondents for completeness and possible errors. Users were notified to provide an answer to the present question prior to moving on to the next one. A message was placed at the bottom of the interview window informing the respondent of his/her progress through the survey questionnaire. Cold Fusion programming interface was utilized to route the data to a Microsoft Access database file. Finally, the collected data were analyzed using SPSS statistical package.

An outline of the methodological experiments and topics covered in this study is presented in Table 2.1. The experiments were all conceptual, methodological replications of those conducted by Schuman and Presser (1981), using questions that were appropriate in the context of the 2000 presidential election – i.e., question topics all related to issues and opinions that applied to the then-current presidential election campaign between George W. Bush, Al Gore, and Ralph Nader.

Table 2.1. Experiments and Topics Covered in 2000 Cincinnati Web Study

Topic	Questions
Response Order Effect	1, 4 and 25
Fictitious Issue	7
Middle Response Alternative	12, 13, and 14
No Opinion	5, 6, 8, 9, 10 , and 11
Forbid / Allow	15 and 16
Election / Other	2, 3, 17, and 18
Demographics	19 through 24

Questionnaire Design

In this study we have replicated four classic methodological experiments conducted originally by Schuman and Presser (1981): (1) Effects of presenting a no opinion alternative, (2) Effects of question wording, (3) Effect of offering middle response alternative, and (4) Response order effects. See appendix A for the complete questionnaire.

Effects of Offering a No opinion Alternative

In the first experiment, six questions were created to examine the effects of presenting respondents a “no opinion,” “not sure,” or “don’t know” alternative. Two questions focused on the issue of whether people should be allowed to put a portion of their Social Security payroll taxes into personal retirement accounts.

One question concerned whether gun manufacturers can be sued to recover the costs associated with gun violence in the community. Another question examined whether respondents favored or opposed the death penalty as a punishment for a person convicted of murder. We also measured opinions about managed health care plans and included a question about the legality of abortion under different circumstances as part of these “no opinion” experiments.

As shown in Table 2.2, in the first phase of the experiment, 462 respondents received the unfiltered “Forced-choice Form,” in which there was no explicitly offered option for saying “don’t know,” “not sure,” and/or “no opinion.” Another 483 respondents received the “Offered Form” where all three options: “not sure,” “don’t know,” and “no opinion” were explicitly offered to the respondents. In the second phase, 212 people responded to the unfiltered “Forced Choice Form,” providing “Other” as an additional possible answer to the questions. Also in the second phase, 199 individuals received the “Offered Form,” which was identical to the “Offered Form” in phase one, allowing for all three “not sure,” “don’t know,” and “no opinion” answers.

Table 2.2. Design of Experiments with No Opinion Alternative vs. Forced-Choice

Phase I		
	Forced-Choice Form	Offered Form
N =	(462)	(483)
Phase II		
	Forced-Choice Form with “Other” option	Offered Form
N =	(212)	(199)

Question Wording Effects

The second experiment addressed the effects of changes in question wording. Specifically, we studied the effects of using “forbid” versus “allow” in several questions (ct. Schuman and Presser, 1981). In the present study, we examined the topics of daily prayer and display of Ten Commandments in public schools (see Appendix A). In this study, 682 respondents received the “Forbid” Form and 674 received the “Allow” Form (see Table 2.3).

Table 2.3. Design of Experiments with Question Wording: Forbid vs. Allow

	“Forbid” Form	“Allow” Form
N =	(682)	(674)

Note: Question forms in this experiment were identical in phase I and II.

Effects of a Middle Response Alternative

The third experiment examined the effects of offering vs. not offering a middle response alternative. Respondents were asked how much political leaders in Washington paid attention to the needs of senior citizens, their view on the amount of money spent on national defense, and the role of religion in politics (see Appendix A). In the first phase, 462 respondents received the “Forced-choice Form” with no middle alternative and 483 received the “Offered Form” where “about the right amount” was provided as a possible middle category to the respondents. In the second phase, 212 people responded to the “Forced Choice Form” in which “Other” was an additional possible answer to the questions. However, 199 individuals received an identical “Offered form” to that in phase I (see Table 2.4).

Table 2.4. Experiments with Middle Response Alternative vs. Forced-Choice

Phase I		
	Forced-Choice Form	Offered Form
N =	(462)	(483)
Phase II		
	Forced-Choice Form with “Other” option	Offered Form
N =	(212)	(199)

Response-Order Effects

The fourth and final experiment consisted of three questions, which were designed to address response-order effect. Respondents were asked how much attention they have paid to the U.S. presidential election, what they thought was the most important issue for a presidential candidate to address in the 2000 election campaign, and their overall political views ranging from extremely liberal to extremely conservative (see Appendix A).

In both phases of the study, 674 respondents received Form A and 682 received the Form B, in which the order of the response alternatives was reversed (see Table 2.5).

Table 2.5. Experiments with Response Order

	Form A Standard Order	Form B Reverse Order
N =	(674)	(682)

Note: Question forms in this experiment were identical in phase I and II.

Other Topics and Demographics

Other questions in the survey included asking respondents whether they were registered to vote and how likely they were to vote in the 2000 presidential election. In addition, they were asked who they were going to vote for and what was the most important reason for them to vote for that candidate. Finally, respondents were asked to answer general demographic questions regarding age, level of education, sex, race, religious affiliation, and political party identification (See Appendix A).

Demographics and Respondents' Characteristics

In this study, the results indicated that the likelihood of the respondents voting in the 2000 presidential election was fairly high. Only 5.7% indicated that they were “not too likely” to vote in the upcoming election; 1.5% said that it was “somewhat likely” that they vote; 2.2% mentioned that they were “fairly likely” to vote; 6.9% expressed that they were “very likely” to vote, and 83.6% suggested that it was “extremely likely” for them to vote (Table 2.6).

Table 2.6. Likelihood to Vote in the 2000 Presidential Election

Extremely likely	83.6%
Very likely	6.9%
Fairly likely	2.2%
Somewhat likely	1.5%
Not too likely	5.7%

N=1356

Compared to adults 18 years and over using Internet at home, this self-selected sample (N=1356) was better educated (Table 2.7), much younger (Table 2.8), more likely to be black (Table 2.9), and male (Tables 2.10). The response rate for this self-selected sample is unknown and no weighting was done on the data.

Table 2.7. Level of Education

	Cincinnati 2000 Respondents	Census 2000¹² Home Internet Users
Did not complete high school	1.1%	3.7%
Attended high school	12.1%	22.8%
Some college or associate degree	34.1%	33.6%
College degree and more	52.7%	39.9%

N=1356

¹² U.S. Census Bureau – Home Computers and Internet Use in the United States: August 2000 – Special Studies – Issued September 2001 – Current Population Reports – Eric C. Newburger

Table 2.8. Age of the Respondents

	Cincinnati 2000 Respondents		Census 2000 Home Internet Users
Under 25	38.4%	18-24	14.6%
25-29	13.3%	25-34	21.8%
30-39	15.9%	35-44	27.0%
40-49	13.9%	45-54	21.5%
50-59	12.1%	55-64	9.6%
60-69	4.2%	65 years and older	8.8%
70 and older	2.2%		

N=1356

Table 2.9. Race of the Respondents

	Cincinnati 2000 Respondents	Census 2000 Home Internet Users
White	62.8%	83.0%
Black/African American	37.2%	6.5%
Hispanic/Latino	.6%	5.0%
Asian	3.2%	4.6%
Multi-racial	.8%	-
Other	3.1%	-

N=1356

Table 2.10. Sex of the Respondents

	Cincinnati 2000 Respondents	Census 2000 Home Internet Users
Male	62.8%	49.4%
Female	37.2%	50.6%

N=1356

Though this self-selected sample is statistically ungeneralizable to the U.S. population as a whole, it will be shown that it is sufficiently diverse to test and replicate well-known survey question effects in a quick and cost-effective manner.

Chapter 3

Effects of Not Sure, Don't Know, and No Opinion

Survey questions are typically designed to solicit opinions about various topics of interest. Regardless of the type of question, “not sure,” “don’t know,” and “no opinion” are possible answers that many respondents could easily choose as a response to a survey question, depending on how familiar the topic is to them. However, many polling organizations resist including these alternatives on survey questionnaires since they are considered to be voluntary and eliminating them minimizes missing data. The University of Michigan’s Survey Research Center Interviewer Manual (1976), for example, suggests that a “don’t know” (DK) response could merely be the result of a respondent searching for a real answer in his or her mind, and that an interviewer should probe further to determine what the respondent is really thinking. In other words, “don’t know” is not really an acceptable response and should be discovered by interviewers.

Early research by Katz (1940) showed that public opinion polls assume that dealing with “a problem of practical importance or of political interest” leads to opinions that can be measured. However, researchers must keep in mind that respondents may simply not be willing to report a “no opinion,” “don’t know” or “not sure.” Philip Converse (1970) found after conducting a three wave panel study that a number of errors in survey data are the direct result of random responses by those who do not have solid views on specific issues. According to

Converse, respondents essentially flip a “mental coin” and produce random answers in order to satisfy an interviewer’s expectations. Therefore, admission that they “don’t know” may be considered a negative response and many respondents may avoid giving such an answer. Because of this reason, Schuman and Presser (1981) suggest that a “respondent should be allowed, perhaps even encouraged, to see *don’t know* as a legitimate response in attitude surveys.” They refer to those questions explicitly providing “don’t know,” “no opinion,” and “not sure” as acceptable responses, as *filter* questions. We use the same terminology throughout this chapter. In addition, we refer to questions that do not offer no-opinion type responses as *forced-choice* questions.

Addressing the typical guess work done by respondents, Payne (1951) suggested using a fictitious issue in a question form as a test of the pseudo-opinion tendency. Hartley (1946), Gill (1947), Converse (1964), Presser (1980), and Bishop, Tuchfarber, and Oldendick (1986) have all conducted similar experiments, demonstrating the tendency of respondents to give opinions on topics they know nothing about.

In this study, we examine the inclusion of “don’t know,” “no opinion,” and “not sure” as possible responses to survey research questions. In addition, we question whether “don’t know,” “no opinion,” or “not sure” provide the same meaning to each respondent. Furthermore, we evaluate responses on a fictitious issue as an indicator of the pseudo-opinion problem, utilizing Internet technology

as a medium to collect the survey data.

Experimental Design

In examining these issues, we have conducted two sets of experiments prior to the presidential election of 2000. We used six experimental variations targeting social and economic issues: Social Security investment in private stocks and bonds, the long-term effects of such investment, whether to allow local governments to sue gun manufacturers, managed health care, the death penalty, and abortion. The design of these “DK” experiments is outlined in Chart 3.1.

In the first phase of this experiment, respondents received either a *forced-choice form* (Form A) in which “not sure”, “don’t Know,” and “no opinion” were not offered as possible answers, or a *filtered form* (Form B) that provided all three alternatives as possible responses to survey questions at the same time (Table 3.1A).

In the second phase, an “other” category was added as an option in the *Modified forced-choice form* (Form A), but the *filtered form* remained the same (Table 3.1B).

In this particular experiment we address issues similar to those identified by Schuman and Presser (1981):

1. Does the addition of a “not sure,” “don’t know,” and “no opinion” increase the number of responses on those topics, and does any such increase depend on the nature of the question or the initial level of these responses?
2. Does filtering change the relationship of opinion items to other opinion or background variables?
3. Does “not sure,” “don’t know,” or “no opinion” offered as a response on a question form necessarily mean the same thing to each respondent?

Chart 3.1. Experimental Design of DK – Filter Experiments

FORM A	Phase I Forced-choice Form	Phase II Filtered Form Offer "not sure," "don't know," and "no opinion"
FORM B	Phase I Modified Forced-choice Form Offer "other"	Phase II Filtered Form Offer "not sure," "don't know," and "no opinion"

Table 3.1A. Filter Experiments with Social and Economic Issues

Forced-Choice Form		Phase I Filtered Form	
Social Security Investment in Stocks and Bonds			
<i>Do you favor or oppose a proposal that would allow people to put a portion of their Social Security payroll taxes into personal retirement accounts that would be invested in private stocks and bonds?</i>		<i>Do you favor or oppose a proposal that would allow people to put a portion of their Social Security payroll taxes into personal retirement accounts that would be invested in private stocks and bonds?</i>	
Favor	76.2%	Favor	63.6%
Oppose	23.8	Oppose	18.2
	-----	Not Sure	11.8
	100.0%	Don't Know	3.3
	(462)	No Opinion	3.1

			100.0%
			(483)

Long-term effect of Social Security Investment

Thinking about the long-term condition of the Social Security system, if people were allowed to put a portion of their Social Security payroll taxes into accounts that would be invested in the stock market, do you think this would strengthen or weaken the ability to pay benefits to retirees 25 years from now?

Strengthen	72.9%
Weaken	27.1

	100.0%
	(462)

Thinking about the long-term condition of the Social Security system, if people were allowed to put a portion of their Social Security payroll taxes into accounts that would be invested in the stock market, do you think this would strengthen or weaken the ability to pay benefits to retirees 25 years from now?

Strengthen	52.3%
Weaken	20.1
Not Sure	20.1
Don't Know	4.8
No Opinion	2.7

	100.0%
	(483)

Table 3.1A. (Continued) - Filter Experiments with Social and Economic Issues

Phase I	
Forced-Choice Form	Filtered Form

Allow Local Government to Sue Gun Manufacturers

Do you favor or oppose allowing local governments to sue gun manufacturers in order to recover the costs incurred because of gun violence in their areas?

Favor	26.8%
Oppose	73.2

	100.0%
	(462)

Do you favor or oppose allowing local governments to sue gun manufacturers in order to recover the costs incurred because of gun violence in their areas?

Favor	23.6%
Oppose	67.5
Not Sure	6.2
Don't Know	1.0
No Opinion	1.7

	100.0%
	(483)

Death Penalty

Do you favor or oppose the death penalty for a person convicted of murder?

Favor	66.2%
Oppose	33.8

	100.0%
	(462)

Do you favor or oppose the death penalty for a person convicted of murder?

Favor	58.8%
Oppose	27.3
Not Sure	10.2
Don't Know	1.0
No Opinion	2.7

	100.0%
	(483)

Table 3.1A. (Continued) - Filter Experiments with Social and Economic Issues

	Phase I	
Forced-Choice Form	Filtered Form	

Managed Health Care

Which one of the following statements best represents the way you feel about managed health care plans, such as HMO?

