

**What Matters, Information or Awareness? ---
The Key to the Mystery of Mass Media Effects**

by

Ying Qian

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Dissertation Committee:

Professor Michael W. Traugott, Chair
Professor L. Rowell Huesmann
Professor W. Russell Neuman
Associate Professor Ted Brader

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Chapter 1

INTRODUCTION

The News---Our Window onto the World of Public Affairs
-----*Walter Lippmann*

When a story about a public issue appears in the news media, politicians, laypersons, and academic researchers naturally wonder whether and what kind of influence the story may have on the opinions of its audience. How the public feels about an issue or a political figure matters greatly in a democratic political system (Hume, 1963, Habermas, 1989). Its influence on issue support and electoral results are well documented by research (e.g. Iyengar & Simon, 1993, Burstein, 2003, Mishler, 1993 & Lavine, 2001). The importance to understand and predict the formation and change of public opinion with exposure to media contents has thus made research in this line one of the key areas in political science and mass communication studies.

The news media have been regarded as playing a unique role in bringing information to citizens that is beyond their immediate reach (Lippmann, 1922). It is commonly assumed that the news stories influence the perceptions, attitudes, and opinions of their audience. The subtractive logic (Mutz, 1998) as well as incidental or anecdotal experience such as the panic effect from shows like *Attack by the Mar*

certainly supports this notion.

The scientific evidence with regard to media effects has gone through quite dramatic shifts---from magic bullet to minimal effects and back to powerful effects (Bryant & Zillmann, 1994). Nowadays, the news media is considered to have some influence, but not under all circumstances. Nor is such influence all powerful on different individuals. These paradigm changes clearly indicate that media effects are simply complicated. It also represents a progression from a simplistic view to a more sophisticated understanding of media effects on public opinion.

The question then becomes when and how the messages communicated through the media would have an effect. Some research argues that the difference in the magnitude of media effects is due to individual differences, such as differences in political knowledge (Zaller, 1992, Neuman, 1986). Some research argues that the difference is also on the issue level, as some issues are more close to the lives of the general public, some are a bit distant from it (Gambson, 1992).

It seems, though, that the differences that have been conceptualized and tested in these various studies have something in common. Then it may be possible to unify the theories in these studies by using a single construct, if that construct can capture the underlying differences among individuals and among issues.

Overarching Goals of the Dissertation

Drawing from the theory of asymmetric information in the field of economics and from previous public opinion research about specific information (e.g. Akerlof, 1970, Zaller, 1992, and Iyengar, 1986), this dissertation proposes a unifying theoretical model

for explaining the circumstances under which the news media would have a stronger effect on issue opinions. The research question that this dissertation addresses is whether the construct of information may explain the magnitude of media effects, either in place of or as an addition to constructs that have been tested by previous research (e.g. Zaller, 1992, Mutz, 1998, Gambson, 1992 and Zucker, 1978).

Empirically, three experiments are conducted to test whether having more specific information about an issue in the news would mitigate the effect from exposing to the news. That is, whether those who have more information about the issue would demonstrate less agreement with the issue position in the respective news stories shown to them. The three public issues in these three experiments are the North Korean nuclear threat, health care reform, and alternative energy research. By choosing these three issues that represent both foreign and domestic affairs of either a political or economic nature, this dissertation tries to choose public issues that may represent a wide spectrum of issues. Experiments are conducted to allow the testing of media effects and its interaction with specific information with control of media exposure and information reception. With these experiments, it is not only possible to examine the short term effects right after receiving issue specific information, but also the longer term effects from information that has been accumulated over time.

The Organization of the Dissertation

In Chapter 2, I review previous research that examines the various moderators of media effects on public opinion. The review is mostly focused on studies that address this question directly. Then I provide a concept explication for information, the key construct

in the theory proposed in this dissertation. Information is then compared to other major constructs that have been proposed and tested to explain the magnitude of media effects with a focus on comparison to the explanatory and predictive power of political awareness.

In Chapter 3, I present the theory proposed in this dissertation with specific hypothesis deduced from the theory for each of the three public issues. In the following two chapters, I describe the procedure (Chapter 4) and results (Chapter 5) from three experimental studies using the three public issues.

The concluding chapter (Chapter 6) highlights the implications of major findings in the current research in light of existing media effects theories. It also discusses the limitations of the current study and direction for future research.

Chapter 2

LITERATURE REVIEW

Media effects research has shifted through three paradigms. Starting from the notion of all-powerful effects, early empirical research concluded that the media only have minimal effects (Klapper, 1960). The reversion to the powerful effects paradigm was marked by demonstrating that the media tend to have more influence on “what people think about” than on “what people think” (Cohen, 1962).

In the process of these paradigm changes, evidence has accumulated that media messages do not have uniform impact under all circumstances or on all individuals (Klapper, 1960; Lazarsfeld, Berelson & Gaudet, 1948; Cacioppo & Petty, 1979; Tichenor, Donohue & Olien, 1970; Gerbner & Gross, 1976;). Additional research has tried to identify the limiting conditions (Simon, 1977) under which the mass media tend to have a greater or lesser impact (e.g. Zucker, 1978; Gamson, 1992; Mutz, 1998; Zaller, 1992). This dissertation proposes that information is the underlying construct common to a few factors that have been identified as the moderators of media effects.

Moderators of Media Effects

Issue Obtrusiveness

Zucker (1978) proposes that the impact of the news media is contingent upon two factors. One of them is the obtrusiveness of an issue. If people have less direct experience with an issue, it is less obtrusive. Media reports about such issues tend to have larger impact on the public than issues that are more obtrusive. For example, Zucker has demonstrated that public opinion about pollution is more prone to shifts from exposure to media coverage than opinion about the cost of living.

Issue Proximity

Gamson finds that proximity of issues or of issue frames to the daily life of the public has an impact on how much they rely on media messages when talking about politics (Gamson, 1992). For issues such as nuclear power and the Arab-Israeli conflict, the reliance on the mass media is greater compared to issues like the troubled American industry or affirmative action.

Gamson's idea of proximity is very similar to the concept of obtrusiveness proposed by Zucker (1978). Both categorize issues or issue frames into those close to people's everyday life and those that are relatively distant. However, proximity is proposed only as an explanation for the public's varying level of reliance on mass media while talking about the four issues (affirmative action, nuclear power, troubled industry, and Arab-Israeli conflict) in the study. How to measure proximity for other issues is not specified. Nor has the idea been tested further.

Impersonal Influence

Mutz (1998) demonstrates that media messages tend to influence the perceptions of collective experience and opinions more strongly than personal ones. For example, personal opinions about low-income housing or unemployment are less prone to the effects of exposure to media coverage than perceptions on the collective level, such as community support for low-income housing.

Information: The Underlying Construct

These three research domains have empirically demonstrated the varying magnitude of media influence across issues or on opinions at the personal or collective level. However, the question remains as to what exactly the difference is between obtrusive and non-obtrusive issues, between issues that are close to our daily lives, and issues that are distant, and between personal and impersonal perceptions.

This dissertation argues that information is the construct that underlies issue obtrusiveness, proximity, and impersonal influence. It is information that moderates mass media effects. A theory built upon information may provide a unifying theoretical explanation for these pieces of empirical evidence about mass media effects.

Although obtrusiveness, proximity, and personal- and collective- perceptions all seem to have high heuristic values, the concept of information has the following advantages. First of all, it is logical and testable to see whether the public has more information about obtrusive than non-obtrusive issues. So is the case with proximity and impersonal influence. In this sense, using information as a moderator of media effects can

provide a unifying explanation for these seemingly different pieces of empirical observation.

Secondly, information can be measured and quantified with higher inter-objectivity. The measures of issue obtrusiveness, proximity and opinion collectivity are not specified in previous research. Rather, intuition and common sense are applied to decide which issues are obtrusive or close to our lives or which opinions are personal or collective. Subjectivity arises as different researchers may have different opinions about these things. On the other hand, the measurement of information can be specified so that it is more objective across studies.

Lastly, obtrusiveness, proximity, and impersonal influence have all been conceptualized with regard to issues or opinions. None of them discusses whether the mass media may have stronger or weaker impact on different individual audience members. The concept of information, however, makes it possible to explain the varying magnitude of media effects both on the issue level and on the individual level. The public may have more or less information about different issues or topics. Individual audience members may also have more or less specific information about what is discussed in a media message. In this sense, the concept of information has more explanatory power than the three concepts proposed in the previous studies.

Political Awareness, an Alternative Explanation?

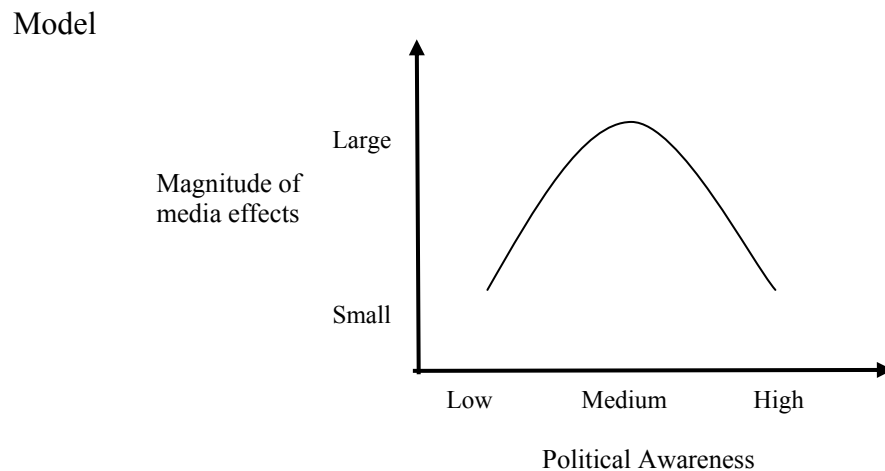
As for a unifying explanation of media effects on attitude change, the Reception, Acceptance and Sampling (RAS) model proposed by Zaller (1992) seems to be an existing alternative to the model proposed in this dissertation. In this section, I explain

why they are different and how the concept of information can contribute to our understanding of the magnitude of media effects.

The RAS Model

Zaller (1992) proposes and tests the model suggesting that those who have a moderate level of political awareness tend to show the largest effects from media messages. Such effects tend to be smaller for those who are the least and the most aware (Figure 3).

Figure 1. The Relationship between Political Awareness and Mass Media Impact in the RAS

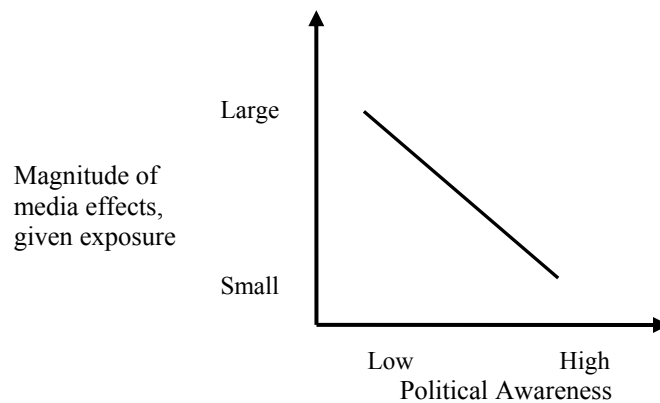


The logic behind the non-monotonic relationship between political awareness and the magnitude of media effects, or attitude change as Zaller put it, has two steps. First of all, the Acceptance Axiom argues that political awareness is positively related to the reception of media communication about a particular topic. Secondly, given exposure to the media coverage, the Acceptance Axiom argues that political awareness is negatively correlated with the likelihood of accepting the argument communicated in a media

message (Figure 4). Based on these two steps, the non-monotonic model of political awareness and media effects is deduced.

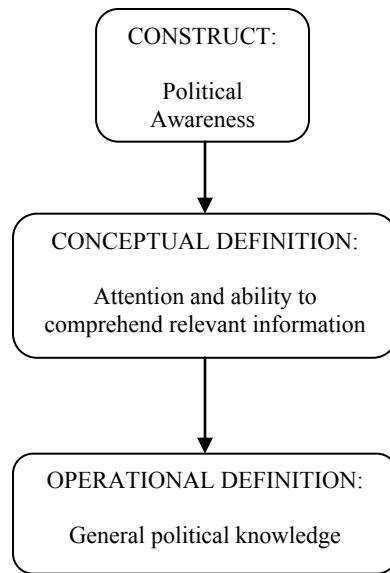
The theory proposed in this dissertation only concerns the relationship between information and the magnitude of media effects given exposure. It is thus an argument directly related to the Acceptance Axiom.

Figure 2. The Relationship between Political Awareness and Mass Media Impact, Given Exposure in the RAS Model (the Acceptance Axiom)



Political awareness is conceptualized as the attention and ability to comprehend relevant information. Zaller (1992) argues that the battery of factual and general political knowledge questions, like the one used in the National Election Studies, provides a very good measure of this concept (Figure 5). The operationalized version of the Acceptance Axiom is that given exposure, the mass media show stronger impact on those with low levels of general political knowledge than on those with high levels of general political knowledge.

Figure 3. The Conceptualization and Operationalization of Political Awareness



Explanatory Power and Parsimony of Model Building

Measured by general political knowledge, political awareness seems to explain why some individuals in the public are more prone to media communication and some are less prone. However, it does not explain why the mass media tend to have more effects on non-obtrusive issues or issues that are distant from people's daily lives even for the same individual (Zucker, 1978; Gamson, 1992). The reason is that the level of political knowledge is a constant for each individual at a given point of time. Thus political awareness alone cannot explain why the mass media have stronger impact for some topics than others. Zaller has to add two more variables, media message intensity and familiarity, in his model in order to explain such differences.

Using the concept of information, however, one can explain not only the variance among different individuals in the public but also differences for the same individual across different issues. The level of information about a particular issue may differ among individuals in the public. It may also vary when different issues or topics are

involved. This makes it possible to model opinion formation and change more parsimoniously by using specific information rather than using political awareness.

In addition, even though Zaller proposes message intensity and familiarity in his model of attitude change, these two concepts are not measured directly. Again, as in previous literature, they are estimated vaguely by comparing one issue with another. The relative intensity and familiarity are then judged rather subjectively, which makes it difficult to test their impact directly. On the other hand, as discussed above, information can be measured and quantified more objectively.

Another aspect of explanatory power concerns the scope of phenomena that a theoretical model can explain. Although Zaller argues that his RAS model is a general model explaining opinion formation and change, it would be quite a stretch to use political awareness to explain media impacts that are beyond political communication, for example, from messages about fashion or entertainment. Using the concept of information, however, can provide us a general model that may explain and predict the impact of mass communication in a much wider scope that is not limited to messages about politics and public affairs.

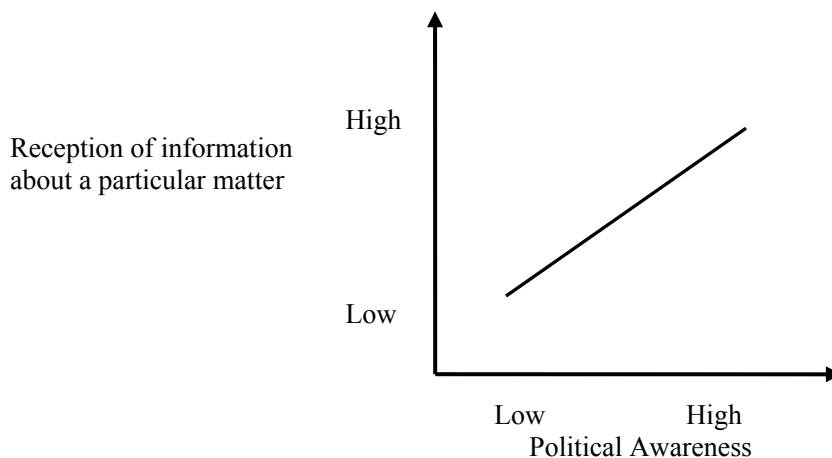
Logical and Empirical Problems of Political Awareness as a Moderator of Media Effects

Even for explaining and predicting mass media effects for different individuals, information also has advantages over awareness. The term awareness and the way it is measured suggest that it is a theoretical construct about some stable and trait-like characteristic of an individual citizen, which usually does not vary across different situations.