They need to be completely overhauled	23.6%
They need major changes	50.0
They need minor changes	19.7
They are basically fine the way they are	6.7

	100.0%
	(462)

Which one of the following statements best represents the way you feel about managed health care plans, such as HMO?

They need to be completely overhauled	23.2%
They need major changes	41.8
They need minor changes	21.5
They are basically fine the way they are	3.7
Not Sure	4.8
Don't Know	2.1
No Opinion	2.9

	100.0%
	(483)

Abortion

Do you think abortions should be legal under any circumstances, legal only under certain circumstances, or illegal in all circumstances?

Legal under any circumstances	29.2%
Legal only under certain circumstances	48.7
Illegal in all circumstances	22.1

	100.0%
	(462)

Do you think abortions should be legal under any circumstances, legal only under certain circumstances, or illegal in all circumstances?

Legal under any circumstances	26.3%
Legal only under certain circumstances	54.9
Illegal in all circumstances	16.2
Not Sure	1.2
Don't Know	.2
No Opinion	1.2

	100.0%
	(483)

Table 3.1B. Filter Experiments with Social and Economic Issues

Phase II	
Modified Forced-Choice Form	Filtered Form

Social Security Investment in Stocks and Bonds

Do you favor or oppose a proposal that would allow people to put a portion of their Social Security payroll taxes into personal retirement accounts that would be invested in private stocks and bonds?

Favor	54.3%
Oppose	33.0
Other	12.7

	100.0%
	(212)

Do you favor or oppose a proposal that would allow people to put a portion of their Social Security payroll taxes into personal retirement accounts that would be invested in private stocks and bonds?

Favor	46.7%
Oppose	36.2
Not Sure	10.1
Don't Know	5.0
No Opinion	2.0

	100.0%
	(199)

Long-term effect of Social Security Investment

Thinking about the long-term condition of the Social Security system, if people were allowed to put a portion of their Social Security payroll taxes into accounts that would be invested in the stock market, do you think this would strengthen or weaken the ability to pay benefits to retirees 25 years from now?

Strengthen	46.2%
Weaken	34.9
Other	18.9

	100.0%
	(212)

Thinking about the long-term condition of the Social Security system, if people were allowed to put a portion of their Social Security payroll taxes into accounts that would be invested in the stock market, do you think this would strengthen or weaken the ability to pay benefits to retirees 25 years from now?

Strengthen	39.2%
Weaken	35.7
Not Sure	16.6
Don't Know	6.5
No Opinion	2.0

	100.0%
	(199)

Table 3.1B. (Continued) - Filter Experiments with Social and Economic Issues

Phase II	
Modified Forced-Choice Form	Filtered Form

Allow Local Government to Sue Gun Manufacturers

Do you favor or oppose allowing local governments to sue gun manufacturers in order to recover the costs incurred because of gun violence in their areas?

Favor	34.0%
Oppose	59.9
Other	6.1

	100.0%
	(212)

Do you favor or oppose allowing local governments to sue gun manufacturers in order to recover the costs incurred because of gun violence in their areas?

Favor	35.2%
Oppose	53.8
Not Sure	7.5
Don't Know	1.5
No Opinion	2.0

	100.0%
	(199)

Death Penalty

Do you favor or oppose the death penalty for a person convicted of murder?

Favor	53.3%
Oppose	46.7
Other	0.0

	100.0%
	(212)

Do you favor or oppose the death penalty for a person convicted of murder?

Favor	51.4%
Oppose	40.7
Not Sure	5.0
Don't Know	0.0
No Opinion	3.0

	100.0%
	(199)

Table 3.1B (Continued) - Filter Experiments with Social and Economic Issues

Phase II	
Modified Forced-Choice Form	Filtered Form

Managed Health Care

Which one of the following statements best represents the way you feel about managed health care plans, such as HMO?

They need to be completely overhauled	24.1%
They need major changes	49.1
They need minor changes	17.9
They are basically fine the way they are	.9
Other	8.0

	100.0%
	(212)

Which one of the following statements best represents the way you feel about managed health care plans, such as HMO?

They need to be completely overhauled	23.1%
They need major changes	52.3
They need minor changes	12.6
They are basically fine the way they are	1.5
Not Sure	6.0
Don't Know	1.0
No Opinion	3.5

	100.0%
	(199)

Abortion

Do you think abortions should be legal under any circumstances, legal only under certain circumstances, or illegal in all circumstances?

Legal under any circumstances	44.3%
Legal only under certain circumstances	35.8
Illegal in all circumstances	14.2
Other	5.7

	100.0%
	(212)

Do you think abortions should be legal under any circumstances, legal only under certain circumstances, or illegal in all circumstances?

Legal under any circumstances	42.2%
Legal only under certain circumstances	38.7
Illegal in all circumstances	16.1
Not Sure	.5
Don't Know	.5
No Opinion	2.0

	100.0%
	(199)

As indicated, six topics were selected for this experiment, and the questions were constructed in the same manner as experiments conducted by Schuman and Presser to form a scale of decreasing salience for the respondents. We expected people to have strong, stable opinions about such issues as abortion and the death penalty, slightly less knowledge of, or interest in, suing gun manufacturers, and even less interest in, or opinions about, Social Security taxes, Social Security investment, and managed health care. In general, these expectations turned out to be correct as indicated by the level of DK, not sure, and no opinion responses.

Findings

As mentioned previously, in the first phase of the data collection, the forced-choice form did not offer “not sure,” “don’t know” or “no opinion” as response alternatives. But when utilizing the filtered form, the overall percentage of respondents choosing the Not Sure/Don’t Know/No Opinion responses was smallest for the abortion question (2.6%), somewhat higher for the question about suing gun manufacturers (8.9%) and managed healthcare (9.8%). Those responses increased on the question about the death penalty, with 13.8% selecting Not Sure/Don’t Know/No Opinion, and went even higher on items about Social Security investment (18.2%) and long-term consequences of Social Security investment (27.6%), thus confirming our overall expectations.

The pattern was fairly the same utilizing the filtered form in the second phase of

this experiment. On the filtered form, overall Not Sure/Don't Know/No Opinion percentage response is lowest on the abortion question (3.0%), somewhat higher for the death penalty item (8.0%), a bit higher for the managed health care question (10.5%) followed by the gun manufacturer question (11.0%), Social Security investment in stocks and bonds (17.1%) and the long-term effects of Social Security investment (25.1%).

When a modified forced-choice form was used ("other" category is offered as one of the acceptable responses), respondents with indefinite opinions most likely selected the "other" category because "not sure," "don't know," and "no opinion" were not explicitly offered. Interestingly and consistently, the percentage responses were about five percentage points lower when this option was offered, except in the case of the abortion item, which actually increased DK responses by 2.5% to 3.1% points. This could be due to the respondent thinking of other possible response alternatives besides the ones stated and non-responses such as "not sure," "don't know," and "no opinion."

Table 3.2. Overall Distribution of Not Sure, Don't Know, No Opinion and Other Responses Utilizing Various Forms

Question/Form	Phase I Filtered Form	Phase II Filtered Form	Phase II ^a Modified Forced- choice Form
1. Social Security Investment in Stocks and Bonds	18.2%	17.1%	12.7%
2. Long-term effect of Social Security Investment	27.6%	25.1%	18.9%
3. Allow Local Government to Sue Gun Manufacturers	8.9%	11.0%	6.1%
4. Death Penalty	13.8%	8.0%	0.0%
5. Managed Health care	9.8%	10.5%	8.0%
6. Abortion	2.6%	3.0%	5.7%

^a Not sure, don't know, or no opinion are not offered

These results met our expectation since we consider the subjects of abortion, the death penalty, and suing gun manufacturers to be most familiar to the general public at the time of this study, and therefore they would be more likely to have substantive opinions on these topics (Table 3.2).

Table 3.3 shows detailed percentage responses for “not sure”, “don't know,” and “no opinion” in both phases of this study. Decreases in the percentages during phase II can be attributed to the introduction of “other” as a response alternative in the forced-choice form.

Table 3.3. Distribution of Not Sure, Don't Know, and No Opinion Responses in Filtered Question Form

Question/Form	Phase I	Phase II	Response
1. Social Security Investment in Stocks and Bonds	11.8% 3.3% 3.1%	10.1% 5.0% 2.0%	Not Sure Don't Know No Opinion
2. Long-term Effects of Social Security Investment	20.1% 4.8% 2.7%	16.6% 6.5% 2.0%	Not Sure Don't Know No Opinion
3. Allow Local Government to Sue Gun Manufacturers	6.2% 1.0% 1.7%	7.5% 1.5% 2.0%	Not Sure Don't Know No Opinion
4. Death Penalty	10.1% 1.0% 2.7%	5.0% 0.0% 3.0%	Not Sure Don't Know No Opinion
5. Managed Health care	4.8% 2.1% 2.9%	6.0% 1.0% 3.5%	Not Sure Don't Know No Opinion
6. Abortion	1.2% .2% 1.2%	.5% .5% 2.0%	Not Sure Don't Know No Opinion

In this context, it is important to note the term “floaters” used by Schuman and Presser to refer to “respondents who would give a substantive response to a forced-choice version but a DK (don’t know) response to a filtered version of the same question.” In this experiment floaters fell into three categories, and interestingly enough, in our first phase of the experimentation, the largest group of floaters falls into the “not sure” response category. The rest are divided between “don’t know” and “no opinion” categories.

These results suggest that these three responses probably have different meanings to respondents. “Not sure” possibly suggests an un-solidified opinion

regarding the subject matter, where as “no opinion” may suggests that the respondent may have never thought about the subject matter, and “don’t know” could be the sign of respondent simply dismissing the question and refusing to answer (Table 3.3).

Schumann and Presser (1981) suggest that “if a single set of people exists who are unwilling to voice DK (don’t know) when it is not offered explicitly, but ready to give it when invited, then the exact form of the filter should not make a difference.” They experimented with the level of encouragement using the exact form of the filter. However, we discovered that respondents clearly differentiate between “not sure,” “don’t know,” and “no opinion”.

Introduction of “Other” as a Response Alternative

Comparison of the forced-choice form to the modified forced-choice form (where “other” had been introduced as an acceptable response alternative), demonstrates clearly that there are a number of respondents who think about other responses besides the ones stated in the question. These responses can possibly include “not sure,” “don’t know,” and “no opinion.” We observed that the percentage of “other” response varies between 5.7% for abortion to 18.9% for long-term effect of Social Security investment. However, the percentage response to the “other” category for death penalty was zero percent suggesting that respondents have definite opinions about the topic of the death penalty (Table 3.4).

Table 3.4. Comparison of Responses in Forced-Choice vs. Modified Forced-Choice Form

	Forced Choice	Modified Forced-Choice
1. Social Security Investment in Stocks and Bonds		
Favor	76.2%	54.2%
Oppose	23.8	33.0
	-----	Other 12.7
	100.0%	-----
	(462)	100.0%
		(212)
2. Long-term effect of Social Security Investment		
Favor	72.9%	46.2%
Oppose	27.1	34.9
	-----	Other 18.9
	100.0%	-----
	(462)	100.0%
		(212)
3. Allow Local Government to Sue Gun Manufacturers		
Favor	26.8%	46.2%
Oppose	73.2	34.9
	-----	Other 18.9
	100.0%	-----
	(462)	100.0%
		(212)

Table 3.4 (Continued) – Comparisons of Responses in Forced-Choice vs. Modified Forced-Choice form

	Forced Choice	Modified Forced Choice
4. Death Penalty		
Favor	66.2%	53.3%
Oppose	33.8	46.7
	-----	Other 0.0
	100.0%	-----
	(462)	100.0%
		(212)
5. Managed Health Care		
Need to be completely overhauled	23.6%	24.1%
Need major changes	50.0	49.1
Need minor changes	19.7	17.9
Basically fine the way they are	6.7	.9
	-----	Other 8.0
	100.0%	-----
	(462)	100.0%
		(212)
6. Abortion		
Legal under any circumstances	29.2%	44.3%
Legal only under certain circumstances	48.7	35.8
Illegal in all circumstances	22.1	14.2
	-----	Other 5.7
	100.0%	-----
	(462)	100.0%
		(212)

Effect on Marginals of Eliminating Not Sure, Don't Know, and No Opinion Responses

In phase I, comparison of the responses between the forced-choice form and the filtered form where “not sure,” “don’t know,” and “no opinion” responses were excluded from the analysis reveals that only the abortion question produced a significant ($\chi^2=6.64$, $df=2$, $p < 0.05$) effect of question form on responses.

Respondents given the filtered form were significantly more likely to say (56.4%) abortion should be “legal only under certain circumstances,” whereas those given forced-choice form were more likely to say abortion should be “illegal in all circumstances.” A researcher would therefore reach different conclusions about public opinion on abortion, depending on which form was used. None of the other five questions, however, produced similar results and the percentage of substantive responses were fairly close regardless of question form, thus replicating Schuman and Presser’s (1981) findings (Table 3.5A).

The same type of comparison in phase II demonstrates a non-significant effect of question form on substantive responses when DK, not sure, and no opinion responses are excluded (Table 3.5B).

So, to summarize, we basically replicated with one exception, the findings of Schuman and Presser (1981) on the effects of filter questions on the distribution of substantive responses.