Although the general political knowledge questions in the NES survey differ slightly from year to year, they mostly ask the respondents about the political offices held by a few political figures, the party in control of the Congress, or the ideological location of political parties or figures. Intuitively, it is not quite logical to argue that the ability to identify a political figure would explain why media communication about specific issues, whether or not related to politics, would have less impact on some people and more on others. So is the case with the ability to answer other general knowledge questions in the political awareness scale.

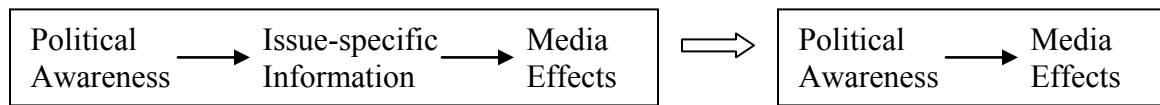
Zaller establishes the logic for using political awareness to explain and predict effects from media communication through the level of specific information about an issue. Political awareness is positively correlated with the amount of specific information one has about a topic (the Reception Axiom, Figure 6).

Figure 4. The Relationship between Political Awareness and Reception of Issue-specific Information in the RAS Model (the Reception Axiom)



Topic-specific information is negatively correlated with the magnitude of media effects. Thus, political awareness is negatively correlated with media effects, given exposure (the Acceptance Axiom). Figure 7 shows this logical process.

Figure 5. The Logic in the RAS Model regarding the Relationship between Political Awareness and the Magnitude of Media Effects



However, this argument is not widely supported empirically. To the contrary, Iyengar (1986) found that the correlations among domain specific knowledge, such as on the defense, inflation, energy, and civil rights issues, are low. This finding contradicts the Acceptance Axiom that political awareness is positively correlated with issue-specific information. In addition, Iyengar (1986) finds the common factors that are universally predictive of domain specific information include education, gender, and political ideology but not general political knowledge. He suggests that selective attention to politics may lead to the specificity of political knowledge.

The empirical evidence provided by Zaller (1992) with regard to the Reception Axiom could very well be some special cases. For example, both the Vietnam War and the Iran-contra issue received a large amount of media coverage and public attention. Those who were more attentive to media coverage may have become more informed about these issues. It could be that only in these cases, is political awareness related to the magnitude of media effects.

For issues with comparatively lower levels of media coverage, general political knowledge and issue-specific information may not correlate with each other. If this can be shown empirically, the Reception Axiom would not hold. Political awareness would not be logically related to the likelihood of attitude change, given the exposure to relevant media messages. If that is the case empirically, political awareness would not be the real moderator of media effects.

In addition, Zaller's dismissal of using specific information to explain and predict the impact of mass media in preference to general political knowledge is rather unsubstantiated. Price and Zaller (1993) provide the key piece of evidence for the argument that general political knowledge outperforms specific measures of information. They compare differential news reception and retention as predicted by general political knowledge and domain specific information. They conclude that general political knowledge is the strongest and most consistent predictor of current news story recall. The tendency of individuals to acquire news and information on a domain- or topic-specific basis fails to undermine the value of political knowledge as a general measure of propensity for news recall.

However, their conclusions are considerably undermined if the bad measures of domain specific information in their article are taken into consideration. For example, the authors presuppose that the older respondents should know more about plans to repeal government health insurance. With that strong yet unsubstantiated assumption, they compare the recall of news stories between the old and the young. This is clearly not a measure of domain specific information, which could seriously invalidate their interpretation about domain specific measures.

Overall, logically and intuitively, political awareness does not seem to be related to the effects of media messages about all kinds of topics covered by the media. Also, the existing empirical evidence does not provide consistent support for the argument that political awareness can explain and predict media effects better than the information specific to the topic covered by the media.

Theoretical Support for Using the Construct of Information

In addition to its intuitive and logical relevance, information has another advantage over political awareness. It has been shown to be a useful theoretical construct for explaining general human behaviors in fields other than political communication. In economics, Akerlof (1970), Spence (1973), and Rothschild & Stiglitz (1976) analyzed and disentangled the impact of asymmetric information on a variety of markets. For example, in the market for used cars, the seller, presumably the owner, usually has more information about the particular car for sale than the buyer. Thus, an asymmetry arises in terms of the disparity between the levels of specific information each party has. This type of information asymmetry explains the phenomenon of adverse selection, i.e., low-quality cars drive out good cars on the market.

Similarly, in the health insurance market, the policy purchaser has more information about his or her own health than the insurance company. This is why the insurance company has to screen the buyers through self-selection, i.e., by offering different policies such as lower premiums in exchange for higher deductibles.

The informational disparity that explains these phenomena is not the general knowledge of autos or medicine. Used car buyers or insurance companies may have more or less such general knowledge. But what matters for adverse selection or screening is that some people have more information while others have less about the specific cars for sale or the health conditions of policy seekers.

The information asymmetry theory provides some hints about the magnitude of media effects. If we can identify those audience members who have more information and those who have less about a specific topic covered in the media, we may be able to

predict the magnitude of media effects with greater precision than using general political awareness.

Parsimony of Measurement

The most acclaimed advantage of political awareness, especially using general political knowledge as its measurement, is its simplicity. Some uniform scale can be constructed and used even if different topics of media messages are involved. If, on the other hand, specific information is used, it would seem quite daunting as we need to come up with new measures for different topics.

First of all, the parsimony of measurement should not be confused with the parsimony of theoretical models. Using specific information is in no way less parsimonious than the use of political awareness in terms of theory building. Rather, it may explain more phenomena about media effects by using fewer variables as discussed earlier.

Secondly, even though the simplicity of measurement is an important concern, it should not be a reason to compromise for a less logical theory. Media effects are complicated. It may take more than just a single measure to ascertain how the level of knowledge or information moderates media effects. If information can be shown to explain more variance and predict with more precision than political awareness, it is necessary to have more complicated measures in order to have an improved understanding of media effects.

Information: Conceptualization & Operationalization

The term information is generally used in a very broad way both in everyday language and in research related to human communication. However, as Chaffee (1991) pointed out, whenever a theory is proposed, the building blocks of the theory, i.e. the key concepts, always need to be explicated carefully and clearly. Explication of concepts helps to improve the inter-objectivity among different studies of the same research topic.

The process of explication involves conceptualization and operationalization of a concept. By conceptualizing a concept, we provide a definition for the concept, which specifies, on a theoretical level, what is and what is not meant by that concept. Operationalization of a concept involves giving a definition that can lead to the practical observation of the concept.

This section discusses how information is defined theoretically and operationally in this dissertation. It also touches upon the major concerns in measuring the concept. In order to define information, it is helpful to look at the characteristics of this concept as used in this dissertation.

Characteristics of Information

Specificity

Information in this dissertation has a strong feature of specificity when compared with seemingly similar concepts such as awareness or knowledge. Such a difference has been proposed by Downs (1957) when he analyzes voting and abstention from a rational choice perspective. He argues that knowledge is the recognition and understanding of a

given field's basics. Information, however, is the updates for the variables in knowledge. He also argues that lack of information is about particular events, not a general condition.

As discussed in the literature review above, knowledge is not empirically tested to be positively correlated with information specific to a topic. Thus it is not quite logical to argue that general knowledge of a field can moderate the effects from the media communication about a specific topic.

Obtainable through the media?

Information can certainly be obtained. However, that does not necessarily mean we can learn more when more information is available. Since the late 1980s, the mass media have gone through an explosive growth in terms of the amount of information provided to the audience. Nowadays, we have 24-hour cable news as a major supplement if not replacement of the three news networks. We also have numerous news websites on the Internet. According to a recent study conducted by the Pew Research Center in February, 2007 on public knowledge of current affairs, these changes and the subsequent increase in the amount of information have influenced the way the American public obtains news. But the American public is not more informed about various national and international affairs.

These findings suggest that more media coverage about an issue does not guarantee that the public obtains more information in the process. One potential explanation is that forgetting is a concurrent process with learning information. As one obtains information about a particular issue from the news media, not all that is received

can remain in one's memory. That is why as the media coverage continues on, the amount of information one has about the issue may or may not accumulate.

In some scenarios, we may even be able to observe a diminishing media effect as media coverage about an issue accumulates over time. For example, Berelson, Lazarsfeld, and McPhee (1954) compared voters' positions on a five-point scale ranging from strong Republican to strong Democrat in June with those in August, and the August positions with those in October using panel procedures. Between June and August, 66 percent of a panel of 760 respondents maintained their original party adherence. About 17 percent wavered between a given party and "neutral", or vice versa. Only 8 percent of voters converted. During the second half of the campaign, from September to late October, the incidence of reinforcement was about the same, 68 percent. However, relatively fewer voters converted, only 3 percent, compared to the first phase of the campaign. There seems to be a trend that as the coverage amount increases, the public tend to be more informed. Thus, less change is found during the later part of a media coverage campaign.

However, media effects from presidential election campaigns can be quite special. For one thing, the mobilization of election campaigns may bring the issue closer to people's lives. For those issues distant from the public's everyday life, one does not have information channels other than the news media. If what the media provide is not the full picture of the issue, even though the public may know more about what is reported in the media, they may still lack the advantage of getting the full picture. In this sense, the public, or some of them, are still not informed enough about the issue.

For another, the major tone of election campaigns is either a promotion of one candidate or an attack of other candidates for the same position. This tone is usually

stable along the process of the campaign. For issues where the media change the major position, such as the Iraq war, we may observe that the public opinion still follows the media position change closely.

In sum, the mass media are channels for the public to obtain information. However, forgetting and inadequacy of media reports in some cases imply that the link between more media coverage and more information obtained does not always hold.

Multi-dimensional

The previous discussion suggests that the concept of information as used in this dissertation is multi-dimensional. One aspect of the concept refers to the sheer amount that an individual knows about a particular issue. The other aspect concerns the informational advantages or channels to know more and fully about the issue. The second aspect may depend on factors such as age, education, career, family background, and personal experience, etc.

All in all, when information is referred to in this dissertation, it does not simply mean a collection of facts an individual possesses about a topic or an issue. It also refers to whether one has advantages, naturally or socially, of obtaining facts about the topic or the issue.

Operationalization of Information

As information is conceptualized as multi-dimensional, the measurement should certainly take that into consideration. Firstly, multiple questions can be asked about the particular topic about which the media effects are investigated. As Babbie suggested,

multiple items are more robust than a single question (2005). The battery of questions may be quite different when a variety of topics are involved. For each topic, specific questions need to be designed to evaluate the amount of information an individual has. For example, this dissertation proposes to test how the individual difference in information can impact the magnitude of media effects from reports of the North Korean nuclear threat. Instead of asking the general political knowledge question, more specific questions should be designed in order to differentiate who is more informed and who is less informed.

Secondly, measures should also be designed to ask whether an individual has advantages in getting to be informed about this issue. For example, questions can be asked about whether the public has other sources of information beside the mass media. Or it can be asked whether discussions among friends or family members about the issue are informative or not. Or it may also be asked whether their personal background makes them know more about the issue than what the media tell them.

Mechanism of the Information Effect

It is important to note that issue specific information may moderate news media effects on public opinions through the following two-step mechanism. First of all, prior information tends to facilitate opinion and attitude formation (Fazio, 1995). For those who tend to know about an issue, it is more likely that they will have a view about the issue than those who do not know about the issue.

Secondly, information may increase the centrality of the attitude formed (Converse, 1964, Fiske, Kinder, & Larter, 1983, Barabas, 2004,). If the news media discuss the public issue and have an issue position that is in line with the opinion already

formed by the public, we should not be able to observe much change in opinion before and after news exposure, simply due to ceiling effects. If, on the other hand, the issue position in the news media is different from the opinion that an individual has already formed, the centrality of the existing attitude acts as a restraint on an issue position that is in the opposite direction (Strickland, Taber, & Lodge, 2011).

Chapter 3

THEORY & HYPOTHESIS

The theory proposed in this dissertation argues that the amount of information a person has about a particular issue can moderate the magnitude of media influence. The more one knows about the issue, the less likely it is that he or she will be influenced by the issue position in the relevant media messages. As this theory concerns the change of a person's opinions pre and post exposure, it should hold true regardless of whether or not he or she has an existing opinion and whether the existing opinion is similar or opposite to the media's position.

If the theory is true, we should be able to observe that the effect of exposure to the mass media varies for different individuals depending upon the amount of information they have, even after controlling for the effects of political knowledge. For those who have more information, their agreement with the issue position in the media message is weaker compared to those who have less or no prior information.

Thus, there are two general hypotheses tested in this dissertation. The first is about the news story effect by itself. The second is about the moderating role of information on news effects. The two hypotheses are,

Hypothesis 1 (H.1): Those who view a news story about a public issue are more likely to agree with the issue position in the story than those who do not view such a story.

Hypothesis 2 (H.2): The degree of agreement with the media's issue position is stronger among those who have less prior information about the topic than for those who have more information.

Hypotheses in the Context of Issues Used in the Experiments

I conduct three lab experiments to test this theory in this dissertation.

Experimental design can, firstly, provide the opportunity to manipulate the exposure to news stories on the issues used in this study. It is a design that generally has high internal validity, allowing us to conclude that if there are any changes in people's opinions about an issue topic, it is due to exposure to relevant news stories. In addition, the moderator variable---the level of specific information---can also be manipulated. Thus, the internal validity for the moderating relationship, if any, is also high.

Most survey data use very general media exposure measures, such as the number of days watching TV or reading newspapers in the past week. Usually, conclusions about opinion change made from survey studies only assume that the public was exposed to certain media messages. It may be a reasonable assumption to make in the real world. After all, the news media are the major source of information for the general public especially when issues out of their reach (Lippmann, 1965) are concerned. In addition, the ubiquity of news these days, due to the multiple news channels and repeated coverage

of the same topic, makes it harder for the public to “escape” from exposure to the major news stories.

However, the increased level of external validity of survey studies comes at the cost of relatively lower internal validity compared to experimental designs. Assumptions are mere assumptions. With only survey designs, we have no guarantee that the causal link can be established between media exposure and opinion changes.

What is more important, very few existing opinion surveys have measures of how much the public knows about specific issue topics (Gilens, 2001). An experimental design provides the opportunity to manipulate the level of such information by furnishing some background information to one group but not the other. Thus, we can examine the impact of specific information on the magnitude of media influence with high internal validity.

The first issue used in the theory testing is the North Korean nuclear program, which has been covered in the news media for quite a while. With the global trend of peace preservation, any nuclear threat is of great concern. For the news effect in the context of this issue, if Hypothesis 1 is true, we should be able to observe that those who view the news story that North Korea poses a nuclear threat to other countries are more likely to think that North Korea poses a nuclear threat than those who do not view such a story, and those who view a story with an opposite issue position. We should also be able to observe that those who view a news story indicating that the North Korean nuclear issue has been resolved are less likely to think that North Korea poses a nuclear threat than those who do not view such a story, or those who view a story that North Korea is posing a nuclear threat.

For the moderating impact of information, if Hypothesis 2 is true, the degree of agreement with the media's issue position that North Korea poses a nuclear threat to other countries will be stronger among those who have less prior information about the topic than for those who have more information. Similarly, the degree of agreement with the media's issue position that North Korea no longer poses a nuclear threat to other countries will be stronger for those who have less prior information about the topic than for those who have more information.

The second issue proposed to be used in the theory testing is Health Care Reform, another salient issue in the news coverage starting in the year of 2008. In the context of this issue, if Hypothesis 1 is true, we should be able to observe that those who view the news story that supports Health Care Reform are more likely to support the reform, while those who view the news story that is against universal health coverage are less likely to support the reform, than those who do not view such a story, and those who view a story with an opposite issue position.

If Hypothesis 2 is true, the degree of agreement with the media's issue position that there should be universal health coverage is stronger for those who have little prior information about the topic than for those who have more information. Similarly, the degree of agreement with the media's issue position that the health care reform including universal health coverage is not beneficial to the public is stronger for those who have less prior information about the topic than for those who have more information.

The third issue used in the theory testing is about alternative energy research. In this issue context, if Hypothesis 1 is true, we should be able to observe that those who view the news story that supports alternative energy research are more likely to think that

alternative energy is beneficial and that such research should be supported, while those who view the news story that does not seem to support alternative energy research are less likely to support the use of such energy and research about it than those who do not view such a story, and those who view a story with an opposite issue position.

If Hypothesis 2 is true, the degree of agreement with the media's issue position that alternative energy research is greatly necessary will be stronger for those who have less prior information about the topic than for those who have more information. The degree of agreement with the media's issue position that alternative energy research has disadvantages and is not necessary will be stronger for those who have less prior information about the topic than for those who have more information.

Chapter 4

METHODS

General Design of the Experiments

In each of the three experiments, both exposure to a news story about one of the three public issues (i.e. North Korean nuclear threat, the Health Care Reform, and the alternative energy research) and how much specific information the subjects have about these issues are manipulated. For the manipulation of news exposure, there are three conditions, no news story, a story in favor of the issue, and a story against the issue. As for the manipulation of specific information, there are two conditions, with information cards about the issue, or with information cards about a completely different topic (i.e. no information provided for the specific issue). Therefore, a 3 by 2 experimental design is used for each experiment.

Literature in psychology and mass communication (e.g. Bartels, 1993; Price, 1989) has generally found that pre-existing attitudes and other relevant ideological views are important covariates of current opinions. That is why a pre and post design is used to obtain a baseline measure of opinions toward these three issues through pre-tests.

However, as a pre-test may sensitize the subject about the issue of the North Korean nuclear threat, pre-tests are conducted three weeks before the post-tests. This way,

memory decay can greatly reduce the sensitization effect. The questionnaires are designed with a stated purpose of surveying opinions about various public affairs facing the U.S. In addition, opinion questions about these issues are asked among other questions about current world affairs to further reduce the potential sensitization effect. For the complete questionnaires used in these experiments, please see Appendix III.

Study Procedure and Sampling of Subjects

Subjects of the experiments are recruited by Zoomerang.com, an online opinion survey portal. For each subject recruited, it takes about one and a half hours to complete the full study, half an hour for filling out the pre-test questionnaire, about half an hour for the manipulation session, and another half an hour for the post-test.

About four weeks before the pre-tests, the subjects receive an email with a link to a web-based questionnaire as the pre-test. They are required to complete the survey within a week. Each subject is randomly assigned into two groups to receive the pre-test survey questionnaire. One group receives the questionnaire with the information cards about the specific issue. These subjects are then randomly assigned into three of the six experimental groups which receive issue specific information for TV news manipulation and post tests. The other group receives the questionnaire with only the information cards about another topic that is irrelevant of the specific issue. These subjects are also then randomly assigned into the three experimental groups which do not receive issue specific information for manipulation of TV news stories and post tests. Please refer to Table 4-1 through 4-3 for group assignments in the experiment. After they finish the post-test, they are debriefed.

Since a 3 by 2 design is used, a minimum of 180 subjects in total are recruited in each experiment. This way, each experimental group should have at least 30 subjects, which is good for making statistical inference based on the experimental data collected in the study.

The number of subjects who participated in the pre-test for Experiments 1, 2 and 3 is 196, 203 and 192 respectively. Among these participants, 91, 95 and 95 participated only in the pre-test portion of the three experiments as well. The remaining participants (101 in Experiment 1, 108 in Experiment 2 and 97 in Experiment 3) completed the post-test portion of the studies. Thus the size of the panel groups for the three experiments is 101, 108 and 97, respectively, or about 17 subjects in each of the six experimental conditions within each experiment.

As the total numbers of panel subjects in each experiment are less than 180, i.e. 30 subjects for each of the six experimental conditions, an additional sample of subjects were contacted by Zoomerang.com to participate in the manipulation and post-test only session for each experiment. This group of subjects provides a supplement sample so that we can have more power for testing the theory and detecting whether there is any effect from the news stories, the specific information provided and their interactions. The total number of participants for the post-test only sample in Experiment 1 through 3 is 420, 423 and 424 respectively. For each experimental condition, there are 70 or more subjects in each of the three experiments.

Table 4-1. Assignment of groups in Experiment 1 on the North Korean nuclear threat

	News Story that North Korea is a threat	News Story that North Korea is not a threat	No Story about North Korea
Information Cards about North Korea	Group 1: News Story that North Korea is a threat Information cards about North Korea	Group 2: News Story that North Korea is not a threat Information cards about North Korea	Group 3: No Story about North Korea Information cards about North Korea
Information Cards about G8	Group 4: News Story that North Korea is a threat Information cards about G8	Group 5: News Story that North Korea is not a threat Information cards about G8	Group 6: No Story about North Korea Information cards about G8

Table 4-2. Assignment of groups in Experiment 2 on Health Care Reform

	News Story that supports Health Care Reform	News Story that opposes Health Care Reform	No Story about Health Care Reform
Information Cards about Health Care Reform	Group 1: News Story that supports Health Care Reform Information cards about Health Care Reform	Group 2: News Story that opposes Health Care Reform Information cards about Health Care Reform	Group 3: No Story about Health Care Reform Information cards about Health Care Reform
Information Cards about G8	Group 4: News Story that opposes Health Care Reform Information cards about G8	Group 5: News Story that opposes Health Care Reform Information cards about G8	Group 6: No Story about Health Care Reform Information cards about G8

Table 4-3. Assignment of groups in Experiment 2 on alternative energy research

	News Story that research in alternative energy is beneficial	News Story that research in alternative energy is not beneficial	No Story about Energy
Information Cards about alternative energy research	Group 1: News Story that research in alternative energy is beneficial Information cards about Energy	Group 2: News Story that research in alternative energy is not beneficial Information cards about Energy	Group 3: No Story about Energy Information cards about Energy
Information Cards about G8	Group 4: News Story that research in alternative energy is beneficial Information cards about G8	Group 5: News Story that research in alternative energy is not beneficial Information cards about G8	Group 6: No Story about Energy Information cards about G8

Measurement of Key Variables

The independent variable in the first experiment, exposure to news stories about the North Korean nuclear threat, is operationalized in the following way. A news story that describes North Korea posing a nuclear threat is shown to two of six groups in the study, Group 1 and Group 4 (See Table 4-1). In order to mitigate the effect that the study participant would be able to guess the purpose of the study and thus their opinions may be distorted in some way, another story on a completely irrelevant topic follows this story. The second story acts as a control story and is about music, specifically pertaining to walkman and ipod ([link to the detailed abstract of the first story](#)).

The news story about the North Korean nuclear threat was broadcasted on NBC evening news on October, 16, 2006 ([link to the detailed abstract of the story](#) and [link to the news video](#)). This news story is particularly selected because it occurred a week after North Korea announced a detonation of a nuclear device. It also occurred two days after the United Nations voted to implement a sanction against North Korea. The story is 3 minutes and 20 seconds long.

Group 2 and 5 (See Table 4-1) in the study view another news story with the opposite issue position and the same control story as what Group 1 and 4 watch. A news story from NBC Evening News for Thursday, June 26, 2008 ([link to the detailed abstract of the story](#) and [link to the news video](#)) on North Korean denuclearization is used. This story describes North Korea's disabling of a nuclear power plant and discusses this event as part of disarmament following negotiations and the next phase in which plutonium will be handed over in exchange for eventual normalization. The duration of the story is 2 minutes.

Subjects in Group 3 and 6 (See Table 4-1) view a control news video in which there is no story about North Korea. Instead, stories irrelevant to any of the three issues in the experiments are shown to them as controls ([link to the detailed abstract of the first story](#), [link to the detailed abstract of the second story](#) and [link to the news video](#)). The first control story is the same story used in the experimental news videos. It is about music, namely, the walkman and ipod. The second control story is about Sears Tower in Chicago.

Similarly, Group 1 and 4 in Experiment 2 or Experiment 3 (see Table 4-2 and 4-3) are shown a news story that is in favor of Health Care Reform ([link to the detailed abstract of the story](#) and [link to the news video](#)) or alternative energy research ([link to the detailed abstract of the story](#) and [link to the news video](#)). Group 2 and 5 are shown a story that is against the reform ([link to the detailed abstract of the story](#) and [link to the news video](#)) or the research ([link to the detailed abstract of the story](#) and [link to the news video](#)). Please note that these stories are all followed by the control story on music to mitigate the potential effect of the study participants' guessing the study purpose. Group 3 and 6 view the same control news video as those in Experiment 1 ([link to the detailed abstract of the first story](#), [link to the detailed abstract of the second story](#) and [link to the news video](#)).

The dependent variable in the first experiment, agreement with the issue position in the media that North Korea is posing a nuclear threat to other countries, is measured using a series of six attitude questions in both the pre-test and the post-test (Question 3 through Question 8). First of all, a feeling thermometer series asks the participants' evaluation of how friendly the relationship is between the United States and a few other

countries including North Korea. Four additional questions are then asked with regard to the general or specific aspects of the North Korean nuclear threat.

The dependent variable in the second experiment, support for the Health Care Reform, is measured by a battery of nine questions (Question 1 through 9) in both the pre- and the post-tests. These questions ask about general support for the reform, as well as for specific aspects of the reform, such as universal coverage, single payer system, and cutting back on Medicare, etc. Please refer to Appendix III for the question wording.

The dependent variable in the third experiment, support for alternative energy research, is measured by seven opinion questions. These questions ask the participants whether they think the traditional energy will run out soon, whether they think alternative energy is a better source, about government incentives, and tax policy to support such research, etc. Please also refer to Appendix III for the question wording.

The moderating variable in the first experiment, how much the subjects know specifically about the North Korean nuclear threat, is manipulated in the following way. Three information cards about North Korea and its relations with the other five countries are shown to three of the six experimental groups (Group 1, 2, and 3, see Table 4-1). Since the theory argues that “prior” information matters for media effects, Group 1, 2, and 3 receive the information cards during the pre-test and before the subjects view the news stories during the post-test. For Group 4, 5, and 6, such background information is not provided. Instead, information cards about G8 countries are provided as a control condition. In order for the subjects to remember as much as possible regarding the specific prior information provided, the information section is shown to the subjects twice. The first time is during the pre-test, in which the information cards are inserted at

the beginning of the pre-test questionnaire. The second time is during the post-test and before they receive the TV news section.

The information cards include a brief history of the relationship between North Korea and the other five countries in the talk, i.e. the U.S., Russia, China, South Korea, and Japan. In addition, a fact sheet comparing North Korea's geographic size, population size, and military strength with those of the other five countries is also provided. Information about a nuclear program is not mentioned in the section as it may interfere with the effects from exposing participants to the news story on this topic. For the exact information cards provided to the subjects, please refer to Appendix II.

The moderating variable in Experiment 2 and 3 is manipulated in a similar way as in Experiment 1. The information cards provided for the control groups (Group 4, 5, and 6, see Table 4-2 and 4-3) are the same as those used in Experiment 1. Information cards about the Health Care Reform provided to Group 1, 2, and 3 in Experiment 2 mostly describe the health care industry and insurance status in the U.S., the main content of the reform, and the major arguments for or against the reform. Information cards about alternative energy crisis provided to Group 1, 2 and 3 in Experiment 3 give an overview of the world's energy sources and their respective percentages in overall consumption. They also discuss sustainability of traditional energy resources, i.e., the advantage and the disadvantages of various energy sources.

The information cards about the G8 countries act as the control condition for the manipulation of issue specific information in all of the three experiments. These cards introduced the G8 organization and some basic geographic, economic, and military

information about its member countries. Please refer to Appendix II for the exact cards used in the three experiments.

Data Analysis

After the experiment is conducted, missing data from the study are first treated using mean imputation and logical recode. Please refer to Appendix III for detailed information about missing data treatment. After that, a univariate analysis of the variables in the study is conducted to provide a description of the distributions of these variables. Appendix IV provides a detailed summary of this analysis.

For the panel data obtained through these three experiments, regression analysis is conducted by using the pre-test opinion measures as an offset or a covariate in the regressions. That way, the effects of existing opinions on these issues are accounted for in the analysis. Thus, it is possible to make conclusions about the effect of news exposure and information reception on the changes in the issue opinions.

Since the sample size for the panel subjects in each of the three experiments is relatively small, the analysis of the supplement sample, i.e. subjects who only participated in the manipulation and post-test sessions, is conducted to improve the power for detecting any news or information effects. In this regard, the univariate effects from TV news exposure and information manipulation are first examined by conducting ANOVA analysis to test whether the mean differences in the dependent variable measures are due to manipulations. Regression analysis is then conducted to further investigate the effects from news exposure, information reception and their interactions after controlling for other important covariates for opinion formation and change.

Chapter 5

RESULTS

For each of the three experiments in this dissertation, I present the data analysis results in three sections in this chapter. Firstly, results from analysis using data collected from the panel subjects are presented to show if there is any change of opinions after exposure to the news story and information cards for the same respondent. We then test whether such changes can be attributed to these two factors and their interaction effects after controlling for relevant social and political factors.

Secondly, results from analysis using data collected from subjects who participated in the manipulation and post-test sessions are presented. The results include two parts. One is the univariate effects from exposure to news stories, information cards and their interactions are reported. This part of the results allows us to examine, without controlling for other factors, whether viewing TV news about a public issue and having more information about it would influence an individual citizen's issue position. The interaction effects between these two variables inform us whether issue-specific information would strengthen or weaken the news effects. After that, the effects of news exposure, information cards and their interaction are presented after controlling for factors that are relevant for public issue opinions, such as political predispositions, media

use habits and demographics. This facilitates our further understanding of the univariate effects presented above, if any, with social and political context of the participants in these studies.

Results from Experiment 1: Opinions on the North Korean Nuclear Threat

Results from the Panel Data

As 101 participants participated both pre-test and post-test in the experiment, it is possible to conduct data analysis on this group of panel subjects. Multiple regressions are fitted for the differences in the dependent variables and scales between pre- and post-test scores using the independent variables and scales collected in the post-test. Modeling the differences in dependent variables enables us to examine the effect of news story and information cards on the changes in the opinions after exposing to these two stimuli. Complete coefficient estimates from the regression analysis are presented in Table A-11 and A-12 in Appendix V.