**Table 3.5A. Opinions on Social and Economic Issues by Question Form
(Not Sure, Don't Know, and No Opinion Excluded)**

	Phase I	
	Forced-Choice Form	Filtered Form *

1. Social Security Taxes

Favor	76.2%	77.7%
Oppose	23.8	22.3
	-----	-----
	100.0%	100.0%
	(462)	(395)

$$\chi^2 = .28, df=1, n.s.$$

* Excluded 88 observations

2. Social Security Investment

Strengthen	72.9%	72.3%
Weaken	27.1	27.7
	-----	-----
	100.0%	100.0%
	(350)	

$$\chi^2 = .04, df=1, n.s.$$

* Excluded 133 observations

3. Sue Gun Manufacturers

Favor	26.8%	25.9%
Oppose	73.2	74.1
	-----	-----
	100.0%	100.0%
	(462)	(440)

$$\chi^2 = .10, df=1, n.s.$$

* Excluded 43 observations

Table 3.5A (Continued) - Opinions on Social and Economic Issues by Question Form (Not Sure, Don't Know, and No Opinion Excluded)

Phase I		
	Forced-Choice Form	Filtered Form *
4. Death Penalty		
Favor	66.2%	63.8%
Oppose	33.8	31.7
	-----	-----
	100.0%	100.0%
	(462)	(416)

$$\chi^2 = .41, df=1, n.s.$$

* Excluded 67 observations

5. Managed Health Care

Completely overhauled	23.6%	25.7%
Need major changes	50.0	46.3
Need minor changes	19.7	23.9
Fine the way they are	6.7	4.1
	-----	-----
	100.0%	100.0%
	(462)	(436)

$$\chi^2 = 5.55, df=3, n.s.$$

* Excluded 47 observations

6. Abortion

Legal under any circumstances	29.2%	27.0%
Legal only under certain circumstances	48.7	56.4
Illegal in all circumstances	22.1	16.6
	-----	-----
	100.0%	100.0%
	(462)	(470)

$$\chi^2 = 6.64, df=2, p < .05$$

* Excluded 13 observations

**Table 3.5B. Opinions on Social and Economic Issues by Question Form
(Not Sure, Don't Know, and No Opinion Excluded)**

		Phase II
Modified Forced-Choice Form		Filtered Form *

1. Social Security Taxes

Favor	62.2%	56.4%
Oppose	37.8	43.6
	-----	-----
	100.0%	100.0%
	(185)	(165)

$$\chi^2 = 1.22, df=1, n.s.$$

* Excluded 61 observations

2. Social Security Investment

Strengthen	57.0%	52.3%
Weaken	43.0	47.7
	-----	-----
	100.0%	100.0%
	(172)	(149)

$$\chi^2 = .69, df=1, n.s.$$

* Excluded 90 observations

3. Sue Gun Manufacturers

Favor	36.2%	39.5%
Oppose	63.8	60.5
	-----	-----
	100.0%	100.0%
	(199)	(177)

$$\chi^2 = .45, df=1, n.s.$$

* Excluded 35 observations

Table 3.5B (Continued). Opinions on Social and Economic Issues by Question Form (Not Sure, Don't Know, and No Opinion Excluded)

	Phase II	
	Modified Forced-Choice Form	Filtered Form *
4. Death Penalty		
Favor	53.3%	55.7%
Oppose	46.7	44.3
	-----	-----
	100.0%	100.0%
	(212)	(183)
	$\chi^2 = .23, df=1, n.s.$	

* Excluded 16 observations

5. Managed Health Care

Completely overhauled	26.2%	25.8%
Need major changes	53.3	58.4
Need minor changes	19.5	14.0
Fine the way they are	1.0	1.7
	-----	-----
	100.0%	100.0%
	(195)	(178)
	$\chi^2 = 2.37, df=3, n.s.$	

* Excluded 38 observations

6. Abortion

Legal under any circumstances	47.0%	43.5%
Legal only under certain circumstances	38.0	39.9
Illegal in all circumstances	15.0	16.6
	-----	-----
	100.0%	100.0%
	(200)	(193)
	$\chi^2 = .51, df=2, n.s.$	

* Excluded 18 observations

Schuman and Presser (1981) also examined interattitude relationships by relating substantive opinion responses for two question items. Omitting all “don’t know” responses, they examined different associations between variables and three-way interactions¹³ with question form. A similar approach is presented here.

In phase I, we have discovered that the two questions about Social Security were highly correlated, with those favoring Social Security investment also believing that putting a portion of their Social Security payroll taxes into accounts invested in the stock market will strengthen the ability to pay benefits to retirees 25 years from now. Both the forced-choice form ($\chi^2=257.31$, $df=1$, $p<0.01$) and the filtered form ($\chi^2=219.96$, $df=1$, $p<0.01$) demonstrated significant relationships between these two variables. However, the three-way interaction between these opinions and the form variable was insignificant (Table 3.6A).

In phase II, we have discovered a similar pattern with both the forced-choice form ($\chi^2=104.48$, $df=1$, $p<0.01$) and the filtered form ($\chi^2=116.25$, $df=1$, $p<0.01$).

Again, the three-way interaction led to insignificant results (Table 3.6B). This means that the conclusion a researcher would draw about the relationship between opinions on different aspects of the Social Security issue would be unaffected by the form in which the question is asked.

¹³ Hierarchical log linear model for multivariate contingency tables is used to determine the three-way interaction between variables. HILOGLINEAR uses an iterative proportional-fitting algorithm determining which categorical variables are associated (Davis, 1974; SPSS package 11.5– Help).

Table 3.6A. Response to Social Security Investment by Social Security Taxes by Form (Phase I)

Social Security Taxes	Forced-Choice Form	
	<u>Social Security Investment</u>	
	Favor	Oppose
Strengthen	91%	14%
Weaken	9	86
Total	100% (352)	100% (110)

$\chi^2 = 257.31, df=1, p<.01$

Social Security Taxes	Filtered Form	
	<u>Social Security Investment</u>	
	Favor	Oppose
Strengthen	94%	7%
Weaken	6%	93%
Total	100% (249)	100% (68)

$\chi^2 = 219.96, df=1, p<.01$

Three-way Interaction: Social Security Investment x Social Security Taxes x Form

$$\chi^2 = 3.43, df=1, n.s.$$

Table 3.6B. Response to Social Security Investment by Social Security Taxes by Form (Phase II)

Forced-Choice Form		
Social Security Taxes	Social Security Investment	
	Favor	Oppose
Strengthen	87%	4%
Weaken	13	96
Total	100% (105)	100% (57)
$\chi^2 = 104.48, df=1, p<.01$		

Filtered Form		
Social Security Taxes	Social Security Investment	
	Favor	Oppose
Strengthen	94%	2%
Weaken	6	98
Total	100% (78)	100% (61)
$\chi^2 = 116.25, df=1, p<.01$		

Three-way Interaction: Social Security Investment x Social Security Taxes x Form

$$\chi^2 = 1.49, df=1, n.s.$$

In another case, we have discovered that those who favored suing gun manufacturers also opposed the death penalty. In phase I, forced-choice form ($\chi^2=26.37$, $df=1$, $p<0.01$) and filtered form ($\chi^2=32.78$, $df=1$, $p<0.01$) demonstrated strong relationships between these two variables. However, the three-way interaction between these variables and the form variable was insignificant (Table 3.7A). In phase II, we have discovered a similar pattern with both forced-choice form ($\chi^2=7.64$, $df=1$, $p<0.01$) and filtered form ($\chi^2=13.68$, $df=1$, $p<0.01$). Again, the three-way interaction led to insignificant results (Table 3.7B).

So, on all of these issues, we found that the association between opinions is “form-resistant” with one exception, Schuman and Presser (1981) found the same pattern. Again, we were able to largely replicate their findings with an inexpensive experiment on the Internet.

Table 3.7A. Death Penalty by Suing Gun Manufacturers by Form (Phase I)

Sue Gun Manufacturers	Forced-Choice Form	
	Death Penalty	
	Favor	Oppose
Favor	48%	73%
Oppose	52	27
Total	100% (124)	100% (338)
$\chi^2 = 26.37, df=1, p<.01$		

Sue Gun Manufacturers	Filtered Form	
	Death Penalty	
	Favor	Oppose
Favor	46%	76%
Oppose	54	24
Total	100% (101)	100% (284)
$\chi^2 = 32.78, df=1, p<.01$		

Three-way Interaction: Death Penalty x Sue Gun Manufacturers x Form

$$\chi^2 = .63, df=1, n.s.$$

Table 3.7B. Death Penalty by Suing Gun Manufacturers by Form (Phase II)

Forced-choice Form		
Sue Gun Manufacturers	Death Penalty	
	Favor	Oppose
Favor	40%	61%
Oppose	60%	39
Total	100% (72)	100% (127)

$$\chi^2 = 7.64, df=1, p<.01$$

Filtered Form		
Sue Gun Manufacturers	Death Penalty	
	Favor	Oppose
Favor	39%	68%
Oppose	61	32
Total	100% (64)	100% (101)

$$\chi^2 = 13.68, df=1, p<.01$$

Three-way Interaction: Death Penalty x Sue Gun Manufacturers x Form

$$\chi^2 = .74, df=1, n.s.$$

On the issue of managed care, in phase I, the filtered form produced significant results ($\chi^2=37.68$, $df=4$, $p<0.01$). More than one third (38%) of conservatives believed that the healthcare system is in need of minor changes or no change at all. However, less than 25% percent of moderates and 13% of liberals held the same belief.

Only nineteen percent of moderates and nineteen percent of conservatives believed the healthcare system should be completely overhauled. On the other hand, a large number of liberals (42%) wanted a complete change of the healthcare system. The forced-choice form and three-way interaction with form variable produced non-significant results (Table 3.8A).

Table 3.8A. Response to Health Care by Political Views by Form (Phase I)

Forced-Choice Form			
Health Care	Political Views		
	Liberal	Moderate	Conservative
Completely Overhauled	28%	23%	22%
Major Changes	55	51	46
Minor or No Changes	17	26	32
Total	100% (123)	100% (111)	100% (228)

$\chi^2 = 9.41$, $df=4$, *n.s.*

Filtered Form			
Health Care	Political Views		
	Liberal	Moderate	Conservative
Completely Overhauled	42%	19%	19%
Major Changes	45	57	43
Minor or No Changes	13	24	38
Total	100% (128)	100% (79)	100% (229)

$\chi^2 = 37.68$, $df=4$, $p < .01$

Three-way Interaction: Political Views x Health Care x Form

$\chi^2 = 6.60$, $df=4$, *n.s.*

In, phase II, the interaction between political views and healthcare issues produced significant results ($\chi^2=11.33$, $df=4$, $p<0.05$) using the forced-choice form. However, the filtered form and three-way interaction led to non-significant results (Table 3.8B) indicating that the observed association was form-resistant.

**Table 3.8B. Phase II
Response to Health Care by Political Views by Form**

Forced-Choice Form			
Health Care	Political Views		
	Liberal	Moderate	Conservative
Completely Overhauled	31%	28%	15%
Major Changes	56	51	50
Minor or No Changes	13	21	35
Total	100% (100)	100% (43)	100% (52)

$$\chi^2 = 11.33, df=4, p<.05$$

Filtered Form			
Health Care	Political Views		
	Liberal	Moderate	Conservative
Completely Overhauled	26%	26%	25%
Major Changes	61	60	52
Minor or No Changes	13	14	23
Total	100% (99)	100% (35)	100% (44)

$$\chi^2 = 2.24, df=4, n.s.$$

Three-way Interaction: Political Views x Health Care x Form

$$\chi^2 = 2.26, df=4, n.s.$$

In phase I, both the forced-choice form ($\chi^2=15.54$, $df=4$, $p<0.05$) and the filtered form ($\chi^2=19.81$, $df=4$, $p<0.05$) produced significant results. Two thirds of the sample believed that the healthcare system needs major changes or must be completely overhauled. The three-way interaction with form did not produce significant results (Table 3.9A).

Table 3.9A. Response to Health Care by Party ID by Form (Phase I)

Forced-Choice Form			
Health Care	Party ID		
	Democrat	Republican	Other
Completely Overhauled	26%	17%	32%
Major Changes	56	50	45
Minor or No Changes	18	33	23
Total	100% (116)	100% (221)	100% (125)

$$\chi^2 = 15.54, df=4, p<0.05$$

Filtered Form			
Health Care	Party ID		
	Democrat	Republican	Other
Completely Overhauled	33%	21%	28%
Major Changes	49%	42%	52%
Minor or No Changes	18%	37%	20%
Total	100% (105)	100% (211)	100% (120)

$$\chi^2 = 19.81, df=4, p<0.05$$

Three-way Interaction: Health Care x Party ID x Form $\chi^2 = 4.10$, $df=4$, *n.s.*

The results in phase II were insignificant and three-way interaction with form also did not produce significant results (Table 3.9B).

Table 3.9B. Response to Health Care by Party ID by Form (Phase II)

Forced-Choice Form			
Health Care	Party ID		
	Democrat	Republican	Other
Completely Overhauled	31%	17%	28%
Major Changes	54	60	48
Minor or No Changes	15	23	24
Total	100% (74)	100% (52)	100% (69)

$$\chi^2 = 5.0, df=4, n.s.$$

Filtered Form			
Health Care	Party ID		
	Democrat	Republican	Other
Completely Overhauled	21%	26%	33%
Major Changes	65	58	49
Minor or No Changes	14	16	18
Total	100% (83)	100% (38)	100% (57)

$$\chi^2 = 3.84, df=4, n.s.$$

Three-way Interaction: Health Care x Party ID x Form

$$\chi^2 = 3.74, df=4, n.s.$$

In phase I, there was a significant relationship between political views and opinions about abortion for both the forced-choice form ($\chi^2=129.50$, $df=4$, $p<0.01$), and the filtered ($\chi^2=109.12$, $df=4$, $p<0.01$). However, the three-way interaction between political views, opinions about abortion and question form produced non-significant results (Table 3.10A).

Table 3.10A. Abortion by Political Views by Form (Phase I)

Forced-Choice Form			
Abortion	Political Views		
	Liberal	Moderate	Conservative
Always legal	63%	37%	7%
Legal under certain circumstances	32	46	59
Illegal under all circumstances	5	17	34
Total	100% (123)	100% (111)	100% (228)

$$\chi^2 = 129.50, df=4, p<0.01$$

Filtered Form			
Abortion	Political Views		
	Liberal	Moderate	Conservative
Always legal	54%	38%	9%
Legal under certain circumstances	42	54	65
Illegal under all circumstances	4	8	26
Total	100% (134)	100% (90)	100% (246)

$$\chi^2 = 109.12, df=4, p<0.01$$

Three-way Interaction: Abortion x Political Views x Form $\chi^2 = 2.76$, $df=4$, *n.s.*

The same type of results can be observed from the second phase, with the forced choice form showed significant results ($\chi^2=73.34$, $df=4$, $p<0.01$) as did the filtered form ($\chi^2=69.89$, $df=4$, $p<0.01$). The three-way interaction between abortion, political views and form was insignificant. The results are as expected - two thirds of conservatives would consider abortion to be legal under certain circumstances and illegal under all circumstances in both phases of the experiment. However, two thirds of liberals think abortion should be legal under certain circumstances or to be legal always. The responses of moderates were similar to liberals (Table 3.10B).

Table 3.10B. Abortion by Political Views by Form (Phase II)

Forced-Choice Form			
Abortion	Political Views		
	Liberal	Moderate	Conservative
Always legal	69%	39%	14%
Legal under certain circumstances	30	51	42
Illegal under all circumstances	1	10	44
Total	100% (102)	100% (41)	100% (57)

$$\chi^2 = 73.34, df=4, p<0.01$$

Filtered form			
Abortion	Political Views		
	Liberal	Moderate	Conservative
Always legal	61%	43%	9%
Legal under certain circumstances	37	46	42
Illegal under all circumstances	2	11	49
Total	100% (103)	100% (37)	100% (53)

$$\chi^2 = 69.89, df=4, p<0.01$$

Three-way Interaction: Abortion x Political Views x Form

$$\chi^2 = 1.10, df=4, n.s.$$

In both phases I and II, there were significant relationships between religious affiliation and opinions about abortion for both the forced-choice and filtered question forms. The three-way interaction with question form produced insignificant results in both phase I and II (Table 3.11A, 3.11B).

Table 3.11A. Response to Religious Affiliation by Abortion by Form (Phase I)

Forced-Choice Form					
Abortion	Religious Affiliation				
	Catholic	Protestant	Jewish	Other	None
Always legal	16%	23%	58%	36%	63%
Legal under certain circumstances	50	57	38	39	35
Illegal under all circumstances	34	20	4	25	2
Total	100% (148)	100% (173)	100% (24)	100% (59)	100% (58)

$$\chi^2 = 73.64, df=8, p<0.01$$

Filtered form					
Abortion	Religious Affiliation				
	Catholic	Protestant	Jewish	Other	None
Always legal	19%	20%	64%	19%	60%
Legal under certain circumstances	66	58	18	69	37
Illegal under all circumstances	15	22	18	12	3
Total	100% (138)	100% (170)	100% (11)	100% (62)	100% (81)

$$\chi^2 = 74.85, df=8, p<0.01$$

Three-way Interaction: Abortion x Religious Affiliation x Form: $\chi^2 = 15.87, df=8, p<.05$

Table 3.11B. Response to Religious Affiliation by Abortion by Form (Phase II)**Forced-Choice Form**

Abortion	Religious Affiliation				
	Catholic	Protestant	Jewish	Other	None
Always legal	29%	20%	42%	48%	78%
Legal under certain circumstances	49	48	58	37	21
Illegal under all circumstances	22	32	0	15	1
Total	100% (49)	100% (44)	100% (12)	100% (27)	100% (68)

$$\chi^2 = 53.66, df=8, p<0.01$$

Filtered form

Abortion	Religious Affiliation				
	Catholic	Protestant	Jewish	Other	None
Always legal	28%	34%	82%	23%	61%
Legal under certain circumstances	44	41	18	48	37
Illegal under all circumstances	28	25	0	24	2
Total	100% (43)	100% (56)	100% (11)	100% (21)	100% (62)

$$\chi^2 = 31.41, df=8, p<0.01$$

Three-way Interaction: Abortion x Religious Affiliation x Form

$$\chi^2 = 12.92, df=8, n.s.$$

To summarize, in all of these tests, the relationships between attitudes and opinions on various topics were unaffected by question form, confirming the form-resistant hypothesis.

Relationship between Education and Other Variables

As did Schuman and Presser (1981), we have also examined the background variable education, which we have collapsed into two categories, to determine whether less educated people tend to be more likely to select “not sure,” “don’t know” or “no opinion.” Schuman and Presser (1981) found that on each form “there was a strong and quite reliable tendency for less educated respondents to say DK (don’t know).”

In examining the relationship between opinions about Social Security taxes and education, it became apparent that people with some college or less (23.1%) have a higher tendency to select “not sure,” “don’t know,” or “no opinion” more than those respondents with a college degree and above (13.2%) (Table 3.12).

Table 3.12. Social Security Taxes by Education

Social Security Taxes	Filtered form	
	Education	
	Some College or Less	College Degree or More
Favor	61.8%	55.7%
Oppose	15.1	31.1
Not Sure/Don’t Know/ No Opinion	23.1	13.2
Total	100% (325)	100% (357)

$$\chi^2 = 29.02, df=2, p<0.01$$

Examining the relationship between Social Security Investment and education produced significant results ($\chi^2 = 11.24$, $df=2$, $p<0.01$) demonstrating the likelihood of those without college degrees to select “not sure”, “don’t know”, or “no opinion” (31.1%) (Table 3.13).

Table 3.13. Social Security Investment by Education

Social Security Investment	Filtered form	
	Education	
	Some College or Less	College Degree or More
Strengthen	49.5%	47.6%
Weaken	19.4	29.4
Not Sure/Don’t Know/ No Opinion	31.1	23.0
Total	100% (325)	100% (357)

$$\chi^2 = 11.24, df=2, p<.01$$

Opinions about suing gun manufacturers, however, produced no significant relationship between education and likelihood of selecting “not sure,” “don’t know,” and “no opinion” (Table 3.14A).

Table 3.14. Suing Gun Manufacturers by Education

Filtered form		
Suing Gun Manufacturer	Education	
	Some College or Less	College Degree or More
Favor	23.1%	30.5%
Oppose	66.8	60.5
Not Sure/Don't Know/ No Opinion	10.2	9.0
Total	100% (325)	100% (357)

$\chi^2 = 4.81$, $df=2$, *n.s.*

While education was not related significantly with likelihood of choosing “not sure,” “don’t know” or “no opinion,” there was a significant relationship between education levels and substantive responses to the question: respondents with college degrees or more education were less likely to favor the death penalty than were respondents with some college or less (Table 3.15).

Table 3.15. Death Penalty by Education

Death Penalty	Education	
	Some College or Less	College Degree or More
Favor	63.1%	50.7%
Oppose	24.9	37.0
Not Sure/Don't Know/ No Opinion	12.0	12.3
Total	100% (325)	100% (357)

$\chi^2 = 12.53, df=2, p<.01$

The relationship between opinions about managed health care and education also produced significant results ($\chi^2=11.51$, $df=4$, $p<0.05$). (Table 3.16).

Table 3.16. Managed Healthcare by Education

Managed Health Care	Forced-Choice Form	
	Education	
	Some College or Less	College Degree or More
They need to be completely overhauled	25.5%	21.0%
They need major changes	44.3	45.4
They need minor changes	15.1	22.4
They are basically fine the way they are	2.5	3.6
Not Sure/Don't Know/ No Opinion	12.6	7.6
Total	100% (325)	100% (357)

$\chi^2 = 11.51$, $df=4$, $p<0.05$

Similarly, those respondents with no college degree were significantly more likely to think abortion should always be illegal -- and less likely to think it should always be permitted -- than were respondents with higher educational attainment (Table 3.17).

Table 3.17. Abortion by Education (Forced-Choice Form)

Abortion	Education	
	Some College or Less	College Degree or More
Legal under any circumstances	24.6%	36.7%
Legal only under certain circumstances	52.0	48.5
Illegal in all circumstances	20.9	11.8
Not Sure/Don't Know/ No Opinion	2.5	3.1
Total	100% (325)	100% (357)

$$\chi^2 = 17.53, df=3, p<.001$$

Opinions on a Fictitious Issue

The study also included a question about a fictitious issue, the repeal of the 1995 Social Security Reform Act, which attempted to replicate an earlier study by Bishop et al. (1980, 1986). Previous research (Hartley, 1946; Kolson and Green, 1970; Gill, 1947; Schuman and Presser, 1981) has shown that people are usually willing to offer opinions on fictitious issues. In studies by Bishop, Tuchfarber, and Oldendick (1980, 1986), “the data demonstrates that blacks and less well-educated respondents are more likely than their counterparts to offer opinions on fictitious issues.” They suggest that “*pressure to answer*” is one of the reasons that respondents give opinions on fictitious issues.

In this study, approximately half of the respondents were given the opportunity to choose “not sure”, “don’t know” or “no opinion” as possible response alternatives. The forced-choice form demonstrated no relationship between the fictitious “Repeal of 1995 Social Security Reform Act” and education. Respondents selected “Have not heard of it” about 76% of the time. The filtered form produced a significant relationship with education ($\chi^2=13.55$, $df=4$, $p<0.01$). A number of respondents (18.2%) with some college or less offered an opinion on this topic. A larger number of respondents (26.2%) with college degree or more offered an opinion (Table 3.18). Our findings contradicted Schuman and Presser’s (1981) as well as Bishop’s (1980) findings suggesting individuals with less education have a tendency to offer an opinion on a fictitious issue and fail to admit ignorance on the topic. According to Bishop, Tuchfarber, and Oldendick (1986),

“people have a disposition or personality characteristic which makes them either more or less willing to admit their ignorance on public affairs.” Considering 13.2% of our sample consists of respondents who have some college education or less, in comparison to the general population (26.5%) may be a reason for our findings. In other words, in a highly educated sample such as ours, the fictitious issue phenomena may not follow the same pattern.

Table 3.18. Repeal the 1995 Social Security Reform Act by Education (Forced-Choice Form vs. Filtered Form)

Repeal 1995 Social Security Act	Forced-Choice Form	
	Education	
	Some College or Less	College Degree or More
Favor	13.9%	12.3%
Oppose	10.1	13.2
Have not heard of it	76.0	74.5
Total	100.0	100.0
N = 674	(317)	(357)

$$\chi^2 = 1.71, df=2, n.s.$$

Repeal 1995 Social Security Act	Filtered form	
	Education	
	Some College or Less	College Degree or More
Favor	11.4%	13.4%
Oppose	6.8	12.8
Not Sure	31.1	20.7
Don't Know	36.3	41.2
No Opinion	14.5	12.9
Total	100.0	100.0
N = 682	(325)	(357)

$$\chi^2 = 13.55, df=4, p<.01$$

The other interesting finding is that respondents seem to interpret “not sure”, “don’t know,” and “no opinion” in different ways. The majority of respondents selected “don’t know”, fewer selected “not sure”, and even fewer individuals

selected “no opinion” about the fictitious issue, suggesting these mean different things to respondents.

Conclusion

Our web experiment clearly demonstrates that eliminating “not sure”, “don’t know,” and “no opinion” responses did not generally affect the substantive results of our survey with one minor exception on the abortion issue. The results showed that a researcher would reach the same conclusions about the distribution of public opinion and the relation between opinions regardless of which form was used.

In at least one instance, the result of our experimentation contradicts Schuman and Presser’s (1981) findings. A larger number of respondents with higher level of education expressed opinions about a fictitious issue. However, our results may have been impacted by a disproportionately large number of highly educated respondents participating in this experiment.

Once again we have successfully demonstrated that researchers can easily utilize web technology to create an environment in which well-documented experiments can be easily replicated.

CHAPTER 4

TONE OF WORDING: FORBID vs. ALLOW

Survey researchers have long known that even small changes in question wording can contribute to distinct effects in item distributions. As Schuman and Presser (1981) point out, researchers must realize that our “ideas must be embodied in words and that words have a life—and an influence—of their own.” Key words thus provide “a common linguistic framework” for presenting issues to respondents in public opinion surveys.

One early investigation of “tone of wording” by Rugg (1941) analyzed a split-ballot experiment carried out originally by Roper in 1940, which revealed that when respondents were presented with the question, “*Do you think the United States should forbid public speeches against democracy?*” versus “*Do you think the United States should allow public speeches against democracy?*”, the support for free speech – the percentage of respondents answering “no” to “forbid” form and “yes” to the “allow” form -- was significantly higher (by 21%) on the “forbid” version of the question.

Schuman and Presser’s (1981) replications of this experiment in 1974 and 1976 suggested the following: (1) even though “forbid” and “not allow” seem to be logically equivalent in meaning, Americans were much more willing to “not allow” speeches than they were to “forbid” them; (2) the researchers discovered a

sharp increase over time in willingness to tolerate public speeches against democracy on both forms of the question, a finding consistent with earlier research done by Davis (1975) and Nunn, Crockett, and Williams (1978) on civil liberties issues; (3) they also found a similar increase in tolerance on both versions of the question such that there was hardly any sign of interaction of response, question form, and time.

In this section the author will describe the results of another replication of the forbid-allow effect, using the Internet as a method of data collection.

Forbid/Allow Experiments

An experiment with the “forbid” versus “allow” wording alternative was conducted as part of the 2000 Presidential election Internet survey. The experiment ran between October 8, 2000 and November 7, 2000. Chart 4.1 shows the exact wording and response categories of the questions used in this experiment on two contemporary issues in the battle over religion in American public schools.

These topics were chosen because they seemed to be potentially very susceptible to the forbid-allow effect.

Chart 4.1. Questions in Tone of Wording Experiments

Form A

*Do you think public schools should **allow** daily prayer to be spoken in the classroom?*

Yes
No
Not Sure
Don't Know
No Opinion

*Do you think public schools should be **allowed** to display the Ten Commandments?*

Yes
No
Not Sure
Don't know
No Opinion

Form B

*Do you think public schools should **forbid** daily prayer to be spoken in the classroom?*

Yes
No
Not Sure
Don't Know
No Opinion

*Do you think public schools should be **forbidden** to display the Ten Commandments?*

Yes
No
Not Sure
Don't know
No Opinion

Findings

The data presented in table 4.1A show that respondents were more likely to say they would “not allow” (41.6%) daily prayer in public schools than to “forbid” (36.7%) it. Similarly, the results in table 4.1B show that respondents were more likely to favor “not allow” (38.5%) displaying the Ten Commandments in public schools over forbidding (34.9%) it.

Further examination of data in tables 4.2A with not sure, don’t know, and no opinion responses omitted from the analysis, clearly demonstrates that Americans in general are significantly more willing to not allow prayer in public schools -- by 8.3 percentage points -- in comparison to forbidding school prayer. The response by question form relationship was significant ($\chi^2=16.37$, $df=1$, $p<0.001$). The data in table 4.2B confirms the same conclusion in regards to displaying the Ten Commandments in public schools. Respondents favor “not allowing” it in public schools by a margin of 6.9%. Again, the response by form relationship was significant ($\chi^2=47.04$, $df=1$, $p<0.001$).

These findings thus replicate those reported by Schuman and Presser (1981). However, the margin of difference in their experiments was much wider, ranging from 15.8% to 26.4%. This is possibly due to the difference in the topic of the questions (public speeches against democracy) at that time of their study (mid-1970).