For the ease of interpretation, post-test scores for the dependent variables are presented as the dependent variables in the two tables, while pre-test scores for the dependent variables are presented as an offset variable together with other independent variables. An offset independent variable is just one predictor in the regression model with the coefficient of 1. By including the pre-test opinion as an offset variable in the regression model, the coefficients of other independent variables in the model indicate their effects on the post-test opinions after controlling for the corresponding pre-existing opinions. In addition, it is easier for interpreting the effects of the various independent

variables for the post-test opinions while controlling for the pre-existing opinions rather than explaining the effects on the difference between the two.

Short-term News Exposure and Information Card Reception

Short-term news exposure is only found to have a significant impact on the feeling thermometer toward North Korea (Question 3, $\beta=-7.99$, $p=0.04$), but has no significant impact on other dependent variables. Those who viewed a news story about North Korea posing a nuclear threat tend to feel that North Korea is less friendly than those who did not view any story on the country. Those who viewed a story that the nuclear threat is eased tend to have warmer feelings toward the country than those who did not view any story.

Whether or not the subjects received information cards about North Korea does not have a significant impact on their opinions about the country or the issue after controlling for their pre-existing opinions and other relevant variables. Nor is there an interaction effect between the news story exposure and the information cards on any of the opinion questions.

Long-term Information and General Political Knowledge Acquired

Longer-term information acquired about North Korea as a country and its historical relations with other countries in the peace talk generally has an effect of making the country seemingly less friendly (Question 3, $\beta=-19.51$, $p=0.07$). It also makes the subjects think that this issue is less likely to be resolved by peace talks (Question 8, $\beta=-0.65$, $p=0.05$).

General political knowledge is found to have a significant impact on opinions about whether this issue can be resolved by peace talks (Question 8, $\beta=0.60$, $p=0.07$). Those who are more knowledgeable tend to think that this issue is more likely to be resolved by peace talks, an effect in the opposite direction as compared to that of specific information.

Issue Salience, Media Exposure, Issues News Following, and Discussion

Issue salience is not significantly related to the opinions about North Korea or the nuclear threat issue. However, general media exposure significantly influences whether the respondents feel that North Korea is posing a nuclear threat (Question 4, $\beta=-0.21$, $p<0.07$). Those who receive more news from the media tend to feel that the country is more of a threat.

Those who said that they participated in some discussions about the North Korean nuclear threat are found to be more likely to say that the real intention of North Korea is to get financial aid rather than to pose a real threat (Question 6, $\beta=0.51$, $p<0.07$). Self-reported follow-up of this issue in the news does not make any difference on a respondent's opinions about it.

General Concern about Future Terrorist Attacks

General concern about future terrorist attacks is significantly related to the North Korean nuclear threat scale constructed based on Question 4, 5, and 7 ($\beta=-0.34$, $p<0.04$), as well as the question about whether this country is posing a nuclear threat (Question 4,

$\beta=-0.43$, $p<0.0001$). Those who are more worried about future terrorist attacks are more likely to feel that North Korea is posing a nuclear threat.

Self-evaluation of Information Cards and News Story's Impact

Self-evaluation of whether the information cards are informative does not seem to matter for all the opinion questions in this study. Those who think the information cards are more relevant tend to be more likely to feel that North Korea is friendlier (Question 3, $\beta=12.13$, $p<0.04$).

Self-evaluations of whether the news stories would influence one's own opinion on a North Korean issue do not have a significant impact on the opinion questions except Question 8. Those who think that the news stories about North Korea have more of an effect on his or her own opinions find this issue more likely to be resolved by peace talks ($\beta=0.41$ and $p=0.01$). For those who think that the news stories about North Korea have more of an effect on other people's opinions, they find this issue less likely to be resolved by peace talks ($\beta=-0.41$ and $p<0.0001$).

Political Predispositions

Party identification and political interest are not significantly related to any of the opinion questions or the nuclear threat scale, after controlling for the pre-existing opinions. Political ideology, however, is significantly related to how friendly the respondents feel about North Korea (Question 3, $\beta=3.22$, $p<0.08$). Those who are more conservative tend to feel that North Korea is friendlier.

Demographic Variables

Gender, race, age, and whether parents were born in the U.S. do not make a significant difference on any opinion questions or scale about the North Korean nuclear threat. As for North Korea's real intention to use nuclear power (Question 6), respondents with higher education are more likely to think that the real intention is to get financial aid ($\beta=0.23$, $p<0.06$). However, those who earn more are more likely to think that the real intention is to pose a threat to the world rather than getting financial aid ($\beta=-0.21$, $p<0.0001$).

Results from the Post-Test Sample

Univariate Effects

Viewing News Stories

Table 5-1 presents the mean values for information, general political knowledge, and measures of the dependent variables by three different news story conditions in the North Korean nuclear threat study. The three news story conditions have a story about North Korea posing a threat, a story that nuclear threat from the country is eased, and no story about the country, respectively. If the news story conditions make a difference in the study participants' information, knowledge, and their opinions toward this issue, we would be able to find such a difference by examining the mean differences in these variables across the news groups.

As the TV news stories about North Korea have a limited amount of time to present this issue, neither story provided a great deal of reference to the basics of this country. Thus, viewing a story about this issue or not should not make a big difference in

the level of information the participants have about North Korea. Nor does the direction of the news story with regard to whether North Korea poses a threat matter for the level of information.

As Table 5-1 shows, the mean values for the information scale for the three news viewing groups range from 0.45 to 0.50. No pairwise difference between any two of the three news groups reached the level of statistical significance.

Similar scores for general political knowledge are expected and found for the participants who viewed three different versions of news stories, which range from 0.76 to 0.80. The pairwise differences of the three scores are also not statistically significant.

For the dependent variables and the North Korea Nuclear Threat Scale, it is hypothesized that viewing a news story about North Korea posing a nuclear threat would lead the respondents' to feel that North Korea is less friendly, more likely to pose a nuclear threat, and that this issue is less likely to be resolved by peace talks. Overall, the results shown in Table 5-1 and 5-2 suggest that there are some significant differences in these measures of dependent variables.

The feeling thermometer, a dependent variable that measures respondents' feelings about the friendliness of North Korea, has a similar mean value for the three news groups. The values are 14.65, 19.91, and 16.71 out of 100 for those who viewed a story about North Korea posing a threat, North Korea no longer posing a threat, and those who did not view any story about North Korea. As lower scores on the scale means less friendly feelings, the participants generally feel that North Korea is not a very friendly country. The absolute value of the mean difference between the first two news story groups is 5.26 and is significant at the 0.10 level. This means that those who viewed a

story about North Korea posing a threat feel that the country is less friendly than those who viewed a story about the threat being eased (Table 5-2). This is in line with Hypothesis 1 that viewing a news story about North Korea posing a threat increases the hostile feelings toward this country.

The average responses to Question 6 about the real intention of North Korea with regard to its nuclear capacity and to Question 8 about the likelihood of this issue being resolved by peace talks are very close among the three news groups.

The mean values for the North Korea Nuclear Threat Scale tend to show some significant differences. Those who viewed the story about North Korea posing a threat have the lowest mean value on this scale (-0.16), indicating that they felt North Korea is more of a threat. Such a feeling is followed by those who viewed a story about North Korea's threat eased (0.03). Those who did not view any story tend to have the highest mean on this scale (0.13). The absolute value of the mean difference between those who viewed a threat story about North Korea and those who did not view any story about North Korea is 0.29 and is significant at the 0.05 level. The absolute value of the mean difference between those who viewed a threat story about North Korea and those who viewed a threat being eased story about North Korea is 0.19, but it is not significant at a 0.10 level. The difference between those who viewed a story about the threat being eased and those who did not view any North Korea story is 0.09 and not significant (Table 5-2).

These differences suggest that the threat story has a significant impact on viewers' opinions regarding how much of a threat North Korea poses. Those who viewed the threat story are more likely to feel North Korea poses a threat as compared to those who

did not view such a story. However, viewing a story about the nuclear threat being eased does not tend to decrease the likelihood of a threat from North Korea.

This may be due to a few reasons. One possibility is that North Korea has been portrayed in the news media through repeated coverage as a country utilizing its nuclear capacity to threaten the world. A single story is not enough to mitigate such a cumulated effect. Another possibility is that the mention of a nuclear capability is inherently producing feelings of threat. That is why it is reasonable to find that viewing a story about a nuclear threat being eased still increased the level of threat felt about North Korea versus not viewing a story at all about this issue.

As Question 4, 5, and 7 contribute to the construction of this scale, further comparisons of the means on these three questions separately indicate that Question 7, which asks about a North Korea nuclear threat due to a specific reason---involvement in nuclear arms dealership---contributes mostly to the mean differences on the Nuclear Threat Scale (Table 5-2). Those who viewed a North Korean nuclear story tend to feel more strongly about this country posing a threat than those who viewed no such story or those who viewed a story about the threat being eased. The absolute values of the mean differences are 0.29 ($\alpha \leq 0.05$) and 0.20 ($\alpha \leq 0.10$).

Questions 4 and 5 only ask about the general opinions about North Korea posing a threat and the mean values do not differ from each other among the three news groups. One explanation for this pattern is that in the North Korean nuclear story, there is a specific mention of the possibility of the country getting involved in nuclear arms dealing. This specificity activates the feeling of threat more easily for the respondents.

Overall all, those who viewed a story about North Korea posing a threat are more likely to feel that this country is posing a threat measured by the feeling thermometer, the threat scale, and Questions 4, 5, and 7, as compared to those who viewed a threat eased story and those who viewed no story about North Korea. This relationship is in line with Hypothesis 1.

Those who viewed the eased- threat story tend to feel that this country is friendlier than those who did not view any story about North Korea. This is also in line with Hypothesis 1. However, when measured by the threat scale and Questions 4, 5, and 7, those who viewed the threat eased story are more likely to feel that North Korea is posing a threat as compared to those who did not view any story about North Korea. This is in the opposite direction to what Hypothesis 1 predicts.

Table 5-1. Mean and Standard Deviation for Dependent Variables, Information, and Knowledge by News Groups

Variables	Mean and SD (in Parenthesis) for Different News Groups		
	Those Who Viewed a Story about North Korea Posing a Nuclear Threat (N=140)	Those Who Viewed a Story about North Korea's Nuclear Threat Eased (N=140)	Those Who did not View Any Story about North Korea (N=140)
Information Scale (0-1)	0.46 (0.30)	0.45 (0.27)	0.50 (0.27)
Political Knowledge (0-1)	0.83 (0.29)	0.76 (0.31)	0.78 (0.29)
North Korea Nuclear Threat Scale (-1.28 to 3.14)	-0.16 (0.98)	0.03 (1.01)	0.13 (1.00)
Q3---Feeling Thermo toward North Korea (0-100)	14.65 (17.12)	19.91 (20.92)	16.71 (20.12)
Q.6-Recoded---NK Intention to use nuclear capacity? (1=pose threat 2=both 3=get financial aid 4=neither)	2.37 (0.76)	2.30 (0.85)	2.43 (0.85)
Q.8-Recoded---NK nuclear issue resolved by peace talks? (1=No, 2=Hard to say, 3=Yes)	1.71 (0.59)	1.76 (0.62)	1.82 (0.63)
Q.4---NK posing a nuclear threat (1=Strongly agree, through 5=Strongly disagree)	1.86 (0.83)	1.97 (0.88)	2.05 (0.83)
Q.5---NK a danger to world peace (1=Strongly agree, through 5=Strongly disagree)	1.86 (0.88)	1.98 (0.88)	2.03 (0.85)
Q.7---NK threat due to nuclear arms dealership (1=Strongly agree, through 5=Strongly disagree)	1.84 (0.84)	2.04 (0.78)	2.12 (0.80)

Table 5-2. ANOVA Results for post-test respondents: Effect of Media News Stories

Variables	Mean Difference between		
	Respondents Who Viewed a Threat Story and Those Who did not View Any Story about North Korea	Respondents Who Viewed a Threat Eased Story and Those Who did not View Any Story about North Korea	Respondents Who Viewed a Threat Story and Those Who Viewed a Threat Eased Story
Information Scale (0-1)	-0.05	-0.05	0.001
Political Knowledge (0-1)	0.02	-0.02	0.04
North Korea Nuclear Threat Scale (-1.28 to 3.14)	-0.29**	-0.09	-0.19
Q3---Feeling Thermo toward North Korea (0-100)	-2.06	3.20	-5.26*
Q.6-Recoded---NK Intention to use nuclear capacity? (1=pose threat 2=both 3=get financial aid 4=neither)	-0.06	-0.13	0.08
Q.8-Recoded---NK nuclear issue resolved by peace talks? (1=No, 2=Hard to say, 3=Yes)	-0.11	-0.06	0.05
Q.4---NK posing a nuclear threat (1=Strongly agree, through 5=Strongly disagree)	-0.19	-0.08	-0.11
Q.5---NK a danger to world peace (1=Strongly agree, through 5=Strongly disagree)	-0.17	-0.05	-0.12
Q.7---NK threat due to nuclear arms dealership (1=Strongly agree, through 5=Strongly disagree)	-0.29**	-0.09	-0.20*

**Significant at 0.05 level. *Significant at 0.10 level.

Viewing Information Cards

The information cards providing some background information about North Korea and its historical relations with other countries in the six-party peace talks do not show much effect on the dependent variable questions or the North Korea Nuclear Threat Scale. The mean values for these variables and the scale are comparable for those who received cards and for those who did not (Table 5-3 and 5-4). This pattern suggests that the background information about the country does not directly influence specific opinions about its nuclear threat. Information cards also make no difference on the level of general political knowledge.

The average score on the information scale constructed based on the five specific information questions is higher for those who received the information cards than for those who did not receive them (0.54 versus 0.4, difference significant at the 0.05 level, Table 5-3 and Table 5-4). This acts as a manipulation check evidencing that the respondents who received the information cards about North Korea did read them rather than skip them while completing the questionnaire.