Table 4.1A. Tone of Wording Experiment – Forbid vs. Allow Daily Prayer in Public Schools

	Allow Form		Forbid Form
Yes (allow)	44.5%	No (not forbid)	55.1%
No (not allow)	41.6	Yes (forbid)	36.7
Not sure, Don't know, and No opinion	13.9		8.2
	100		100
	(674)		(682)

Response x Form: $\chi^2 = 27.69$, $df = 2$, $p < .001$

Table 4.1B. Tone of Wording Experiment – Forbid vs. Allow Display of Ten Commandments in Public Schools

	Allow Form		Forbid Form
Yes (allow)	49.6%	No (not forbid)	60.1%
No (not allow)	38.5	Yes (forbid)	34.9
Not sure, Don't know, and No opinion	12.0		5.0
	100		100
	(674)		(682)

Response x Form: $\chi^2 = 68.55$, $df = 2$, $p < .001$

Table 4.2A. Tone of Wording Experiment – Forbid vs. Allow Daily Prayer in Public Schools (Not Sure/Don't Know/No Opinion Excluded)

		Allow Form		Forbid Form
Yes	(allow)	51.6%	No (not forbid)	60.1%
No	(not allow)	48.4	Yes (forbid)	39.9
		100		100
		(580)		(626)

Response x Form: $\chi^2 = 16.37$, $df = 1$, $p < .001$

Table 4.2B. Tone of Wording Experiment – Forbid vs. Allow Display of Ten Commandments in Public Schools (Not Sure/Don't Know/No Opinion Excluded)

		Allow Form		Forbid Form
Yes	(allow)	56.2%	No (not forbid)	63.3%
No	(not allow)	43.8	Yes (forbid)	36.7
		100		100
		(593)		(648)

Response x Form: $\chi^2 = 47.70$, $df = 1$, $p < .001$

Further examination of the data also showed a significant difference between substantive and non-substantive responses (see tables 4.3A and 4.3B).

Respondents given the “forbid” form were significantly less likely to choose a not sure, don’t know, or no opinion response than those given the “allow” form. A clear difference in responses can be observed in the not sure, don’t know, and no opinion category ranging from 5.7% to 7.0%, with $p < .001$, which was substantially significant on both questions. One possible explanation is that respondents react more sharply to the word “forbid” and are therefore more likely to produce an opinion.

Table 4.3A. Tone of Wording Experiment – Forbid vs. Allow Daily Prayer in Public Schools (Forbid and Allow Responses Combined)

	Allow Form	Forbid Form	diff
Yes and No combined	86.1%	91.8%	
Not sure, Don't know, and No opinion	13.9	8.2	-5.7%
	100	100	
	(674)	(682)	

Response x Form: $\chi^2 = 11.33$, $df = 1$, $p < .01$

Table 4.3B. Tone of Wording Experiment – Forbid vs. Allow Display of Ten Commandments in Public Schools (Forbid and Allow Responses Combined)

	Allow Form	Forbid Form	diff
Yes and No combined	88.0%	95.0%	
Not sure, Don't know, and No opinion	12.0	5.0	-7.0%
	100	100	
	(674)	(682)	

Response x Form: $\chi^2 = 21.59$, $df = 1$, $p < .01$

The Schuman and Presser's (1981) analysis also examined the possibility of whether less educated people would be more easily influenced by superficial variations in wording, based on the assumption that allow and forbid versions of the questions are logically equivalent. Using either the forbid or allow version, they found that education was positively related to support for free speech. In addition, they found relatively constant differences among those with up to 12 years of schooling and decreasing differences among respondents with some college or college educated individuals. Their results by education analysis in 1974 and 1976 showed the predicted interaction to be significant in two cases with $p < 0.05$ degree of significance.

The results of the present research, as shown in Charts 4.2A and 4.2B, however, are quite different from those reported by Schuman and Presser. Even though respondents favor "not allow" over "forbid" on both prayers in public schools and displaying of Ten Commandments in public schools, the gap widened in our study as the level of education increased. In addition, the slope of the line is positive and upward, which is opposite to their findings. Schuman and Presser's conclusion that the terms 'forbid' and 'not allow' amount to the same thing logically since their data showed a decline in the form difference among more educated cannot be supported here. Therefore, we cannot clearly attribute the difference to "verbal confusion" rather than "verbal precision" as they have done.

Chart 4.2A - Opposition to Daily Prayer to be Spoken in the Classroom

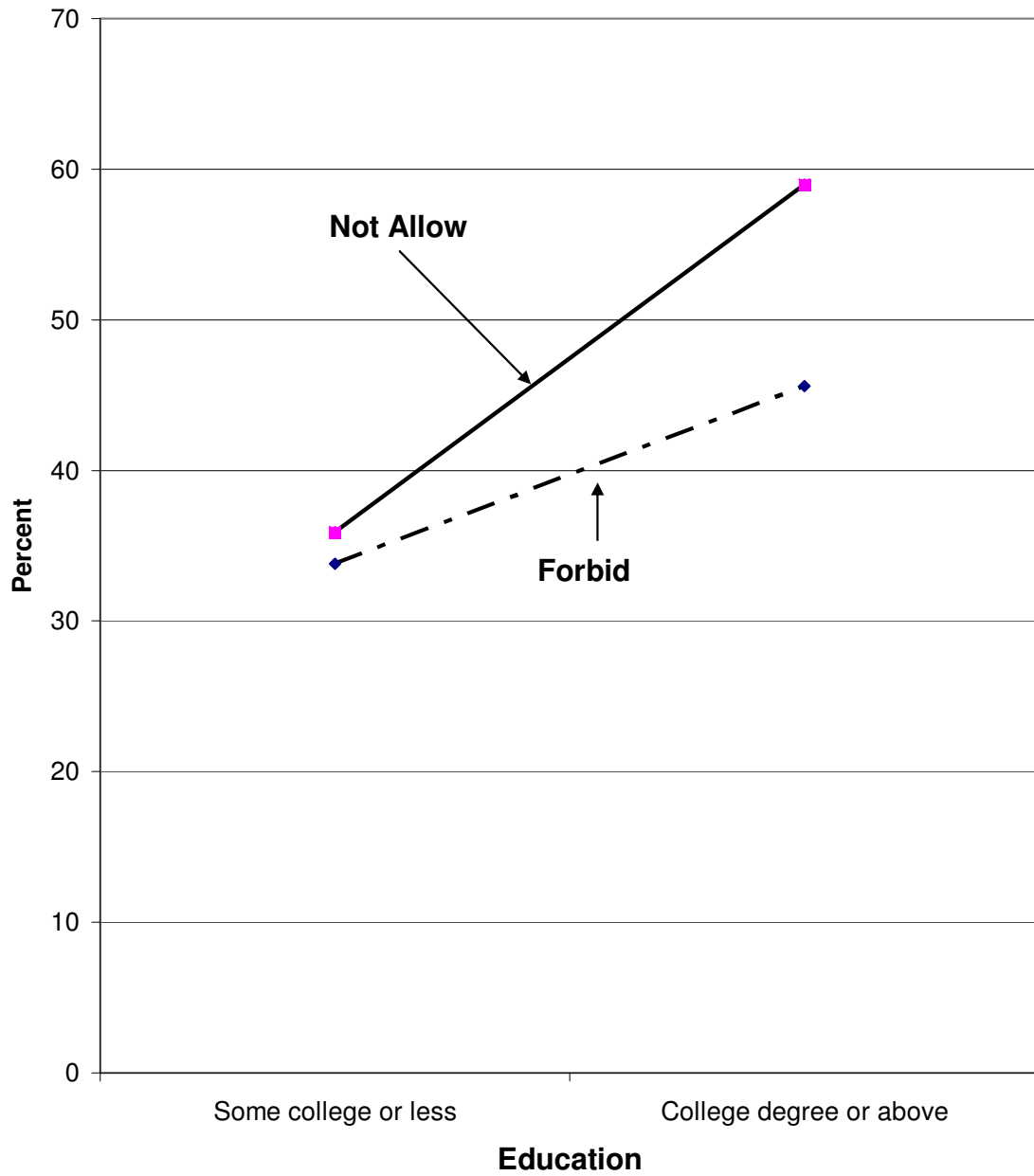
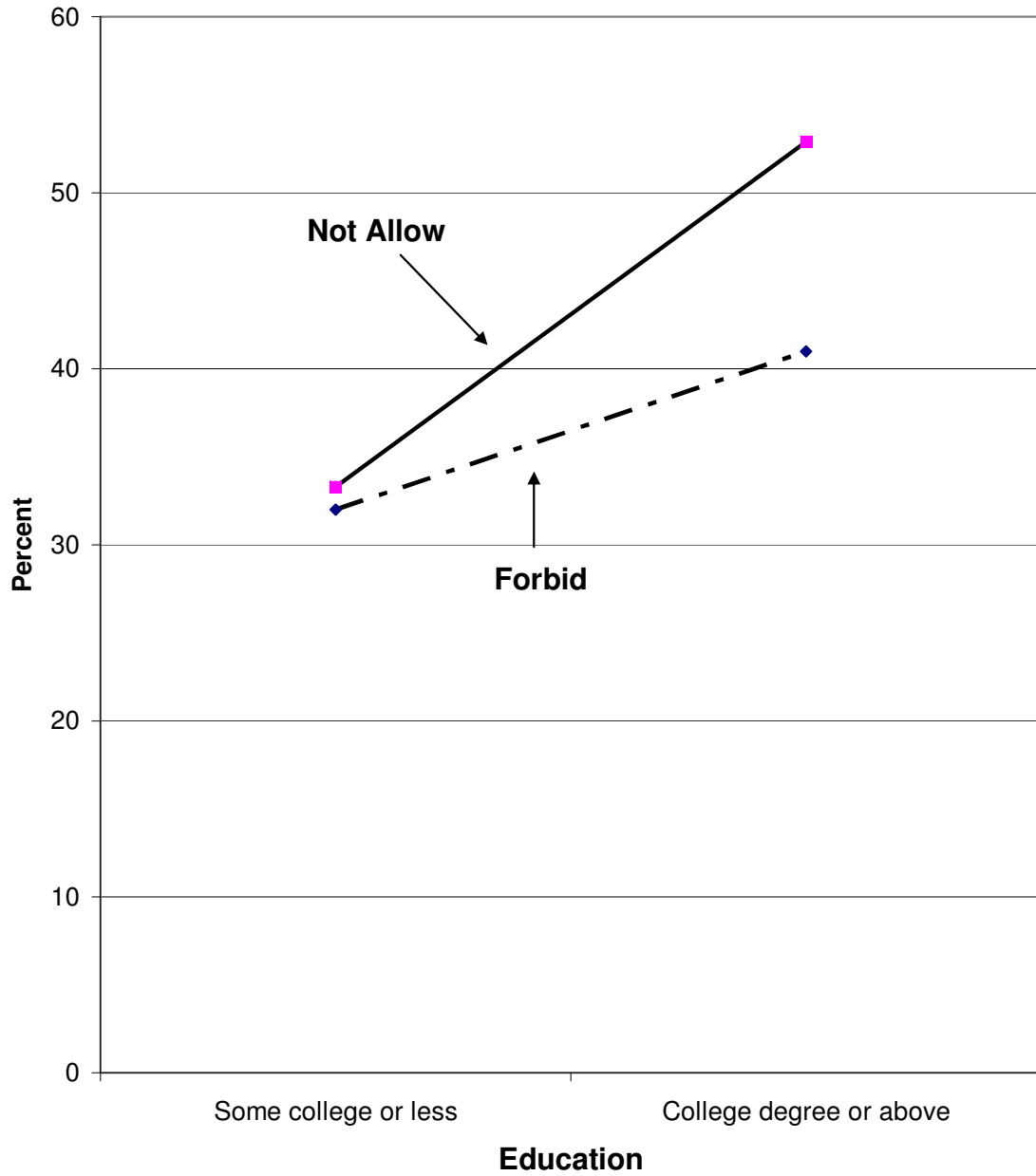


Chart 4.2B - Opposition to Display of Ten Commandments in Public Schools



The data in tables 4.4A and 4.4B show again respondents' preference to choose not allow over forbid. We did not find, however, the response by form effect among those with some college or less to be significant, even though we found it to be significant among individuals with a college degree and above. Nevertheless, the three-way interaction between response by education by form was not significant.

Additional experiments conducted by Schuman and Presser (1981) on the more current and salient topic of x-rated movies and the less salient topic of cigarette advertisement on TV showed trends in the same direction as their earlier experiments. But those differences were small, ranging from 4% to 5%. They did not find any sign of interaction with education in those two experiments. They concluded that "the effect of verbal difference taken alone" was not large if "forbid" and "not allow" convey a somewhat different meaning. However, they suggest that the higher the "don't know" level, the larger the forbid-allow effect would be, supporting Gallup's (1941) suggestion that "difference in wording ... tends to decrease to zero as the no opinion vote tends to zero." We are unable to support this hypothesis based on our observations.

Table 4.4A. Tone of Wording Experiment – Forbid vs. Allow Daily Prayer in Public Schools (Response by Education by Form)

Some College or Less		
	Allow Form	Forbid Form
Yes (allow)	64.1%	66.2%
No (not allow)	35.9	33.8
	-----	-----
	100.0	100.0
	(270)	(299)
	$\chi^2 = 0.29, df=1, n.s.$	

College degree or more		
	Allow Form	Forbid Form
Yes (allow)	41.0%	54.4%
No (not allow)	59.0	45.6
	-----	-----
	100.0	100.0
	(312)	(329)
	$\chi^2 = 11.49, df=1, p<.01$	

Three-way interaction: $\chi^2 = 3.51, df=1, n.s.$

Table 4.4B. Tone of Wording Experiment – Forbid vs. Allow Display of Ten Commandments in Public Schools (Response by Education by Form)

Some College or Less		
	Allow Form	Forbid Form
Yes (allow)	66.5%	68.0%
No (not allow)	33.5	32.0
	-----	-----
	100.0	100.0
	(281)	(306)
$\chi^2 = 0.14, df=1, n.s.$		

College degree or more		
	Allow Form	Forbid Form
Yes (allow)	47.1%	59.0%
No (not allow)	52.9	41.0
	-----	-----
	100.0	100.0
	(314)	(344)
$\chi^2 = 9.31, df=1, p<.01$		

Three-way interaction: $\chi^2 = 0.15, df=1, n.s.$

Conclusion

Do the words forbid and allow have different connotations? Is “forbid” a harsher word than “allow” encouraging deviant behavior? Is tone of wording the sole source of effect in these cases? Are we dealing with terms which constitute a different grammatical structure? The web technology creates an easy-to-use environment to conduct and replicate well-known methodological experiments in order to find answers to some of the questions proposed here.

Our web experiments parallel findings of Schuman and Presser (1981) showing the preference of respondents to choose “not allow” over “forbid” category. However, the margin of difference in our experiments was much lower than in theirs. The bivariate relation between forbid/not allow and education also produced a somewhat different result from Schuman and Presser’s findings. We found the gap between “forbid” and “not allow” responses widened as the level of education increased. However the three-way interaction between response by form by education was insignificant.

Once again, the Internet has provided a reliable, inexpensive means for replicating classic methodological experiments, producing results that are highly comparable to findings presented by earlier researchers using telephone interviewing, much more expensive method of data collection.

CHAPTER 5

EFFECTS OF A MIDDLE RESPONSE ALTERNATIVE

In measuring public opinion, survey questions usually offer a number of response alternatives to the respondents. In many cases, there is a plausible middle position that respondents often prefer over other categories. For example, in answering a question about the influence of religion in politics today respondents could be given the choices of “too much,” “too little,” or “about the right amount.” In a question about whether political leaders in Washington pay too much attention or too little attention to the needs of senior citizens, “right amount” could be a desirable middle alternative. One of the critical choices that survey investigators must make is whether a middle response alternative should be built explicitly into a question or left out completely. In this section the author presents a conceptual replication of an experiment by Schuman and Presser in their research on the effects of offering vs. not offering middle alternative once more, this was done to: (1) demonstrate the feasibility of the Internet as a tool to assess the impact of a middle alternative in attitude surveys and (2) to document further how the presence or absence of an explicit middle alternative impacts the distribution of responses. Specifically, the author’s replication of Schuman and Presser’s (1981) research addresses the following questions:

1. Is the univariate distribution of responses altered significantly by the presence or absence of a middle response alternative?
2. Does a relationship of a given item to other items change significantly depending upon whether a middle alternative is explicitly offered?
3. Would a researcher reach the same conclusions about the distribution of opinions if all middle responses are excluded?

According to Schuman and Presser (1981), “three hypotheses are implied by the way the middle position is handled in the wording questions”:

1. Researchers may decide not to offer an explicit middle alternative assuming middle category largely consists of responses leaning toward one of the polar alternatives even though the level of intensity may be minimal.
2. Some researchers may omit the middle alternative, because they think that “it tends to attract people who have no opinion on the issue and find it easier to choose a seemingly noncommittal position than to say “don’t know.””

3. Some investigators do offer a middle alternative assuming that respondents actually favor the middle position, and “if forced to choose a polar alternative will contribute some form of random or systematic error.”

In addressing these issues, Schuman and Presser constructed a survey consisting of two forms. In the *Offered form*, a middle alternative was explicitly read to the respondents and in the *Omitted form*, no middle alternative was given. We have employed the same approach in designing our survey questions for the present experiment.

Other Research on Middle Alternatives

It is important to mention here the early experiments conducted by Rugg and Cantril (1944) in which they demonstrated that offering a middle category increased its selection significantly. Follow-up studies by Tamulonis (1947) and by Stember and Hyman (1949-1950) also showed substantial shifts in selection of the middle alternative when it was explicitly offered. Kalton, Roberts, and Holts (1980) analysis of middle-alternative split-ballot experiments led them to the conclusion that the increase in the selection of the middle category could be attributed in part to a possible recency bias. Schuman and Presser (1981) conducted two experiments varying the order of the options on two questions regarding Vietnam and divorce. They found some evidence that a portion of the increase in the selection of the middle alternative was due to “ordinal rather than logical position.” But, most of it was not due to an order effect; it was simply the

result of adding the middle alternative to the possible choices which respondents could select from. Bishop (1987) conducted similar experiments varying the order in which the middle alternative was presented to the respondent. It was quite clear from these experiments that explicit inclusion of a middle alternative led to selecting it more, compared to when the alternative was not included. In addition, offering it as the last mentioned alternative made it even more likely to be selected. However, Bishop (1987) concluded that such selection when the alternative was not mentioned last did not occur “consistently and invariably.” In the experiments reported here, we examined whether the inclusion of a middle alternative had a significant impact on the selection of the alternatives. However, we did not examine the order in which the middle alternative is placed in the question.

Design of Middle Alternative Experiments

Two sets of experiments with the middle response alternative were conducted prior to the 2000 Presidential election. The first phase of this experiment ran between October 8, 2000 and October 24, 2000. The second phase ran from October 24, 2000 to November 7, 2000. In phase I, the *offered form* included a middle alternative which was explicitly presented to each respondent. On the *omitted form* it was excluded. In phase II, the *offered form* was an exact replicate of the phase I experiment. However, the omitted form included “other” as one of the possible responses (see rationale in chapter 2). Charts 5.1A and 5.1B show the exact wording of the questions used in these two sets of experiments.

Chart 5.1A. Middle Alternative Experiments (Phase I)

Omitted Form

Do you think the political leaders in Washington pay too much attention or too little attention to the needs of senior citizens?

Too much
Too little

There is much discussion as to the amount of money the government in Washington should spend for national defense and military purposes. How do you feel about this? Do you think we are spending too little or too much?

Too little
Too much

Thinking about the role of religion in politics today, would you like to see religion play a smaller role or a larger role?

Smaller role
Larger Role

Offered Form

Do you think the political leaders in Washington pay too much attention, too little attention, or about right amount to the needs of senior citizens?

Too much
Too little
About right amount
Not sure
Don't know
No opinion

There is much discussion as to the amount of money the government in Washington should spend for national defense and military purposes. How do you feel about this? Do you think we are spending too little, too much, or about the right amount?

Too little
Too much
About right amount
Not sure
Don't know
No opinion

Thinking about the role of religion in politics today, would you like to see religion play a smaller role, a larger role, or about the same role?

Smaller role
Larger Role
About the same
Not Sure
Don't know
No opinion

Chart 5.1B. Middle Alternative Experiments (Phase II)

Omitted Form

Do you think the political leaders in Washington pay too much attention or too little attention to the needs of senior citizens?

Too much
Too little
Other

There is much discussion as to the amount of money the government in Washington should spend for national defense and military purposes. How do you feel about this? Do you think we are spending too little or too much?

Too little
Too much
Other

Thinking about the role of religion in politics today, would you like to see religion play a smaller role or a larger role?

Smaller role
Larger Role
Other

Offered Form

Do you think the political leaders in Washington pay too much attention, too little attention, or about right amount to the needs of senior citizens?

Too much
Too little
About right amount
Not sure
Don't know
No opinion

There is much discussion as to the amount of money the government in Washington should spend for national defense and military purposes. How do you feel about this? Do you think we are spending too little, too much, or about the right amount?

Too little
Too much
About right amount
Not sure
Don't know
No opinion

Thinking about the role of religion in politics today, would you like to see religion play a smaller role, a larger role, or about the same role?

Smaller role
Larger Role
About the same
Not Sure
Don't know
No opinion

Findings

Tables 5.1A and 5.1B clearly demonstrate that respondents chose the middle category significantly more often when it was explicitly offered to them. On the offered form in phase I, 38.9% chose “about the right amount” as a desirable answer when they were asked about the needs of senior citizens; 27.7% of the respondents made the same selection when they were questioned about the amount of money spent on national defense; and 28.4% found it to be the desirable answer when the role of religion in politics was examined. The phase II experiments with the middle alternative produced a similar pattern of answers with 23.6% to 35.7% of the respondents choosing “about the right amount” as a desired answer. Notice, however, that the same pattern occurred when an explicit “other” category was offered (15.1%-38.7%), suggesting that most of the effect may be due to relieving respondents from making a forced choice. The data in tables 5.1A and 5.1B also show that 4.5% to 12.5% of respondents chose a “not sure,” “don’t know,” or “no opinion” response when it was explicitly offered to them. Again, this suggests reducing pressure on respondents to make a forced choice is the key factor.

Table 5.1A. Response by Question Form in Middle Alternative Experiments (Phase I)

	Omitted		Offered	
Needs of senior citizens				
Too much	48.1%	Too much	24.2%	
Too little	<u>51.9</u>	Too little	25.3	
	100.0%	About the right amount	38.9	
	(462)	Not sure	6.4	} 11.6
		Don't know	2.7	
		No opinion	<u>2.5</u>	
			100.0%	
			(483)	
Money spent on national defense				
Too little	64.7%	Too little	48.7%	
Too much	<u>35.3</u>	Too much	16.4	
	100.0%	About the right amount	27.7	
	(462)	Not sure	4.8	} 7.2
		Don't know	1.2	
		No opinion	<u>1.2</u>	
			100.0%	
			(483)	
Role of religion in politics				
Smaller role	52.2%	smaller role	34.8%	
Larger role	<u>47.8</u>	Larger role	31.1	
	100.0%	About the right amount	28.4	
	(462)	Not sure	2.5	} 5.8
		Don't know	.6	
		No opinion	<u>2.7</u>	
			100.1%	
			(483)	

**Table 5.1B. Response by Question Form in Middle Alternative Experiments
(Phase II)**

Omitted		Offered	
Needs of senior citizens			
Too much	31.6%	Too much	23.1%
Too little	29.7	Too little	28.6
Other	<u>38.7</u>	About the right amount	<u>35.7</u>
	100.0%	Not sure	6.5
(212)		Don't know	1.5
		No opinion	<u>4.5</u>
			99.9%
			(199)
Money spent on national defense			
Too little	31.6%	Too little	39.2%
Too much	36.2	Too much	22.6
Other	<u>32.1</u>	About the right amount	<u>29.1</u>
	99.9%	Not sure	4.0
(212)		Don't know	3.0
		No opinion	<u>2.0</u>
			99.9%
			(199)
Role of religion in politics			
Smaller role	61.8%	Smaller role	52.8%
Larger role	23.1	Larger role	19.1
Other	<u>15.1</u>	About the right amount	<u>23.6</u>
	100.0%	Not sure	1.0
(212)		Don't know	0.0
		No opinion	<u>3.5</u>
			100.0%
			(199)

Univariate Effects

It is quite evident that offering a middle alternative results in a significant increase in its selection by respondents. But does it change the conclusions a researcher would draw about the distribution of public opinion? Following Schuman and Presser, in tables 5.2A and 5.2B, the percentage distribution of univariate responses are presented after exclusion of the other, don't know, no opinion, not sure, and middle categories responses. In two of the experiments – Needs of Senior Citizens and Religion in Politics – a researcher would reach the same conclusion about the distribution of public opinion regardless of which form was used, thus replicating what Schuman and Presser found. In the case of Spending for National Defense, however, the difference in the univariate distributions for offered and omitted forms was highly significant ($p < 0.01$) both in phase I and phase II of the study (Tables 5.2A and 5.2B). In the phase I experiments respondents were significantly more likely to say “too little” was being spent on defense if they were given the offered form than if they received the omitted form ($\chi^2 = 8.93$, $df = 1$, $p < 0.01$). In the phase II experiments these findings replicated very well again, in that only the experiment on defense spending indicated a statistically significant difference ($\chi^2 = 7.62$, $df = 1$, $p < 0.01$). So, in two of the experiments we found no difference as did Schuman and Presser (1981), but in one case we did. This suggests that the findings reported by Schuman and Presser on middle alternative effects may not generalize to all issues (see also Bishop, 1987).

**Table 5.2A. Response by Question Form in Middle Alternative Experiment
Not Sure/Don't Know/No Opinion Excluded (Phase I)**

	Omitted	Offered *
Needs of Senior Citizens		
Too much	48.1%	49.0%
Too little	51.9	51.0
	-----	-----
	100.0%	100.0%
	(462)	(239)
	x ² = 0.51, df=1, n.s.	
Money Spent on National Defense		
Too little	64.7%	74.8%
Too much	35.3	25.2
	-----	-----
	100.0%	100.0%
	(462)	(314)
	x ² = 8.93, df=1, ρ < 0.01	
Role of Religion in Politics		
Too little	52.2%	52.8%
Too much	47.8	47.2
	-----	-----
	100.0%	100.0%
	(462)	(318)
	x ² = .033, df=1, n.s.	

* Not Sure, Don't Know, No opinion, and middle responses excluded

**Table 5.2B. Response by Question Form in Middle Alternative Experiment
Other/Not Sure/Don't Know/No Opinion Excluded (Phase II)**

	Omitted *	Offered **
Needs of Senior Citizens		
Too much	51.5%	44.7%
Too little	48.5	55.3
	-----	-----
	100.0%	100.0%
	(130)	(103)
	x ² = 1.09, df=1, n.s.	
Money Spent on National Defense		
Too little	46.5%	63.4%
Too much	53.5	36.6
	-----	-----
	100.0%	100.0%
	(144)	(123)
	x ² = 7.62, df=1, p < 0.01	
Role of Religion in Politics		
Too little	72.8%	73.4%
Too much	27.2	26.6
	-----	-----
	100.0%	100.0%
	(180)	(143)
	x ² = .017, df=1, n.s.	

* Other excluded

** Not Sure, Don't Know, No opinion, and middle responses excluded

Bivariate Effects

Schuman and Presser (1981) also investigated the possibility that omitting or offering a middle response alternative might produce different results in association with other variables. They hypothesized, for example, that question form differences should be related to education, with less educated respondents being more likely to be influenced by offering of middle alternative. They suggested that regardless of question form, better educated individuals should have a more crystallized opinion and therefore would be less susceptible to the offering of a middle position. They found little evidence, however, to support this hypothesis. As shown in tables 5.3A and 5.3B, we tested their hypothesis by examining whether offering vs. omitting a middle alternative on the issue of money spent for national defense, which was the only issue that produced a significant effect, was not significant relation to the educational background of the respondents. In phase I of our experiment, the relation on omitted and offered forms were just about identical in terms of results. The same percentage of respondents in both educational categories (some college and less versus college degree and more) believed either “too little” or “too much” was being spent on national defense, regardless of which question form was used. In phase I, on the omitted form 64.7% of respondents with some college or less and the exact same percent of those with a college degree and above believed that “too little” is spent for national defense; whereas 35.3% in both educational groups felt that “too much” was being spent for national defense ($\chi^2=0.00$, $df=1$, n.s.). A very similar pattern can be seen examining results for the offered form.