Table 5-3. Mean and Standard Deviation for Dependent Variables, Information, and Knowledge by Information Card Groups

Variables	Mean and SD (in Parenthesis) for Different Information Card Groups	
	Information Cards (N=210)	No Information Cards (N=210)
Information Scale (0-1)	0.54 (0.28)	0.40 (0.26)
Political Knowledge (0-1)	0.78 (0.29)	0.78 (0.30)
North Korea Nuclear Threat Scale (-1.28 to 3.14)	0.03 (0.99)	-0.03 (1.01)
Q3---Feeling Thermo toward North Korea (0-100)	17.32 (19.63)	16.86 (19.48)
Q.6-Recoded---NK Intention to use nuclear capacity? (1=pose threat 2=both 3=get financial aid 4=neither)	2.4 (0.82)	2.34 (0.82)
Q.8-Recoded---NK nuclear issue resolved by peace talks? (1=No, 2=Hard to say, 3=Yes)	1.76 (0.63)	1.78 (0.60)
Q.4---NK posing a nuclear threat (1=Strongly agree, through 5=Strongly disagree)	2.00 (0.82)	1.92 (0.87)
Q.5---NK a danger to world peace (1=Strongly agree, through 5=Strongly disagree)	1.99 (0.86)	1.92 (0.88)
Q.7---NK threat due to nuclear arms dealership (1=Strongly agree, through 5=Strongly disagree)	1.99 (0.81)	2.01 (0.82)

Table 5-4. ANOVA Results for post-test respondents: Effect of Information Cards (Short Term Informational Effects)

Variables	Mean Difference between Respondents Who Received Information Cards and Those Who didn't
Information Scale (0-1)	0.14**
Political Knowledge (0-1)	0.003
North Korea Nuclear Threat Scale (-1.28 to 3.14)	0.06
Q3---Feeling Thermo toward North Korea (0-100)	0.46
Q.6-Recoded---NK Intention to use nuclear capacity? (1=pose threat 2=both 3=get financial aid 4=neither)	0.06
Q.8-Recoded---NK nuclear issue resolved by peace talks? (1=No, 2=Hard to say, 3=Yes)	0.02
Q.4---NK posing a nuclear threat (1=Strongly agree, through 5=Strongly disagree)	0.08
Q.5---NK a danger to world peace (1=Strongly agree, through 5=Strongly disagree)	0.07
Q.7---NK threat due to nuclear arms dealership (1=Strongly agree, through 5=Strongly disagree)	-0.02

**Significant at 0.05 level.

Interaction Effect from News Stories and Information Cards

Since the experiment is a 3 by 2 factorial design, there are a total of six experimental groups in total in the North Korean nuclear threat study, 3 groups of media news story exposure for those who did or did not receive information cards. The sample size for each group is 70. In order to test whether the impact of viewing a North Korean nuclear threat story would be moderated by specific information, Table 5-5 lists the mean values and their standard deviations of information, knowledge, and dependent variable measures by the six experimental groups. In addition, the mean differences and the corresponding 90% confidence intervals in the dependent variables among the three news groups are also calculated for those who received or did not received the information cards separately (Table 5-6).

The interaction effect between these two factors is examined by comparing the differences among viewing a threat story, viewing a threat eased story, and not viewing such a story for those who received and did not receive information cards (1st vs. 3rd column, 2nd vs. 4th column, and 3rd vs. 6th column in Table 5-6). The magnitude of such differences is similar for all the dependent variables. The 90% confidence intervals for each pair of the differences overlap with each other (Table 5-6).

As Hypothesis 2 predicts that specific information would weaken the effects from exposing to North Korean nuclear threat news, the univariate results in this study do not support these two hypotheses.

However, there are three pairs of differences that suggest the tendency for those who received the information cards to show a relatively larger change of opinion after viewing a story about North Korea posing a nuclear threat. The three pairs of differences

are for the nuclear threat scale, Question 4 (North Korea posing a threat) and Question 5 (whether North Korea is a danger to the world). More specifically, the difference on the North Korea nuclear threat scale for those who viewed a threat story and those who did not view any story is -0.38. This value is for those who received the information cards. However, for those who did not receive such cards, this difference is -0.19. For Question 4, the values of the pair of differences are -0.30 and -0.09. For Question 5, the values are -0.26 and -0.09.

This trend, even though not statistically significant, suggests that feelings about North Korea posing a threat tend to increase after viewing a story about this issue. Such an influence from the news story tends to be intensified by reading a few information cards about the country and its brief historical relation with other countries in the peace talk.

Viewing a threat being eased story generally tends to make the respondents feel more threat posed by North Korea if they did not receive any information cards about North Korea. The only exception is Question 3, the feeling thermometer. If the respondents received the information cards, they tended to feel less threat posed by the country, the only exception being Question 6 about North Korea's real intention. This trend suggests that those who received information cards are more likely to lean toward the issue position in the story about nuclear threat being eased.

The differences between those who viewed a threat story and those who viewed a threat eased story indicate that respondents are more likely to feel North Korea is posing a threat if a threat story has been viewed (3rd and 6th columns in Table 5-6). The negative values indicate lower scores on the nuclear threat scale or the dependent variable

questions, which means feelings of more threat from North Korea. Comparing the magnitude of these mean differences (3rd and 6th columns in Table 5-6) shows that, those with information cards tend to show larger opinion changes. This pattern is in line with the trend shown in the comparison between those who viewed a threat story and those who did not view any story about North Korea.

These observed differences in the magnitude of news effects between those who received and did not receive information cards are only marginal as the 90% confidence intervals overlap. However, the trend is that reading the information cards make the influence from viewing a news story stronger by making those who received the cards lean more toward agreeing with the news story's issue positions. As Hypothesis 2 predicts that specific information would weaken the effects from exposing to relevant issue coverage in the news, this trend is thus in the opposite direction compared to what this hypothesis predicts.

Table 5-5. Mean and Standard Deviation for Dependent Variables, Information, and Knowledge by Experimental Groups

Variables	Mean and SD (in Parenthesis) for Different Experimental Groups					
	Information Cards			No Information Cards		
	Viewed a Story about North Korea Posing a Nuclear Threat (N=70)	Viewed a Story about North Korea's Nuclear Threat Eased (N=70)	No Story about North Korea (N=70)	Viewed a Story about North Korea Posing a Nuclear Threat (N=70)	Viewed a Story about North Korea's Nuclear Threat Eased (N=70)	No Story about North Korea (N=70)
Information Scale (0-1)	0.56 (0.29)	0.47 (0.28)	0.59 (0.25)	0.35 (0.27)	0.44 (0.26)	0.41 (0.25)
Political Knowledge (0-1)	0.83 (0.26)	0.72 (0.32)	0.79 (0.28)	0.78 (0.31)	0.80 (0.30)	0.76 (0.29)
North Korea Nuclear Threat Scale (-1.28 to 3.14)	-0.24 (0.95)	0.20 (1.02)	0.13 (0.96)	-0.07 (1.01)	-0.13 (0.98)	0.12 (1.04)
Q3---Feeling Thermo toward North Korea (0-100)	14.10 (17.16)	21.20 (22.35)	16.66 (18.62)	15.21 (17.19)	18.62 (19.47)	16.76 (21.65)
Q.6-Recoded---NK Intention to use nuclear capacity? (1=pose threat 2=both 3=get financial aid 4=neither)	2.39 (0.75)	2.37 (0.87)	2.46 (0.83)	2.36 (0.77)	2.23 (0.82)	2.41 (0.87)
Q.8-Recoded---NK nuclear issue resolved by peace talks? (1=No, 2=Hard to say, 3=Yes)	1.64 (0.64)	1.83 (0.59)	1.80 (0.65)	1.79 (0.54)	1.70 (0.64)	1.84 (0.61)
Q.4---NK posing a nuclear threat (1=Strongly agree, through 5=Strongly disagree)	1.77 (0.78)	2.16 (0.88)	2.07 (0.77)	1.94 (0.87)	1.79 (0.85)	2.03 (0.88)
Q.5---NK a danger to world peace (1=Strongly agree, through 5=Strongly disagree)	1.81 (0.86)	2.09 (0.86)	2.07 (0.84)	1.90 (0.90)	1.87 (0.88)	1.99 (0.86)
Q.7---NK threat due to nuclear arms dealership (1=Strongly agree, through 5=Strongly disagree)	1.77 (0.80)	2.11 (0.83)	2.07 (0.77)	1.90 (0.87)	1.96 (0.73)	2.17 (0.83)

Table 5-6. ANOVA Results for post-test respondents: Interaction Effect of Information Cards and Media News Stories

Variables	Mean Difference between					
	Information Cards			No Information Cards		
	Threat Story vs. No Story about North Korea	Threat Eased Story vs. no Story about North Korea	Threat Story vs. Threat Eased Story	Threat Story vs. No Story about North Korea	Threat Eased Story vs. no Story about North Korea	Threat Story vs. Threat Eased Story
Information Scale (0-1)	-0.03 (-0.15, 0.08)	-0.13* (-0.24, -0.005)	0.09 (-0.03, 0.21)	-0.06 (-0.18, 0.06)	0.02 (-0.10, 0.14)	-0.09 (-0.21, 0.03)
Political Knowledge (0-1)	0.03 (-0.10, 0.16)	-0.07 (-0.20, 0.06)	0.10 (-0.20, 0.06)	0.02 (-0.11, 0.15)	0.04 (-0.09, 0.17)	0.02 (-0.15, 0.11)
North Korea Nuclear Threat Scale (-1.28 to 3.14)	-0.38 (-0.81, 0.06)	0.06 (-0.37, 0.50)	-0.44* (-0.88, -0.01)	-0.19 (-0.63, 0.24)	-0.25 (-0.69, 0.18)	-0.06 (-0.38, 0.50)
Q3---Feeling Thermo toward North Korea (0-100)	-2.56 (-11.13, 6.01)	4.54 (-4.02, 13.11)	-7.10 (-15.67, 1.46)	-1.56 (-10.12, 7.02)	1.86 (-6.71, 10.43)	-3.41 (-11.98, 5.16)
Q.6-Recoded---NK Intention to use nuclear capacity? (1=pose threat 2=both 3=get financial aid 4=neither)	-0.07 (-0.43, 0.29)	-0.09 (-0.45, 0.27)	0.02 (-0.34, 0.38)	-0.05 (-0.41, 0.31)	-0.18 (-0.54, 0.18)	0.13 (-0.23, 0.49)
Q.8-Recoded---NK nuclear issue resolved by peace talks? (1=No, 2=Hard to say, 3=Yes)	-0.16 (-0.43, 0.11)	0.03 (-0.24, 0.30)	-0.19 (-0.45, 0.08)	-0.06 (-0.33, 0.21)	-0.14 (-0.41, 0.13)	0.09 (-0.18, 0.35)
Q.4---NK posing a nuclear threat (1=Strongly agree, through 5=Strongly disagree)	-0.30 (-0.67, 0.07)	0.09 (-0.29, 0.45)	-0.39* (-0.75, -0.02)	-0.09 (-0.45, 0.29)	-0.24 (-0.61, 0.13)	-0.09 (-0.22, 0.53)
Q.5---NK a danger to world peace (1=Strongly agree, through 5=Strongly disagree)	-0.26 (-0.21, 0.53)	0.01 (-0.37, 0.40)	-0.27 (-0.66, 0.11)	-0.09 (-0.47, 0.30)	-0.11 (-0.50, 0.27)	0.03 (-0.36, 0.41)
Q.7---NK threat due to nuclear arms dealership (1=Strongly agree, through 5=Strongly disagree)	-0.30 (-0.65, 0.05)	0.04 (-0.31, 0.40)	-0.34 (-0.70, 0.01)	-0.27 (-0.63, 0.08)	-0.21 (-0.57, 0.14)	-0.06 (-0.41, 0.30)

*Significant at 0.10 level. 90% Confidence interval in parenthesis.

Multivariate Effects

Short-term News Exposure and Information Reception

The analysis above for the effect of TV news exposure and information cards, as well as their interaction effect, suggests that viewing news stories about North Korea posing a nuclear threat tends to shift the study subjects opinions about this country right after viewing the story. It also provides some indication of the moderating effect of information cards, although not statistically significant, as the magnitude of changes in opinions tends to be larger among those who received the cards.

These results have not taken into consideration variables that may be potentially relevant to the attitude of a North Korean nuclear issue, such as demographic variables, political predispositions, general opinions about terrorist attacks, media exposure habits, and political discussion on a regular basis. Thus, multiple regressions are used to examine the effects of short-term news and information exposure while controlling all these variables. Multiple regressions also allow the investigation of the effects of information and political knowledge already acquired in addition to the information learned in the particular setting of this experiment.

Regression models were fitted on the dependent variable questions and the scale separately. The results are shown in Table A-13 and A-14. The coefficients for news groups and information cards are not significantly different from zero for all the dependent variables examined. This indicates that while controlling for other relevant variables to the opinions about a North Korean nuclear issue, the short-term main effects of the two experimental variables in this study are not significant. There are also no consistent directions of their effects.

The interaction effect from these two experimental variables is significant in the regression model for Question 4, general opinion about a North Korean nuclear threat, and Question 8, whether this issue can be resolved by peace talks. The β s are -0.14 and -0.17 with both p-values being 0.05. Applying the coefficients of the interaction terms and the main effects of the two experimental variables, we find an effect from viewing TV news and reading information cards similar to the pattern identified in the univariate analysis. The effect of viewing a nuclear threat story tends to lead the participants' views of North Korea in the direction of more threat. This tendency is stronger for those who received the information cards than for those who did not. Such a pattern is consistent for both Question 4 and Question 8 as the dependent variables.

The pattern is also as consistent for these two dependent variables when the participants viewed a threat eased story. On Question 4 regarding general opinion about a North Korean nuclear threat, viewing a threat eased story led the participants to feel that North Korea is less of a threat, especially among those who received the information cards. As for Question 8, whether this issue can be resolved by peace talks, those who viewed a threat eased story still feel it is hard to say or it is possible that peace talks may be a solution. Those who received information cards are more likely to be led toward the direction that the nuclear threat is eased or that peace talks are a likely solution, as discussed in the news. In sum, when a threat eased story is viewed, the issue specific information also tends to strengthen the effect from viewing the news story, at least for two of the opinion questions.

For other opinion questions, such a significant interaction effect is not found, which indicates that the moderating effect of information cards still depends on the

specific opinion question, or how the question relates to the news story. Feelings about the nuclear threat and opinions about a potential solution may be quite different issues at hand for the respondents. For the Nuclear Threat scale, the feeling thermometer toward North Korea, the intention of using nuclear threat, threat to world peace, and threat due to nuclear arms dealership, such a moderating effect is not discovered.

Thus, the findings from this experiment contradict Hypothesis 2 that having more specific information about North Korea would reduce the effect from viewing a news story about North Korea posing a threat. When a nuclear threat eased story is viewed, having more information leads to stronger news effects if general opinion about the North Korean nuclear threat is asked. Having more information also leads to stronger news effects if a question is asked about whether peace talks can be the solution to this issue.

Long-term Information and General Political Knowledge Acquired

Longer-term information acquired about North Korea as a country and its historical relations with other countries in the peace talks generally has an effect of making the country seemingly more of a threat in general. The negative coefficients for this variable in all of the regression models indicate that the more informed one is, the more of a threat North Korea seems. This pattern reaches statistical significance for the feeling thermometer model ($\beta=-8.46$, $p=0.04$) and is very close to statistical significance for Question 7, regarding a nuclear threat due to arms dealership ($\beta=-0.24$, $p=0.13$) and Question 8, the plausibility of peace talks in resolving this issue ($\beta=-0.20$, $p=0.14$).

General political knowledge also has a relatively consistent and significant effect on the opinion questions in the study, except on Question 6 and Question 8. For all other

dependent variable questions and the nuclear threat scale, the more knowledge one has, the more likely he or she feels that North Korea is more of a threat. Question 6 on North Korea's intention and Question 8 on the solution to this issue are probably different from other questions that are more directly concerned about opinions or feelings.

Issue Salience, Media Exposure, Issues News Following and Discussion

Issue salience, i.e. viewing this issue as important and relevant, has a positive coefficient in each of the regression models fitted except the model for Question 8 on peace talks as a resolution. This indicates that the more salient the North Korean nuclear threat seems, the more threat one feels about this country, as lower scores on issue salience indicates one feels the issue to be more salient.

The amount of media exposure is not found to be significantly influencing respondents' opinions about this issue. Nor does the extent of following news reporting for this specific issue or participation in discussion of this issue make any difference on the issue opinions.

General Concern about Future Terrorist Attacks

As expected, general concern about future terrorist attacks is significantly related to the opinions of the North Korean nuclear threat, except on the feeling thermometer, intention, and peace talks as resolution questions. Those who are more worried about future terrorist attacks are more likely to feel that North Korea is posing a nuclear threat.

Self-evaluation of Information Cards and News Story's Impact

Self-evaluations of whether the information cards are informative or relevant do not seem to matter for all the opinion questions in this study. Self-evaluations of whether the news stories would influence one's own opinion on a North Korean issue do not have a significant impact on the opinion questions except for Question 5 and Question 8.

Those who think that the news stories about North Korea tend to have more of an effect on his or her own opinions find this issue more likely to be solved by peace talks ($\beta=0.08$ and $p=0.10$). At the same time, they would also tend to be in more agreement with the statement that North Korea is a danger to world peace ($\beta=-0.12$ and $p=0.04$).

For those who think that the news stories about North Korea tend to have more of an effect on other people's opinions, they find this issue less likely to be solved by peace talks ($\beta=-0.10$ and $p=0.03$). At the same time, they tend to be in less agreement with the statement that North Korea is a danger to world peace ($\beta=0.11$ and $p=0.05$).

Political Predispositions

Party identification is not significant in any of the opinion questions or scale. This is reasonable, as the issue of North Korea is not a partisan issue. There are no diverging opinions of the two parties about this issue in the news media. Political ideology tends to have a consistently significant impact on the opinion questions, except for the feeling thermometer (Question 3) and the intention question (Question 6). Generally speaking, the more conservative a respondent is, the more of a threat he or she feels from North Korea.

Those who are less interested in politics in general tend to feel that North Korea is more of a threat. Such an effect is statistically significant except for the threat due to arms dealership and the nuclear threat intention questions (Questions 7 and 8).

Demographic Variables

Race and whether parents were born in the U.S. do not make a significant difference on North Korean nuclear threat attitudes. Females only felt more threat when asked about the real intention of North Korea using its nuclear capacity (Question 6). They are more likely to feel that the real intention is to pose a threat than to get financial assistance ($\beta=-0.15$ and $p=0.08$).

Higher education is associated with lower feelings of threat as the coefficients for this variable are positive and significant for all but Question 3, 6, and 7. Age is only associated with the feeling thermometer about North Korea. The older a respondent is, the less friendly he or she would feel about North Korea ($\beta=-1.24$ and $p=0.05$). Family income is significant for peace talks as a resolution question (Question 8). The wealthier a respondent is, the less likely that he or she feels that peace talks are a possible solution ($\beta=-0.04$ and $p=0.05$).

Results from Reduced Regression Models

Reducing the full regression model to exclude Questions 20, 21, 29, and 36, which do not have a statistically significant impact on any of the opinion questions or scale, reveals that the parameter estimates for most of the independent variables remain stable in terms of their magnitude, direction, and significance (See Table A-15 and A-16).

The only two occasions in which the independent variables become statistically significant is long-term information acquired in the model for Question 8, about peace talks as a resolution. The information scale still has a negative coefficient, indicating that the more information one has, the more feelings of threat one feels ($\beta=-0.22$ and $p=0.10$). In addition, age becomes significant in the model for Question 7, regarding the threat due to involvement of nuclear arms dealership ($\beta=-0.04$ and $p=0.09$), which means that older respondents tend to feel that North Korea is more of a threat due to nuclear arms dealership.

Results from Experiment 2: Opinions on Health Care Reform

Results from the Panel Data

There are 108 subjects in the experiment of health care reform who participated in both the pre-test and post-test. Results from the regression analysis using data collected from this group of panel subjects are presented in Table A-17 through A-20.

Short-term News Exposure and Information Card Reception

Short-term news exposure only has a significant impact on opinions of whether the reform would be beneficial or harmful to the economy (Question 9, $\beta=-0.33$, $p=0.02$), but has no significant impact on other dependent variables. Those who viewed a news story in support of the reform are more likely to say that the reform will be greatly beneficial or beneficial to the economy compared to those who did not view any story.

Those who received information cards about the health care reform are more likely to strongly favor or favor a policy to require the employer to pay a fee if health care insurance is not provided for employees. (Question 5, $\beta=-1.67$, $p=0.03$). However, they are also more likely to oppose and strongly oppose increasing tax on upper income Americans (Question 7, $\beta=2.63$, $p<0.0001$). Whether or not the subjects received information cards about the reform does not have a significant impact on other opinion questions or scales. In addition, there is no an interaction effect between the news story exposure and the information cards found for any of the opinion questions.

Long-term information and general political knowledge acquired

Longer-term information acquired about the reform and general political knowledge do not have any impact on opinions related to health care reform. None of the

coefficients reached the statistical significance at 0.10 level. There seems to be a trend, though, that those who are more informed are more likely to oppose requiring employers to pay a fee if they don't provide health insurance (Question 5, $\beta=0.59$, $p=0.16$). They are also more likely to favor saving money by cutting Medicare costs to finance the reform (Question 6, $\beta=-0.84$, $p=0.11$). Those who have more political knowledge, on the other hand, are more likely to oppose saving money by cutting Medicare costs to finance the reform (Question 6, $\beta=0.66$, $p=0.19$).

Issue Salience, Media Exposure, Issues News Following and Discussion

Issue salience is significantly related to several opinion questions or scales in the panel analysis. Those who find the issue of health care reform more salient are less likely to favor financing the reform by cutting Medicare costs (Favorability by cutting Medicare cost scale, $\beta=-0.23$, $p=0.09$). They are also more likely to favor a health care insurance system with both public and private options (Question 3, $\beta=0.20$, $p=0.08$). They are slightly more likely to think that the U.S. should follow European countries to have a single payer system (Question 4, $\beta=0.08$, $p=0.06$). In addition, they are more likely to think that the reform will be harmful to the economy (Question 9, $\beta=-0.23$, $p=0.04$).

Media exposure is not significantly related to the opinions about the health care reform.

Those who said that they participated in some discussions about the reform are more likely to favor a system with both public and private options of health care insurance (Question 3, $\beta=-0.63$, $p=0.01$). Self-reported follow-up of the reform in the news does not make any difference on the opinions about it.

Presidential Job Approval

Those who approve of Obama's job performance as the President are more likely to support financing the reform by cutting Medicare costs (favorability of cutting Medicare costs scale, $\beta=0.34$, $p<0.0001$, Question 6, $\beta=0.22$, $p=0.07$). They are also more likely to favor the reform in general (Question 1, $\beta=0.14$, $p=0.06$) and less likely to favor a system with both public and private insurance options (Question 3, $\beta=-0.16$, $p=0.07$). They are also more likely to favor requiring the employers pay a fee if they do not provide health insurance to their employees (Question 5, $\beta=0.24$, $p=0.02$). In addition, they are more likely to think that the reform will be beneficial to the economy (Question 9, $\beta=0.24$, $p=0.01$).

Self-evaluation of Information Cards and News Story's Impact

Those who think the information cards are informative are more likely to favor or strongly favor increasing tax on upper income Americans to finance the reform (Question 7, $\beta=-0.58$, $p=0.05$). They are less likely to support cutting Medicare costs to finance the reform (Question 6, $\beta=-0.69$, $p<0.04$). At the same time, they are less likely to support universal coverage (Question 2, $\beta=0.40$, $p<0.09$).

Those who think the information cards are relevant are less likely to support cutting Medicare costs to finance the reform (favorability of cutting Medicare costs scale, $\beta=1.05$, $p<0.0001$; Question 4, $\beta=1.14$, $p<0.0001$).

Self-evaluations of whether the news stories influence one's own opinion on the reform do not have a significant impact on the opinion questions. For those who think that the news stories about the reform have more of an effect on other people's opinions,

they are more likely to support cutting Medicare costs to finance the reform (Question 6, $\beta=-0.30$ and $p<0.07$).

Political Predispositions

Even though the health care reform is an issue on which the two political parties have different views, political predisposition variables are not found to have consistently significant impact on opinions about this issue in the panel analysis. As expected, Democrats are more likely to support a system with universal coverage (Question 2, $\beta=0.21$, $p=0.02$). Those who are more interested in politics are more likely to favor requiring the employers to pay a fee if they do not provide health insurance to their employees (Question 5, $\beta=0.35$, $p=0.07$). Political ideology, on the other hand, is not significantly related to any of the opinion questions or scales constructed.

Demographic Variables

Females are more likely to oppose a single payer system (Question 4, $\beta=0.13$, $p=0.05$) and think that the reform will be beneficial to the economy (Question 9, $\beta=-0.30$, $p=0.10$). Those who have higher education are more likely to favor a system with both public and private insurance options (Question 9, $\beta=-0.18$, $p=0.07$) and think that the reform will be beneficial to the economy (Question 9, $\beta=-0.16$, $p=0.09$). Race, age, and income, however, are not found to have a significant impact on the opinions about the reform.

Results from the Post-Test Sample

Univariate Effects

Viewing News Stories

Table 5-7 presents the mean values for information, general political knowledge, and dependent variables by the three news story conditions in this experiment of Health Care Reform. The three news story conditions have either a story in support of the reform, a story against the reform, or no story about the reform.

Similar scores for specific information and general political knowledge are expected and found for the participants who viewed three different versions of news stories. The three information scores range from 0.43 to 0.45. The scores for political knowledge range from 0.71 to 0.78. No pairwise differences are found to be statistically significant among the information scores or among the political knowledge scores. These findings are comparable to the findings in the North Korean nuclear threat study.

For the dependent variables and the factors extracted from these variables, it is hypothesized that viewing a news story portraying health care reform in a positive way would increase the favorability of the reform (Hypothesis 1). If a news story framing health care reform in a negative way is shown to the respondents, they would feel less favorable about the reform (Hypothesis 1).

Data presented in Table 5-7 and 5-8 indicate that the responses to the dependent variable questions as well as the scales constructed based on these questions are extremely similar. Most of the responses do not significantly differ among the three news conditions. It is concluded that Hypothesis 1 is not supported by the univariate results in this experiment about health care reform.

The only significant mean difference found is between those who viewed a story in support of the reform (1.63 on a scale of 1 to 3) and those who viewed a story against the reform (1.49 on the same scale) with regard to their attitude about whether the U.S. should follow a few European countries to have a single payer system (Question 4). The difference is 0.14 and significant at the 0.05 level, which suggests that those who viewed the positive story are more likely to oppose a single payer system. This may seem to be in the opposite direction to what Hypothesis 1 predicts. However, given the fact that the reform proposed by the Obama administration is not intended to follow a single payer system, this significant difference does not suggest the support for the real proposed reform is more among those who viewed a negative story.

Table 5-7. Mean and Standard Deviation for Dependent Variables, Information, and Knowledge by News Groups

Variables	Mean and SD (in Parenthesis) for Different News Groups		
	Respondents Who Viewed a Story in Support of Health Care Reform (N=141)	Respondents Who Viewed a Story against Health Care Reform (N=140)	Those Who did not View Any Story about Health Care Reform (N=142)
Information Scale (0-1)	0.44 (0.26)	0.43 (0.28)	0.45 (0.27)
Political Knowledge (0-1)	0.78 (0.29)	0.71 (0.32)	0.76 (0.31)
General Favorability of Health Care Reform (-1.72 to 2.10)	0.02 (1.00)	-0.02 (0.97)	0.00 (1.04)
Favorability by Cutting Medicare Cost (-2.57 to 2.12)	0.05 (1.02)	-0.08 (1.00)	0.02 (0.98)
DV 1 factor(-1.67 to 3.81)	0.02 (1.01)	-0.03 (0.98)	0.00 (1.01)
Q.1 Recoded ---Generally favor or oppose the Reform (1=Favor, 2=No opinion and 3=Oppose)	2.09 (0.90)	2.04 (0.89)	2.03 (0.91)
Q.2 Recoded ---Favor or oppose universal coverage (1=Favor, 2=No opinion and 3=Oppose)	1.70 (0.88)	1.72 (0.85)	1.70 (0.88)
Q.3 Recoded ---Favor or oppose a system that has both public and private health insurance (1=Favor, 2=No opinion and 3=Oppose)	1.60 (0.81)	1.69 (0.80)	1.67 (0.83)
Q.4---Whether U.S. should follow to have a single payer system (1=Yes and 2=No)	1.63 (0.43)	1.49 (0.44)	1.60 (0.41)
Q.5---Require employer to pay a fee if they do not provide insurance (1=Strongly favor through 5=Strongly oppose)	2.81 (1.30)	2.86 (1.27)	2.89 (1.17)
Q.6---Saving money by cutting back on Medicare cost (1=Strongly favor through 5=Strongly oppose)	3.36 (1.33)	3.27 (1.17)	3.37 (1.25)
Q.7---Increase income tax on upper income Americans (1=Strongly favor through 5=Strongly oppose)	2.53 (1.30)	2.5 (1.32)	2.55 (1.26)
Q.8---Health Care Reform beneficial/harmful to	2.98	2.92	2.87

American people (1=Greatly beneficial through 5=Greatly Harmful)	(1.52)	(1.42)	(1.52)
Q.9--- Reform beneficial/harmful to the economy (1=Greatly beneficial through 5=Greatly Harmful)	3.21 (1.34)	3.17 (1.36)	3.18 (1.42)

Table 5-8. ANOVA Results for post-test respondents: Effect of Media News Stories.

Variables	Mean Difference between		
	Respondents Who Viewed a Story in Support of Health Care Reform and Those Who did not View Any Story about Health Care Reform	Respondents Who Viewed a Story against Health Care Reform and Those Who did not View Any Story about Health Care Reform	Respondents Who Viewed a Story in Support of Health Care Reform and Those Who Viewed a Story against the Reform
Information Scale (0-1)	0.02	-0.02	0.01
Political Knowledge (0-1)	0.02	-0.05	0.07
General Favorability (-1.72 to 2.10)	0.02	-0.02	0.03
Favorability by Cutting Medicare Cost (-2.57 to 2.12)	0.03	-0.10	0.13
DV 1 factor(-1.67 to 3.81)	0.02	-0.04	0.06
Q.1 Recoded ---Generally favor or oppose the Health Care Reform (1=Favor, 2=No opinion and 3=Oppose)	0.06	0.01	0.05
Q.2 Recoded ---Favor or oppose universal coverage (1=Favor, 2=No opinion and 3=Oppose)	0.002	0.02	-0.02
Q.3 Recoded ---Favor or oppose a system that has both public and private health insurance (1=Favor, 2=No opinion and 3=Oppose)	-0.07	0.02	-0.09
Q.4---Whether U.S. should follow to have a single payer system (1=Yes and 2=No)	0.03	-0.11	0.14**
Q.5---Require employer to pay a fee if they do not provide insurance (1=Strongly favor through 5=Strongly oppose)	-0.09	-0.03	-0.05
Q.6---Saving money by cutting back on Medicare cost (1=Strongly favor through 5=Strongly oppose)	-0.005	-0.09	0.09
Q.7---Increase income tax on upper income Americans (1=Strongly favor through 5=Strongly oppose)	-0.02	-0.11	0.03
Q.8---Health Care Reform beneficial/harmful to American people (1=Greatly beneficial through 5=Greatly Harmful)	0.11	0.06	0.06
Q.9---Health Care Reform beneficial/harmful to the economy (1=Greatly beneficial through 5=Greatly Harmful)	0.03	-0.005	0.03

**Significant at 0.05 level. *Significant at 0.10 level.

Viewing Information Cards

The univariate effect of information cards in the study of health care reform is found to be similar to that in the study of the North Korean nuclear threat. That is, information cards do not have impact on the specific opinions about the reform (Table 5-9 and 5-10). They are only found to have effects on specific information measures. The average score on the information scale constructed, based on the five specific information questions is higher for those who received the information cards than for those who did not receive them (0.47 versus 0.40, difference significant at the 0.05 level).