Table 5.3A. Opinion on Money Spent for National Defense by Education by Form (Phase I)

Omitted Form		
	Some College or less	College degree and above
Too little	64.7%	64.7%
Too much	35.3	35.3
	-----	-----
	100.0%	100.0%
	(221)	(241)
	$\chi^2 = 0.00, df=1, n.s.$	

Offered Form *		
	Some College or less	College degree and above
Too little	73.8%	75.8%
Too much	26.2	24.2
	-----	-----
	100.0%	100.0%
	(149)	(165)
	$\chi^2 = 0.16, df=1, n.s.$	

Three-way interaction: $\chi^2 = 0.00, df=1, n.s.$
(Response by Education by Form)

* Not Sure, Don't Know, No opinion, and middle responses excluded

Table 5.3B. Opinion on Money Spent for National Defense by Education by Form (Phase II)

Omitted Form *		
	Some College or less	College degree and above
Too little	60.0%	35.4%
Too much	40.0	64.6
	-----	-----
	100.0% (65)	100.0% (79)
	$\chi^2 = 8.64, df=1, p < 0.00$	

Offered Form **		
	Some College or less	College degree and above
Too little	73.7%	54.5%
Too much	26.3	45.5
	-----	-----
	100.0% (57)	100.0% (66)
	$\chi^2 = 4.83, df=1, p < 0.03$	

Three-way interaction: $\chi^2 = 0.30, df=1, n.s.$
(Response by Education by Form)

* Other excluded

** Not Sure, Don't Know, No opinion, and middle responses excluded

Nearly three-fourth (73.8%) of those individuals with some college or less believed that “too little” was spent for national defense, comparing to 26.2% who believed “too much” was being spent. The same pattern can be seen for those respondents with a college degree and above, with 75.8% believing “too little” was being spent for national defense versus 24.2% who believed “too much” was being spent. The three-way interaction was obviously not significant ($\chi^2=0.00$, $df=1$, n.s.).

In the second phase of the study, however, the results were quite different. Using the omitted version, 60.0% of those respondents with a college degree or less believed that “too little” was being spent for national defense versus 40% who believed that “too much” was spent for it. Interestingly, percentages were reversed among respondents with a college degree and above; 35.4% believed “too little” was being spent on the national defense versus 64.6% who thought “too much” was spent on national defense. In contrast, on the offered form 73.7% of the respondents with some college or less believed “too little” was being spent for national defense and 26.3% thought “too much” was being spent. On the other hand, 54.5% of the respondents with a college degree or above believed that “too little” was being spent on national defense versus 45.5% who believed too much was spent. The three-way interaction, however, was not significant ($\chi^2=0.30$, $df=1$, $p=1.00$). These findings thus replicate those reported by Schuman and Presser (1981) as well as those by Kalton et al. (1980), showing that generally the inferences about the relationship between background

variables and attitude items are not affected by the presence or absence of a middle alternative.

Tables 5.4A and 5.4B present an additional test of bivariate effects showing the relationship between the opinions on money spent on national defense and political ideology by omitted versus offered forms. Schuman and Presser (1981) conducted a similar analysis examining the relationship between opinions on the amount of aid during the Vietnam War and a respondent's political ideology by question form. In phase I of the present experiment we find that on both the omitted form and the offered form there was a highly significant difference in opinion on money spent on national defense among liberals, moderates, and conservatives. Conservatives in general were more likely to believe "too little" was being spent on national defense compared to moderates and liberals. The relationship between opinion and ideology was also stronger on the omitted form than on the offered form, and the three-way interaction was highly significant ($\chi^2=10.39$, $df=2$, $p<.01$). But in phase II this three-way interaction failed to replicate ($\chi^2=1.27$, $df=2$, n.s.). The failure of the interaction to replicate in phase II may possibly be due to the smaller sample size in the second phase of our study.

Table 5.4A. Money Spent for National Defense by Ideology by Form (Phase I)

Omitted Form			
Money Spent on National Defense	Liberal	Middle of the road	Conservative
Too little	32.5%	55.0%	86.8%
Too much	67.5	45.0	13.2
	-----	-----	-----
	100.0%	100.0%	100.0%
	(123)	(111)	(228)

$$\chi^2 = 109.35, df=2, p<.01$$

Offered Form *			
Money Spent on National Defense	Liberal	Middle of the road	Conservative
Too little	25.8%	82.6%	89.1%
Too much	74.2	17.4	10.9
	-----	-----	-----
	100.0%	100.0%	100.0
	(66)	(46)	(202)

$$\chi^2 = 107.76, df=2, p < .01$$

Three-way interaction: $\chi^2 = 10.39, df=2, p = .01$
(Opinion by Ideology by Form)

* Not sure, Don't know, No opinion, and middle responses excluded

Table 5.4B. Money Spent for National Defense by Ideology by Form (Phase II)

Omitted Form *			
Money Spent on National Defense	Liberal	Middle of the road	Conservative
Too little	15.2%	51.9%	84.3%
Too much	84.4	48.1	15.7
	-----	-----	-----
	100.0%	100.0%	100.0%
	(66)	(27)	(51)

$$\chi^2 = 55.69, df=2, p<.01$$

Offered Form **			
Money Spent on National Defense	Liberal	Middle of the road	Conservative
Too little	38.2%	61.9%	93.6%
Too much	61.8	38.1	6.4
	-----	-----	-----
	100.0%	100.0%	100.0%
	(55)	(21)	(47)

$$\chi^2 = 33.59, df=2, p<.01$$

Three-way interaction:
(Opinion by Ideology by Form) $\chi^2 = 1.27, df=2, n.s.$

* Other excluded

* Not Sure, Don't Know, No opinion, and middle response excluded

Conclusion

Our web experiment clearly demonstrates that many respondents will choose a middle category when it is offered to them. The results of our experiment thus replicate Schuman and Presser's (1981) findings on this topic. Almost one third of the respondents chose the middle alternative when it was offered. In regards to univariate effects, we also discovered the same pattern as Schuman and Presser for two out of three questions; a researcher would draw essentially the same conclusion. However, in case of defense spending, we clearly found evidence of statistically significant difference based on response form. To examine the bivariate effects, we replicated Schuman and Presser's (1981) study to examine whether omitting or offering a middle response alternative produced different results in association with other variables such as education and political ideology. Our findings were similar to theirs as well as to those of Kalton et al. (1980), demonstrating that the inferences about the relationship between attitude items and a background variable are not affected by whether middle alternative is offered or not. Here once again we have demonstrated that web technology can be effectively utilized to create a laboratory in which this type of experiment can be successfully replicated, and further, that web surveys offer a relatively inexpensive, efficient way to carry out these and other types of experiments.

Chapter 6

RESPONSE ORDER EFFECTS

It is now well demonstrated that even slight changes in response order can produce significant variations in survey results (see Rugg and Cantril, 1944; Payne, 1951; Schwarz, Hippler, and Noell-Newman, 1992; Krosnick and Awin, 1987; Schuman and Presser, 1981; Bishop, 1990; Bishop and Smith, 2001). According to Schuman and Presser (1981), it is possible that the issues with response order effects may not even be evident to the researcher since responses to a recurring question are given in the same order from study to study. They also suggest that many response order effects can be explained by the difficulty for the respondent to keep in mind all the alternatives read by an interviewer in a telephone poll. This issue is not dealt with in this study since the user is capable of viewing all of the alternatives at the same time in a web survey.

Earlier research by Rugg and Cantril (1944) reported in an edited volume, *Gauging Public Opinion* (Cantril, ed., 1944) pointed out the frequent occurrence of response-order effects. They attributed these results to the respondent's "uncrystallized" opinions and to the degree of complexity of the questions. In a study of a split-ballot experiment for the American Petroleum Institute, which consisted of 16 dichotomous and trichotomous items, Payne (1951) reported nine response order variations (not specified) to be insignificant, but seven

questions showed significant percentage differences between 4.5% to 7.5%. In one case a primacy effect was observed possibly due to unique nature of that question. In other cases, a recency effect was observed. Payne suggested that question length and difficulty level could attribute to the response-order effects. Kalton et al (1978) also conducted four experiments regarding traffic safety and attitudes towards European Common Market by reversing three and four point scales. These experiments did not provide a statistically significant conclusion even though authors made some suggestions identifying a primacy effect. Schuman and Presser (1981) replicated two questions from Payne's (1951) study of the oil industry that had shown some degree of response-order effect. The question on competition among oil companies was repeated exactly as it was stated in the original study. The second question regarding remaining oil supply was adapted to the time frame of the study. These experiments were carried out in January of 1979 and repeated in April of the same year. The results showed that in both experiments, a response was chosen more often when it was read last. Comparing the percentages of respondents choosing an alternative when it was listed first versus last, researchers concluded that the difference in three of the four comparisons were significant. However, three of the percentages were small (6% - 8%) and one was large (14%). According to Schuman and Presser, the differences were large as or larger than what has been reported by Payne. Therefore, the researchers concluded that "even dichotomous items can produce serious response order effects." Further research in the same area by Schuman and Presser revealed that when a large

number of alternatives were read to respondents in open-closed experiments, no order effects were produced, suggesting that the number of alternatives or total number of words by themselves fail to create response-order effects.

Bishop and Smith (2001) meta-analysis of the early Gallup split-ballots demonstrated that, even with a fairly large sample size, only a fifth of the experiments in auditory format and only about a tenth of those in visual format led to statistically significant response-order effects. Questions presented in auditory format were more likely to produce a statistically significant pattern of recency effect when longer rather than shorter response alternatives were offered. However, the visual mode did not produce a statistically significant pattern of primacy effect as expected. It actually led to some degree of recency effect.

In the present study, three response-order experiments were conducted (Chart 6.1) in which two forms were presented for questions about important issues in the 2000 election, likelihood of voting, and political ideology (see also Appendix A). For each of the response-order experiments, 674 respondents received Form A and 682 received Form B. As shown in Table 6.1, response order did make a significant difference in how respondents answered the question about “the single most important issue for presidential candidates to address” in the campaign. With Form A, 26.9% of respondents selected one of the top three responses on the list of 12 possible issues, while 19.0% of respondents given

form B chose one of the top three answers (Table 6.2). The difference between the two forms produced a χ^2 of 15.29, which was significant at $p < .001$. In this case, the results clearly indicate the presence of a primacy effect.

Chart 6.1. Design of Response Order Experiment (Phase I and II)

Form A

What do you think is the single most important issue for the presidential candidates to address in this election campaign?

Abortion
Campaign Finance
Economy
Education
Foreign Policy
Gun Control
Health Care
Moral Values
National Defense
Prescription Drug Costs
Social Security
Tax Cuts

How likely are you to vote in the presidential election on November 7th?

Extremely likely
Very likely
Fairly likely
Somewhat likely
Not too likely

Your Political views on most issues:

Extremely liberal
Very liberal
Somewhat liberal
Moderate
Somewhat conservative
Very conservative
Extremely conservative

Form B

What do you think is the single most important issue for the presidential candidates to address in this election campaign?

Tax Cuts
Social Security
Prescription Drug Costs
National Defense
Moral Values
Health Care
Gun Control
Foreign Policy
Education
Economy
Campaign Finance
Abortion

How likely are you to vote in the presidential election on November 7th?

Not too likely
Somewhat likely
Fairly likely
Very likely
Extremely likely

Your Political views on most issues:

Extremely conservative
Very conservative
Somewhat conservative
Moderate
Somewhat liberal
Very liberal
Extremely liberal

Table 6.1. Response Order by Form (Phase I & II)

	Form A	Form B
Single most important Issue for the presidential candidates to address		
Abortion	7.7%	4.7%
Campaign Finance	4.7	4.1
Economy	14.5	10.2
Education	22.3	21.9
Foreign Policy	7.0	6.3
Gun Control	1.8	2.3
Health Care	8.0	8.9
Moral Values	9.6	8.3
National Defense	5.0	7.6
Prescription Drug Costs	0.7	1.9
Social Security	8.0	8.8
Tax Cuts	10.7	14.9
	-----	-----
Total	100.0% (674)	100.0% (682)
How likely to vote		
Extremely likely	84.6%	82.6%
Very likely	6.1	7.7
Fairly likely	3.0	1.5
Somewhat likely	0.6	2.5
Not too likely	5.8	5.7
	-----	-----
Total	100.0% (674)	100.0% (682)
Political Ideology		
Extremely liberal	4.9%	4.8%
Very liberal	11.7	13.0
Somewhat liberal	17.2	18.3
Moderate	23.2	19.4
Somewhat conservative	23.5	24.6
Very conservative	15.5	15.2
Extremely conservative	4.0	4.7
	-----	-----
Total	100.0% (674)	100.0% (682)

Table 6.2. Single Most Important Issue for the Presidential candidates to Address

	Form A	Form B
Top 3 listed responses combined	26.9%	19.0%
Middle 6 listed responses combined	53.7	55.4
Bottom 3 listed responses combined	19.4	25.6
	100.0%	100.0%
	(674)	(682)

Response x Form: $\chi^2 = 15.29$, $df = 2$, $p < .001$

The other two response-order experiments produced somewhat less robust results. On likelihood of voting (Table 6.3), respondents were a little less likely to say they would be “extremely likely” to vote when that response was listed last (form B) compared to first (form A). Respondents who were given Form B were more likely to choose either “not too likely” or “somewhat likely” (8.2%) when they were presented at the beginning of the list. In all, the difference between form A and form B produced a χ^2 of 12.91, significant at $p < .01$ showing a small primacy effect. On the topic of political ideology, response order did not significantly affect how respondents answered (Table 6.4). The analysis of response by form produced χ^2 of 3.55 which was non-significant.

Table 6.3. How Likely to Vote in the Presidential Election by Form

	Form A	Form B
Extremely likely	84.6%	82.6%
Very likely	6.1	7.7
Fairly likely	3.0	1.5
Somewhat likely	0.6	2.5
Not too likely	5.8	5.7
	100.0% (674)	100.0% (682)

Response x Form: $\chi^2 = 12.91$, $df = 4$, $p < .01$

Table 6.4 – Political Ideology by Form

	Form A	Form B
Extremely liberal	4.9%	4.8%
Very liberal	11.7	13.0
Somewhat liberal	17.2	18.3
Moderate	23.2	19.4
Somewhat conservative	23.5	24.6
Very conservative	15.5	15.2
Extremely conservative	4.0	4.7
	100.0% (674)	100.0% (682)

Response x Form: $\chi^2 = 3.55$, $df = 6$, *n.s.*

Further analysis of the “single most important issue for presidential candidates to address” in relation to the level of education among respondents failed to produce any significant results (Table 6.5).