Table 5-9. Mean and Standard Deviation for Dependent Variables, Information, and Knowledge by Information Card Groups

Variables	Mean and SD (in Parenthesis) for Different Information Card Groups	
	Information Cards (N=212)	No Information Cards (N=211)
Information Scale (0-1)	0.47 (0.28)	0.40 (0.25)
Political Knowledge (0-1)	0.73 (0.33)	0.77 (0.28)
General Favorability (-1.72 to 2.10)	0.00 (0.99)	0.00 (1.02)
Favorability by Cutting Medicare Cost (-2.57 to 2.12)	-0.01 (0.94)	0.02 (1.05)
DV 1 factor(-1.70 to 1.92)	0.00 (0.98)	0.00 (1.02)
Q.1 Recoded ---Generally favor or oppose the Health Care Reform (1=Favor, 2=No opinion and 3=Oppose)	2.06 (0.89)	2.05 (0.91)
Q.2 Recoded ---Favor or oppose universal coverage (1=Favor, 2=No opinion and 3=Oppose)	1.70 (0.86)	1.72 (0.88)
Q.3 Recoded ---Favor or oppose a system that has both public and private health insurance (1=Favor, 2=No opinion and 3=Oppose)	1.67 (0.81)	1.64 (0.82)
Q.4---Whether U.S. should follow to have a single payer system (1=Yes and 2=No)	1.57 (0.43)	1.58 (0.43)
Q.5---Require employer to pay a fee if they do not provide insurance (1=Strongly favor through 5=Strongly oppose)	2.86 (1.25)	2.84 (1.24)
Q.8---Health Care Reform beneficial/harmful to American people (1=Greatly beneficial through 5=Greatly Harmful)	3.32 (1.20)	3.35 (1.29)
Q.7---Increase income tax on upper income Americans (1=Strongly favor through 5=Strongly oppose)	2.52 (1.32)	2.54 (1.26)
Q.8---Health Care Reform beneficial/harmful to American people (1=Greatly beneficial through 5=Greatly Harmful)	2.92 (1.48)	2.92 (1.49)
Q.9---Health Care Reform beneficial/harmful to the economy (1=Greatly beneficial through 5=Greatly Harmful)	3.18 (1.35)	3.18 (1.40)

Table 5-10. ANOVA Results for post-test respondents: Effect of Information Cards (Short Term Informational Effects)

Variables	Mean Difference between Respondents Who Received Information Cards and Those Who didn't
Information Scale (0-1)	0.07**
Political Knowledge (0-1)	0.05
General Favorability (-1.72 to 2.10)	-0.0003
Favorability by Cutting Medicare Cost (-2.57 to 2.12)	-0.03
DV 1 factor(-1.70 to 1.92)	-0.006
Q.1 Recoded ---Generally favor or oppose the Health Care Reform (1= Favor, 2=No opinion and 3=Oppose)	0.01
Q.2 Recoded ---Favor or oppose universal coverage (1= Favor, 2=No opinion and 3=Oppose)	-0.02
Q.3 Recoded ---Favor or oppose a system that has both public and private health insurance (1= Favor, 2=No opinion and 3=Oppose)	0.02
Q.4---Whether U.S. should follow to have a single payer system (1=Yes and 2=No)	-0.02
Q.5---Require employer to pay a fee if they do not provide insurance (1=Strongly favor through 5=Strongly oppose)	0.02
Q.6---Saving money by cutting back on Medicare cost (1=Strongly favor through 5=Strongly oppose)	-0.03
Q.7---Increase income tax on upper income Americans (1=Strongly favor through 5=Strongly oppose)	-0.02
Q.8---Health Care Reform beneficial/harmful to American people (1=Greatly beneficial through 5=Greatly Harmful)	-0.004
Q.9---Health Care Reform beneficial/harmful to the economy (1=Greatly beneficial through 5=Greatly Harmful)	-0.001

**Significant at 0.05 level

Interaction Effect from News Stories and Information Cards

Using the same method to test the univariate interaction effect from news stories and information cards as in the first experiment found that the magnitude of the mean differences between any two of the three news groups is similar for all the dependent variables for those who received and did not receive information cards about the reform (Table 5-11 and Table 5-12). This pattern is indicated by the fact that the 90% confidence intervals for each pair of the differences overlap with each other in Table 5-12.

As Hypothesis 2 predicts that specific information would weaken the effects from exposing to health care reform, the univariate results about the interaction effect in this study do not support these two hypotheses.

However, there seem to be a pattern, even though not statistically significant, that those who viewed a story in support of the reform and who also received the information cards lean toward opposing the reform. That is, they are less likely to follow the perspective of the news story to support the reform as compared to those who viewed the same story yet did not receive the information cards. Such a pattern can be seen for the general favorability scale, Question 1, 2, 3, and Question 7 through 9. Such a pattern is not visible on the favorability by cutting Medicare cost, or Question 4, 5, or 6. These questions relate to either cutting Medicare cost, requiring employers to pay a fee or pursuing a single payer system.

Among those who viewed a story against the reform, those who received the information cards are less likely to oppose the reform than those who did not receive the cards on some dependent variable questions, such as the general favorability, Question 2 through 5 and Question 8. General favorability question (Question 1), favorability of the reform by cutting Medicare cost (Question 6), and the scale as well as Question 7 and 9 do not conform to this pattern, as predicted by the hypothesis.

When looking at the difference between those who viewed a story in support of the reform and those who viewed a story against it, those who received the specific information cards tend to be less favorable of the reform, or more opposing to the reform compared to those who did not receive the cards. This is in line with the hypothesis

regarding the moderating role of specific information. One exception is the question and scale constructed for the favorability of the reform by cutting Medicare cost.

Overall, these observed trends in the magnitude of news effects between those received and did not receive information cards are only marginal as the 90% confidence intervals overlap with each other. However, it seems that reading the information cards are weakening the influence from viewing a news story about health care reform by making those who received the cards show less support for the news story's issue position. Hypothesis 2 predicts that specific information would weaken the effects from exposing to relevant issue coverage in the news. These trends provide some marginal support for the interaction effects that Hypothesis 2 predict. Such support is certainly not statistically significant. It also depends on the specific opinion questions asked.

Table 5-11. Mean and Standard Deviation for Dependent Variables, Information and Knowledge by Experimental Groups

Variables	Mean and SD (in Parenthesis) for Different Experimental Groups					
	Information Cards			No Information Cards		
	Viewed a Story in Support of Health Care Reform (N=70)	Viewed a Story against Health Care Reform (N=70)	No Story about Health Care Reform (N=71)	Viewed a Story in Support of Health Care Reform (N=71)	Viewed a Story against Health Care Reform (N=70)	No Story about Health Care Reform (N=71)
Information Scale (0-1)	0.47 (0.3)	0.44 (0.27)	0.51 (0.28)	0.41 (0.21)	0.41 (0.29)	0.39 (0.25)
Political Knowledge (0-1)	0.74 (0.34)	0.69 (0.33)	0.75 (0.33)	0.82 (0.23)	0.73 (0.32)	0.77 (0.29)
General Favorability (-1.72 to 2.10)	0.12 (0.91)	-0.10 (0.94)	-0.01 (1.10)	-0.08 (1.08)	0.07 (1.00)	0.02 (0.98)
Favorability by Cutting Medicare Cost (-2.57 to 2.12)	-0.04 (0.92)	0.01 (0.92)	-0.02 (1.01)	0.14 (1.12)	-0.16 (1.07)	0.06 (0.97)
DV 1 factor(-1.70 to 1.92)	0.11 (0.93)	-0.1 (0.94)	-0.02 (1.08)	-0.06 (1.08)	0.04 (1.02)	0.03 (0.95)
Q.1 Recoded ---Generally favor or oppose the Health Care Reform (1= Favor, 2=No opinion and 3=Oppose)	2.19 (0.87)	2.01 (0.88)	1.99 (0.93)	2.00 (0.93)	2.07 (0.91)	2.07 (0.91)
Q.2 Recoded ---Favor or oppose universal coverage (1= Favor, 2=No opinion and 3=Oppose)	1.79 (0.87)	1.57 (0.77)	1.74 (0.92)	1.62 (0.88)	1.87 (0.90)	1.67 (0.85)
Q.3 Recoded ---Favor or oppose a system that has both public and private health insurance (1= Favor, 2=No opinion and 3=Oppose)	1.66 (0.80)	1.64 (0.78)	1.69 (0.85)	1.55 (0.82)	1.74 (0.83)	1.64 (0.82)
Q.4---Whether U.S. should follow to have a single payer system (1=Yes and 2=No)	1.64 (0.41)	1.46 (0.44)	1.6 (0.42)	1.62 (0.44)	1.53 (0.43)	1.6 (0.41)
Q.5---Require employer to pay a fee if they do not provide insurance (1=Strongly favor through 5=Strongly oppose)	2.83 (1.26)	2.84 (1.28)	2.92 (1.23)	2.79 (1.35)	2.87 (1.26)	2.86 (1.12)

Q.6---Saving money by cutting back on Medicare cost (1=Strongly favor through 5=Strongly oppose)	3.27 (1.15)	3.33 (1.13)	3.35 (1.33)	3.45 (1.48)	3.21 (1.21)	3.39 (1.16)
Q.7---Increase income tax on upper income Americans (1=Strongly favor through 5=Strongly oppose)	2.56 (1.33)	2.51 (1.30)	2.49 (1.35)	2.51 (1.27)	2.49 (1.34)	2.61 (1.17)
Q.8---Health Care Reform beneficial/harmful to American people (1=Greatly beneficial through 5=Greatly Harmful)	3.14 (1.48)	2.8 (1.34)	2.82 (1.61)	2.82 (1.55)	3.04 (1.50)	2.91 (1.43)
Q.9---Health Care Reform beneficial/harmful to the economy (1=Greatly beneficial through 5=Greatly Harmful)	3.31 (1.27)	3.14 (1.24)	3.10 (1.52)	3.10 (1.42)	3.2 (1.48)	3.26 (1.30)

Table 5-12. ANOVA Results for post-test respondents: Interaction Effect of Information Cards and Media News Stories

Variables	Mean Difference between					
	Information Cards			No Information Cards		
	Supporting Health Care Reform Story vs. No Story about Health Care Reform	Against Health Care Reform Story vs. No Story about Health Care Reform	Supporting Health Care Reform Story vs. Against Health Care Reform Story	Supporting Health Care Reform Story vs. No Story about Health Care Reform	Against Health Care Reform Story vs. No Story about Health Care Reform	Supporting Health Care Reform Story vs. Against Health Care Reform Story
Information Scale (0-1)	-0.05 (-0.16, 0.07)	-0.07 (-0.18, 0.04)	0.02 (-0.09, 0.14)	0.01 (-0.10, 0.13)	0.01 (-0.10, 0.13)	-0.0001 (-0.12, 0.12)
Political Knowledge (0-1)	-0.01 (-0.14, 0.13)	-0.06 (-0.18, 0.09)	0.05 (-0.09, 0.18)	0.04 (-0.09, 0.18)	-0.04 (-0.18, 0.09)	0.09 (-0.05, 0.22)
General Favorability (-1.72 to 2.10)	0.13 (-0.31, 0.57)	-0.09 (-0.53, 0.35)	0.22 (-0.22, 0.66)	-0.09 (-0.54, 0.34)	0.05 (-0.39, 0.49)	-0.15 (-0.59, 0.29)
Favorability by Cutting Medicare Cost (-2.57 to 2.12)	-0.02 (-0.46, 0.41)	0.03 (-0.41, 0.46)	-0.05 (-0.49, 0.39)	0.08 (-0.36, 0.52)	-0.22 (-0.66, 0.22)	0.30 (-0.16, 0.74)
DV 1 factor(-1.70 to 1.92)	0.12 (-0.32, 0.56)	-0.08 (-0.52, 0.35)	0.21 (-0.23, 0.65)	-0.08 (-0.52, 0.36)	0.01 (-0.43, 0.45)	-0.10 (-0.53, 0.34)
Q.1 Recoded ---Generally favor or oppose the Health Care Reform (1= Favor, 2=No opinion and 3=Oppose)	0.22 (-0.38, 0.82)	0.05 (-0.55, 0.65)	0.17 (-0.43, 0.78)	-0.16 (-0.76, 0.44)	-0.06 (-0.66, 0.55)	-0.10 (-0.70, 0.50)
Q.2 Recoded ---Favor or oppose universal coverage (1= Favor, 2=No opinion and 3=Oppose)	0.05 (-0.33, 0.43)	-0.16 (-0.54, 0.21)	0.21 (-0.17, 0.59)	-0.05 (-0.43, 0.33)	0.20 (-0.18, 0.58)	-0.25 (-0.63, 0.13)
Q.3 Recoded ---Favor or oppose a system that has both public and private health insurance (1= Favor, 2=No opinion and 3=Oppose)	-0.04 (-0.39, 0.32)	-0.05 (-0.41, 0.31)	0.01 (-0.34, 0.38)	-0.09 (-0.45, 0.27)	0.04 (-0.26, 0.46)	-0.19 (-0.55, 0.16)

3=Oppose)						
Q.4---Whether U.S. should follow to have a single payer system (1=Yes and 2=No)	0.05 (-0.14, 0.23)	-0.14 (-0.33, 0.05)	0.19 (-0.001, 0.37)	0.02 (-0.17, 0.21)	-0.07 (-0.26, 0.12)	0.09 (-0.10, 0.28)
Q.5---Require employer to pay a fee if they do not provide insurance (1=Strongly favor through 5=Strongly oppose)	-0.09 (-0.6346 0.4584)	-0.07 (-0.6203 0.4727)	-0.01 (-0.5646 0.5361)	-0.07 (-0.6168 0.4800)	0.01 (-0.5361 0.5646)	-0.08 (-0.6311 0.4657)
Q.6---Saving money by cutting back on Medicare cost (1=Strongly favor through 5=Strongly oppose)	-0.08 (-0.62, 0.47)	-0.02 (-0.61, 0.49)	0.07 (-0.56, 0.53)	0.24 (-0.48, 0.62)	-0.17 (-0.72, 0.38)	0.09 (-0.31, 0.78)
Q.7---Increase income tax on upper income Americans (1=Strongly favor through 5=Strongly oppose)	0.07 (-0.49, 0.64)	0.03 (-0.54, 0.59)	0.04 (-0.53, 0.61)	-0.11 (-0.67, 0.46)	-0.13 (-0.70, 0.44)	0.02 (-0.55, 0.59)
Q.8---Health Care Reform beneficial/harmful to American people (1=Greatly beneficial through 5=Greatly Harmful)	0.32 (-0.39, 1.04)	-0.02 (-0.73, 0.70)	0.34 (-0.38, 1.06)	-0.10 (-0.82, 0.62)	0.13 (-0.59, 0.85)	-0.23 (-0.94, 0.49)
Q.9---Health Care Reform beneficial/harmful to the economy (1=Greatly beneficial through 5=Greatly Harmful)	0.22 (-0.38, 0.82)	0.05 (-0.55, 0.65)	0.17 (-0.43, 0.78)	-0.16 (-0.76, 0.44)	-0.06 (-0.66, 0.55)	-0.10 (-0.70, 0.50)

*Significant at 0.10 level.

Note: 90% Confidence interval in parenthesis.