Table 6.5. Most Important Issue for the Presidential Candidates to Address by Form by Education (Responses Combined)

	Some College or less *	
	Form A	Form B
Top 3 responses combined	25.5%	16.9%
Middle 6 responses combined	54.7	57.2
Bottom 3 responses combined	19.8	25.8
	100.0% (318)	100.0% (325)

Response x Form: $\chi^2 = 8.30$, $df = 2$, *n.s.*

* Some college or less (47.3%)

	College degree or more *	
	Form A	Form B
Top 3 responses combined	28.2%	20.9%
Middle 6 responses combined	52.8	53.8
Bottom 3 responses combined	19.0	25.3
	100.0% (358)	100.0% (359)

Response x Form: $\chi^2 = 7.21$, $df = 2$, *n.s.*

* Some college or more (52.7%)

Schuman and Presser (1981) varied response order in 12 experiments, four of which provided evidence of moderately large effects. Furthermore, the result of three other experiments produced a recency effect. However, in one case a primacy effect was observed, the cause of which is unknown to researchers since this type of effect in telephone surveys should be due recency, possibly because of remembering the last alternative read by the interviewer. In our web-based experiments, only one question – likelihood of voting – demonstrated a primacy effect with statistically significant results.

In general, self-administered methods on the web can produce primacy effects, while verbally-administered methods such as telephone polls potentially produce recency effects. This study included only three questions testing response order effects, with one of the three producing significant differences. In a future study with an emphasis on response order effects, additional manipulations of response order could well result in findings of significant differences based on the order in which responses are presented.

Chapter 7

Conclusion

In this study a number of well-known experiments were successfully replicated utilizing Internet technology. These web-based surveys provided a quick and inexpensive method to test well-established findings on survey question effects. While specific technical issues or the questions surrounding sample representativeness were not addressed in this study, we have successfully demonstrated that Internet can be used as a laboratory for social scientists to create online surveys in a quick and cost-efficient manner.

Gradually, computers are finding their way into every household around the world. The number of individuals who can be reached through email systems and Internet websites is growing rapidly. Subsequently, higher level of Internet access will lead to better representative samples of population. Since large amount of data can be collected easily online, we predict that Internet will become the primary means of survey research in the future.

Close examination of a number of methodological experiments, such as effects of filter questions, experiments in question wording, effects of middle response alternative, and issues dealing with order effects provided us with sufficient evidence that research scientists can quickly recreate and examine various experiment online and acquire fresh data for further synthesis.

We successfully demonstrated in previous chapters that many of the experiments we recreated led to results similar to the original research, though some differed, allowing us to re-examine the conclusions drawn in the original experiments conducted by Schuman and Presser (1981), confirming or not confirming the original observations.

Implications for Further Research

Use of Internet technology in conducting survey research has increased tremendously in the past decade. Now researchers can easily put together surveys and test hypotheses using data collected online.

Having successfully replicated a number of methodological experiments, researchers can explore additional lines of research related to the online surveys. One of the areas to be examined is the way users interact with a survey page. For example, in “single-question” method the user is asked only one question per page. The webpage does not allow for directional movements and once the question is answered, the respondent is automatically moved to the next question. “Complete-multiple-question” method displays the entire list of questions and the user is capable of modifying his/her answers within a single session. “Restricted-multiple-question” method shows a partial list of questions to the user. After completing each segment and submitting it, the user is capable of moving to the next group of questions. However, the user is restricted to a

single section and is not allowed to move back to the previous section of the survey. There is a need to compare these alternative methods of presentation.

Jabbari (2000) has successfully constructed surveys utilizing all three methods. The University of Cincinnati Presidential Election Survey utilized “single-question” method. Pulse, a monthly survey conducted by Cincinnati Business Courier (1992-present) uses “complete-multiple-question” method, and University of Cincinnati Women Center Survey (2005) was set up as a “restricted-multiple-question” questionnaire. A future analysis will conduct a methodological experiment comparing these methods in a single survey.

Couper, Traugott and Lamias (2001) examined use of progress indicators in both graphic and text formats. They also analyzed grouping of related items on a single screen hypothesizing that context and order effects should be minimized since the respondent is capable of viewing several related questions at the same time. They hypothesized that order effects will be enhanced when respondent can view only a single question per screen. Finally, they compared radio buttons, check boxes, and text areas in order to determine the amount of time and effort needed to complete a web survey. Additional research in this area is needed to confirm their findings.

Another area for further research is the examination of the effects of using various graphics and animation as well as text and background color in online

survey questionnaires. Designers are fully capable of using different colors and background images in setting up survey pages. However, most online surveys are fairly uniform in nature and they use a single color for background and text representation. No in-depth study has been done on the effects of use of color or background images in an online survey.

Currently, the use of animation and graphics (including charts) is fairly limited in online survey research. Sophisticated software packages will introduce such designs in the near future and there will be a need to examine their impact.

Another fascinating approach is the use of stream audio and video in conducting survey research on-line. This can be accomplished by storing audio and video information of an interviewer or subject in a database and playing it back online. Methodologist can examine the impact of age, race, and gender of an interviewer in a video clip as well as the respondent's reaction to the character or event shown via streaming video online.

Couper (2000) emphasized an important point that web surveys should be also evaluated in terms of traditional measures of quality and major sources of errors such as sampling, non-response, coverage, and measurement error. We confirm and suggest that survey methodologists need to address these quality measures as well as those related to this new mode of survey research.

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Appendix A

Presidential Election Poll (Campaign 2000) – FORM A

1a. How much attention have you paid to the American presidential election campaign this fall?

1. A lot
2. Fair amount
3. Some
4. Little
5. None

2a. If the presidential election were being held today, whom would you most likely vote for?

1. George Bush and Dick Cheney
2. Al Gore and Joe Lieberman
3. Pat Buchanan and Ezola Foster
4. Ralph Nader and Winona LaDuke
5. Other presidential candidates
6. Undecided/Not Sure

3a. What would you say is the most important reason why you would be more likely to vote for these candidates?

1. Agree with their political ideas
2. Care about average person
3. Candidates of my political party
4. Experience
5. Economic Issues
6. Other
7. Undecided voter

4a. What do you think is the single most important issue for the presidential candidates to address in this election campaign?

1. Abortion
2. Campaign Finance
3. Economy
4. Education
5. Foreign Policy
6. Gun Control
7. Health Care
8. Moral Values
9. National Defense
10. Prescription Drug Costs
11. Social Security
12. Tax Cuts

5a. Do you favor or oppose a proposal that would allow people to put a portion of their Social Security payroll taxes into personal retirement accounts that would be invested in private stocks and bonds?

1. Favor
2. Oppose
3. Other *

6a. Thinking about the long-term condition of the Social Security system, if people were allowed to put a portion of their Social Security payroll taxes into accounts that would be invested in the stock market, do you think this would strengthen or weaken the ability to pay benefits to retirees 25 years from now?

1. Strengthen
2. Weaken
3. Other *

7a. Do you favor or oppose a proposal to repeal the 1995 Social Security Reform Act?

1. Favor
2. Oppose
3. Haven't heard of it

8a. Do you favor or oppose allowing local governments to sue gun manufacturers in order to recover the costs incurred because of gun violence in their areas?

1. Favor
2. Oppose
3. Other *

9a. Do you favor or oppose the death penalty for a person convicted of murder?

1. Favor
2. Oppose
3. Other *

10a. Which of the following statements best represents the way you feel about managed health care plans, such as HMOs?

1. They need to be completely overhauled
2. They need major changes
3. They need minor changes
4. They are basically fine the way they are
5. Other *

11a. Do you think abortions should be legal under any circumstances, legal only under certain circumstances, or illegal in all circumstances?

1. Legal under any circumstances
2. Legal only under certain circumstances
3. Illegal in all circumstances
4. Other *

12a. Do you think the political leaders in Washington pay too much attention or too little attention to the needs of senior citizens?

1. Too much
2. Too little
3. Other *

13a. There is much discussion as to the amount of money the government in Washington should spend for national defense and military purposes. How do you feel about this? Do you think we are spending too little or too much?

1. Too little
2. Too much
3. Other *

14a. Thinking about the role of religion in politics today, would you like to see religion play a smaller role or a larger role?

1. Smaller role
2. Larger role
3. Other *

15a. Do you think public schools should allow daily prayer to be spoken in the classroom?

1. Yes
2. No
3. Not Sure
4. Don't Know
5. No Opinion

16a. Do you think public schools should be allowed to display the Ten Commandments?

1. Yes
2. No
3. Not Sure
4. Don't Know
5. No Opinion

17a. Are you currently registered to vote at your present address?

1. Yes
2. No

18a. How likely are you to vote in the presidential election on November 7th?

1. Extremely likely
2. Very likely
3. Fairly likely
4. Somewhat likely
5. Not too likely

19a. To which age group do you belong?

1. Under 25
2. 25-29
3. 30-39
4. 40-49
5. 50-59
6. 60-69
7. 70 or older

20a. Last grade of school you completed:

1. Did not complete high school
2. High school graduate
3. Some college or associate degree
4. College degree
5. Postgraduate study

21a. Are you?

1. Male
2. Female

22a. Are you?

1. White
2. Black/African-American
3. Hispanic/Latino
4. Asian
5. Multi-racial
6. Other

23a. Your Religious Affiliation:

1. Catholic
2. Protestant
3. Jewish
4. Other religion
5. None

24a. Political Party Identification:

1. Democrat
2. Republican
3. Reform
4. Green
5. Libertarian
6. Natural Law
7. Other Political Party
8. Independent

25a. Your political views on most issues:

1. Extremely liberal
2. Very liberal
3. Somewhat liberal
4. Moderate
5. Somewhat conservative
6. Very conservative
7. Extremely conservative

* Form A was modified and this option was added effective 10:39 p.m. on Tuesday, October 24, 2000.

Presidential Election Poll (Campaign 2000) – FORM B

1b. How much attention have you paid to the American presidential election campaign this fall?

1. None
2. Little
3. Some
4. Fair amount
5. A lot

2b. If the presidential election were being held today, whom would you most likely vote for?

1. George Bush and Dick Cheney
2. Al Gore and Joe Lieberman
3. Pat Buchanan and Ezola Foster
4. Ralph Nader and Winona LaDuke
5. Other presidential candidates
6. Undecided/Not Sure

3b. What would you say is the most important reason why you would be more likely to vote for these candidates?

1. Leadership qualities
2. Like choice of running mate
3. Good morals, ethics, values
4. Just like them more
5. Better qualified
6. Other
7. Undecided voter

4b. What do you think is the single most important issue for the presidential candidates to address in this election campaign?

1. Tax Cuts
2. Social Security
3. Prescription Drug Costs
4. National Defense
5. Moral Values
6. Health Care
7. Gun Control
8. Foreign Policy
9. Education
10. Economy
11. Campaign Finance
12. Abortion

5b. Do you favor or oppose a proposal that would allow people to put a portion of their Social Security payroll taxes into personal retirement accounts that would be invested in private stocks and bonds?

1. Favor
2. Oppose
3. Not sure
4. Don't know
5. No opinion

6b. Thinking about the long-term condition of the Social Security system, if people were allowed to put a portion of their Social Security payroll taxes into accounts that would be invested in the stock market, do you think this would strengthen or weaken the ability to pay benefits to retirees 25 years from now?

1. Strengthen
2. Weaken
3. Not Sure
4. Don't know
5. No Opinion

7b. Do you favor or oppose a proposal to repeal the 1995 Social Security Reform Act?

1. Favor
2. Oppose
3. Not sure
4. Don't know
5. No opinion

8b. Do you favor or oppose allowing local governments to sue gun manufacturers in order to recover the costs incurred because of gun violence in their areas?

1. Favor
2. Oppose
3. Not sure
4. Don't know
5. No opinion

9b. Do you favor or oppose the death penalty for a person convicted of murder?

1. Favor
2. Oppose
3. Not sure
4. Don't know
5. No opinion

10b. Which of the following statements best represents the way you feel about managed health care plans, such as HMOs?

1. They need to be completely overhauled
2. They need major changes
3. They need minor changes
4. They are basically fine the way they are
5. Not sure
6. Don't know
7. No opinion

11b. Do you think abortions should be legal under any circumstances, legal only under certain circumstances, or illegal in all circumstances?

1. Legal under any circumstances
2. Legal only under certain circumstances
3. Illegal in all circumstances
4. Not sure
5. Don't know
6. No opinion

12b. Do you think the political leaders in Washington pay too much attention, about the right amount, or too little attention to the needs of senior citizens?

1. Too much
2. Too little
3. About right amount
4. Not sure
5. Don't know
6. No opinion

13b. There is much discussion as to the amount of money the government in Washington should spend for national defense and military purposes. How do you feel about this? Do you think we are spending too little, too much, or about the right amount?

1. Too little
2. Too much
3. About the right amount
4. Not sure
5. Don't know
6. No opinion

14b. Thinking about the role of religion in politics today, would you like to see religion play a smaller role, a larger role, or about the same role?

1. Smaller role
2. Larger role
3. About the same
4. Not sure
5. Don't know
6. No opinion

15b. Do you think public schools should forbid daily prayer to be spoken in the classroom?

1. Yes
2. No
3. Not Sure
4. Don't Know
5. No Opinion

16b. Do you think public schools should be forbidden to display the Ten Commandments?

1. Yes
2. No
3. Not Sure
4. Don't Know
5. No Opinion

17b. Are you currently registered to vote at your present street address?

1. Yes
2. No

18b. How likely are you to vote in the presidential election on November 7th?

1. Not too likely
2. Somewhat likely
3. Fairly likely
4. Very likely
5. Extremely likely

19b. To which age group do you belong?

1. Under 25
2. 25-29
3. 30-39
4. 40-49
5. 50-59
6. 60-69
7. 70 or older

20b. Last grade of school you completed:

1. Did not complete high school
2. High school graduate
3. Some college or associate degree
4. College degree
5. Postgraduate study

21b. Are you?

1. Male
2. Female

22b. Are you?

1. White
2. Black/African-American
3. Hispanic/Latino
4. Asian
5. Multi-racial
6. Other

23b. Your Religious Affiliation:

1. Catholic
2. Protestant
3. Jewish
4. Other religion
5. None

24b. Political Party Identification:

1. Democrat
2. Republican
3. Reform
4. Green
5. Libertarian
6. Natural Law
7. Other Political Party
8. Independent

25b. Your political views on most issues:

1. Extremely conservative
2. Very conservative
3. Somewhat conservative
4. Moderate
5. Somewhat liberal
6. Very liberal
7. Extremely liberal