Multivariate Effects

Short-term News Exposure and Information Card Reception

Multiple regression results are shown in Table A-21 through A-24 in Appendix V. The coefficients for news groups are negative for all of the dependent variables or scales except for Question 4 (favorability of single payer system), 6 (favorability of the reform by cutting Medicare cost), and 7 (favorability of the reform by tax increase). This indicates that on most of the dependent questions, viewing a story in support of the reform tends to make the subjects feel more favorable about the reform (indicated by lower scores). Such an effect reaches statistical significance at the 0.10 level for the dependent variable question about favoring universal coverage ($\beta=-0.11$ and $p\text{-value}=0.07$).

Subjects who viewed the information cards demonstrate consistent, although not always significant, lower favorability of the reform. Such an effect is significant on the general favorability scale ($\beta=0.49$ and $p\text{-value}=0.04$), favorability of both public and private insurance option (Question 3, $\beta=0.61$ and $p\text{-value}=0.05$), and of increasing tax on higher income individuals to finance the reform (Question 7, $\beta=0.85$ and $p\text{-value}=0.05$).

A significant interaction effect of the news story and information cards is only found for the favorability of universal coverage (Question 2, $\beta=0.15$ and $p\text{-value}=0.09$) but not for all of the other opinion questions. The positive sign of the coefficient suggests that among those who viewed the positive news about the reform, those who read the information cards show less favorable feeling toward the reform compared to those who did not read the cards. Similarly, among those who viewed the negative news about the reform, those who read the information cards tend to oppose the reform less than those

who did not read the information cards. This effect confirms Hypothesis 2 that specific information tends to mitigate the effect of the news story. Those who have more specific information tend to show weaker effect from media communication.

However, this effect is not significant across different opinion questions, which may indicate that the moderating effect of information cards still depends on the specific attitude being asked and how it is asked. This finding is also similar to the findings in the study of North Korean nuclear threat.

Long-term Information and General Political Knowledge Acquired

Longer-term information acquired about the health care reform is found to lead to more favorability of the reform in general (Question 1, $\beta=-0.26$ and $p\text{-value}=0.06$) and more likely to think that the reform would be beneficial to the American people (Question 8, $\beta=-0.38$ and $p\text{-value}=0.04$). Acquired information also leads to less favorability for having a single payer system (Question 4, $\beta=0.15$ and $p\text{-value}=0.06$) and taxing on upper income Americans (Question 7, $\beta=0.59$ and $p\text{-value}=0.01$).

General political knowledge also has different impact on opinions about the health care reform, depending on what aspect of the opinion the respondent is asked. Those who are more knowledgeable are more likely than those who are less knowledgeable to favor the reform in general (general favorability scale, $\beta=-0.23$ and $p\text{-value}=0.06$), favor a system that has both public and private insurance options (Question 3, $\beta=-0.43$ and $p\text{-value}=0.01$), and favor the reform by increasing tax on upper income Americans (Question 7, $\beta=-0.38$ and $p\text{-value}=0.08$). With regard to financing the reform by cutting back on Medicare cost, those who are more knowledgeable tend to show less

favorability (Question 6, $\beta=0.42$ and $p\text{-value}=0.07$; and the factor that extracted mostly through Question 6, $\beta=0.52$ and $p\text{-value}=0.01$).

Issue Salience, Media Exposure, Issues News Following and Discussion

Issue salience, i.e. viewing this issue as important and relevant, has a positive coefficient in the regression models fitted for the general favorability scale, indicating that those who view this issue as more important are more likely to oppose the reform than those who view it as less important ($\beta=0.10$ and $p\text{-value} < 0.0001$). This pattern is also found for Question 1 (generally favor or oppose, $\beta=0.14$ and $p\text{-value} < 0.0001$), 2 (favorability of universal coverage, $\beta=0.15$ and $p\text{-value} < 0.0001$), 8 (beneficial to the American people, $\beta=0.12$ and $p\text{-value} = 0.01$), and 9 (beneficial to the American people, $\beta=0.13$ and $p\text{-value} = 0.01$).

General media exposure does not significantly influence respondents' opinions on this issue, which is similar to the finding in the North Korean nuclear threat study. Nor does the extent of participation in discussion of this issue make any difference on the issue opinions.

However, self-evaluation of how closely one follows this issue has a significant influence on quite a few questions regarding health care reform opinions, such as the general favorability (scale and Question 1, $\beta=-0.11$ and $p\text{-value} = 0.03$; $\beta=-0.16$ and $p\text{-value} < 0.0001$), 2 (favorability of universal coverage, $\beta=-0.10$ and $p\text{-value} = 0.10$), 4 (having a single payer system, $\beta=-0.05$ and $p\text{-value} = 0.07$), and 8 (beneficial to the American people, $\beta=-0.14$ and $p\text{-value} = 0.04$). The negative sign of the coefficients

indicates that the more closely one feels that he or she follows this issue in the news, the less favorable one would feel about the reform.

Presidential Job Approval

As expected, presidential job approval is a significant and consistent predictor of opinions about the reform. Those who approve of the President's job performance are more likely to think favorably of the reform, no matter how the opinion questions are framed ($\beta=0.45$ and $p<0.0001$ for general favorability scale, see Table A-21 through A-24 for coefficients fitted for other dependent variables).

Self-evaluation of Information Cards and News Story's Impact

Those who think that the information cards are relevant to the issue of health care reform are more likely to favor the reform in general (general favorability scale, $\beta=-0.12$ and $p=0.09$) and a health care insurance system with both public and private options (Question 3, $\beta=-0.18$ and $p=0.06$).

Self-evaluation of whether the news story about the health care reform affects one's own opinion only has significant impact on the favorable attitudes toward increasing tax on higher income Americans to finance the reform (Question 7, $\beta=-0.16$ and $p=0.03$). The negative sign of the coefficient indicates that those who think the news story is having more effect on their own opinions tend to favor the reform more. Whether or not the participants think that the story would affect other people's opinions about the reform is not found to be significant on the opinions about the reform.

Political Predispositions

Expectedly, political party identification is significantly related to the views of participants for the reform. Democrats are more likely to favor the reform as reflected by the positive coefficients in the multiple regressions fitted for general favorability (the scale, $\beta=0.05$ and $p=0.10$; and Question 1, $\beta=0.06$ and $p=0.07$) and support for the proposal that a fee is assessed to the employers who do not provide health insurance (Question 5, $\beta=0.12$ and $p=0.02$).

Political ideology tends to have a relatively consistent and significant impact on the opinion questions. The more liberal a respondent is, the more favorable he or she feels about the reform (general favorability scale, $\beta=0.12$ and $p<0.0001$; Question 3, $\beta=0.07$ and $p=0.05$; Question 4, $\beta=0.04$ and $p=0.01$; Question 5, $\beta=0.08$ and $p=0.06$; Question 7, $\beta=0.23$ and $p<0.0001$; Question 8, $\beta=0.15$ and $p<0.0001$ and Question 9, $\beta=0.12$ and $p<0.0001$).

Those who are less interested in politics in general are more likely to oppose the health care reform in general and for having both public and private options of insurance (general favorability scale, $\beta=-0.09$ and $p=0.10$; and Questions 3, $\beta=-0.13$ and $p=0.08$).

Demographic Variables

Women are found to be more likely to oppose financing the reform by cutting Medicare cost as indicated by the significant coefficient in the regressions for Question 6 and the scale ($\beta=0.32$ and $p\text{-value} = 0.01$; $\beta=0.30$ and $p\text{-value} <0.0001$). They are more likely to think that the reform is harmful to the economy than men (Question 9, $\beta=0.20$ and $p\text{-value} = 0.02$). No other gender differences are found.

Race is not found to be significantly related to the opinion questions about the health care reform except for Question 9 regarding whether the reform would be beneficial to the economy. It seems that minorities are less likely to think that the reform will be beneficial to the economy than the whites ($\beta=0.07$ and $p=0.05$).

Higher education is only associated with lower general favorability of the reform but no other opinion questions about the reform (Question 1, $\beta=-0.08$ and $p\text{-value} = 0.02$). Older participants are found to be more likely to oppose cutting Medicare cost to finance the reform (Question 6, $\beta=0.22$ and $p<0.0001$; and the corresponding scale, $\beta=0.17$ and $p<0.0001$), more likely to favor increasing tax on higher income Americans to finance the reform (Question 7), and having both public and private insurance options (Question 3, $\beta=-0.05$ and $p=0.09$). Participants with more income are found to be more likely to oppose the reform than those who have a lower income (general favorability, $\beta=0.04$ and $p=0.06$; Question 1, $\beta=0.05$ and $p=0.02$; Question 2, $\beta=0.07$ and $p=0.02$; and Question 7, $\beta=0.10$ and $p=0.01$).

Results from Experiment 3: Opinions on Alternative Energy Research

Results from the Panel Data

About 101 subjects in the experiment of health care reform participated in both the pre-test and post-test. Results from the regression analysis using data collected from this group of panel subjects are presented in Table A-25 through A-27 in Appendix V.

Short-term News Exposure and Information Card Reception

No main effect of short-term news exposure is found on the opinion questions and scales for the energy issue. However, those who received information cards tend to score higher on the support for alternative energy scale ($\beta=1.25$, $p=0.04$). That is, they are less likely to support alternative energy than those who did not receive the cards. They are also more likely to say that government incentives for alternative energy should be decreased (Question 3, $\beta=1.10$, $p=0.01$).

Long-term Information and General Political Knowledge Acquired

Longer-term information acquired about alternative and traditional energy is not significantly related to the opinions related to this issue. General political knowledge has a significant impact on the support for alternative energy scale ($\beta=-0.66$, $p=0.05$). Those who are more knowledgeable tend to score lower on the scale. That is, they are less likely to support this type of energy.

Issue Salience, Media Exposure, Issues News Following and Discussion

Media exposure is related to opinions about whether traditional energy sources will run out soon (Question 1, $\beta=0.11$, $p=0.08$). Those who have more news exposure are more likely to think that traditional energy will sustain long compared to those who receive less news from various media outlets. More media exposure is also related to thinking alternative energy is beneficial to the economy (Question 6, $\beta=0.18$, $p=0.04$). Those who think the energy issue more salient are also more likely to think that traditional energy will sustain long (Question 1, $\beta=0.09$, $p=0.08$).

Those who reported that they follow the news about alternative energy more closely are more likely to think that alternative energy is beneficial to the environment than those who did not follow as much (Question 5, $\beta=0.15$, $p=0.06$).

Those who said that they participated in discussions about alternative energy are more likely to score lower on the support for traditional energy scale ($\beta=0.49$, $p=0.07$). That is, they are more likely to show support for traditional energy. They are more likely to say that the government should decrease the incentives to develop alternative energy (Question 3, $\beta=0.37$, $p=0.01$) and increase incentives for traditional energy (Question 4, $\beta=-0.30$, $p=0.10$).

Self-evaluation of Information Cards and News Story's Impact

Those who think that the news story about alternative energy influences one's own opinion more are more likely to think that alternative energy is beneficial to the environment than older respondents (Question 5, $\beta=-0.15$, $p=0.01$). They are also more likely to think that alternative energy is better sources of energy (Question 2, $\beta=-0.22$,

$p=0.11$). In addition, they are more likely to say that the government should decrease incentives to develop traditional energy (Question 4, $\beta=-0.21$, $p=0.10$).

Those who think that the information cards are relevant are more likely to say that the government should increase the incentives to develop alternative energy (Question 3, $\beta=-0.21$, $p=0.05$). They are more likely to score lower on the support for alternative energy scale ($\beta=-0.28$, $p=0.08$). That is, they are more likely to support alternative energy.

Political Predispositions

Republicans are more likely to say that the government should increase the incentives to develop alternative energy (Question 3, $\beta=-0.12$, $p=0.08$). Republicans are also more likely to think that alternative energy is beneficial to the environment than Democrats (Question 5, $\beta=-0.11$, $p=0.10$).

Liberals in the political ideology spectrum and those who are more interested in politics tend to feel the same way (Question 3, $\beta=0.08$, $p=0.10$ for ideology and Question 3, $\beta=0.07$, $p=0.02$ for political interest). Conservatives are more likely to think that traditional energy sources will run out soon (Question 1, $\beta=-0.11$, $p<0.0001$).

Demographic Variables

At the significance level of 0.10, age is related to the opinion regarding whether the government should increase or decrease incentives to develop alternative energy.

Older respondents are more likely to say that such incentives should be increased (Question 3, $\beta=-0.08$, $p=0.10$). Younger respondents, on the other hand, are more likely to think that alternative energy is beneficial to the environment than older respondents

(Question 5, $\beta=0.12$, $p=0.01$). White respondents are more likely to feel that way as compared to other races (Question 5, $\beta=0.10$, $p=0.05$).

Male respondents are more likely to think that alternative energy will be beneficial to the economy than female respondents (Question 6, $\beta=0.31$, $p=0.01$). Those respondents who have more income are less likely to support increasing gas tax to finance alternative energy research (Question 7, $\beta=0.14$, $p=0.07$).

Results from the Post-test Sample

Univariate Effects

Viewing News Stories

Table 5-13 presents the mean values for information, general political knowledge, and dependent variables by the three news story conditions in this experiment of alternative energy research. The three news story conditions have either a story in support of such research, a story against such research, or no story about alternative energy.

Similar scores for specific information and general political knowledge are expected and found for the participants who viewed three different versions of news stories. The three information scores range from 0.60 to 0.63. The scores for political knowledge range from 0.75 to 0.78. No pairwise differences are found to be statistically significant among the information scores or among the political knowledge scores. These findings are comparable to the findings in the previous two experiments about the North Korean nuclear threat and health care reform.

For the dependent variables and the two factors extracted from them, it is hypothesized that viewing a news story in support of alternative energy research would

increase the favorability and support of alternative energy (Hypothesis 1). If a news story framing alternative energy in a negative way is shown to the respondents, they would feel less favorable or supportive of the related production and research (Hypothesis 1).

Data presented in Table 5-13 and 5-14 indicate that the responses to the scale measuring support for alternative energy is strongest among those who viewed a negative story about this issue. Note that lower scores on the scale indicate more support. The difference between those who viewed a positive story and those who viewed a negative story is 0.30 and is significant at 0.05 level (mean values are 0.17 and -0.13, respectively on a scale of -1.40 to 3.41).

It is also found that those who viewed a positive story are less likely to think that alternative energy will be beneficial to the environment or the economy. In Table 5-14, the difference between those who viewed a positive story and a negative story of this issue is 0.15 and significant at the 0.05 level. The difference between those who viewed a positive story and those who did not view any story of this issue is 0.17 and significant at the 0.05 level. As a positive number for the differences indicates that those who viewed the positive story have higher scores for these two opinion questions, those respondents are more likely to think negatively about alternative energy.

The responses to the scale of support for traditional energy as well as other individual opinion questions about this issue (Question 1 through 4 and Question 7) are similar. However, there is still a consistent pattern wherein those who viewed the positive story about alternative energy tend to have less support of this issue than those who viewed a negative news story.

These results seem to move in the opposite direction as to what Hypothesis 1 predicts. A closer look at the news videos shown to the experimental groups indicate that this may have something to do with details of the news content and how alternative energy is portrayed. The positive story about alternative energy has an overall supportive news reporting angle on the topic. However, close to the end of the story, there is a question or a concern discussed about the cost of such solar alternative energy being high. The study participants may very well be reacting to this message, even though the majority of the news content is about the advantages of this type of energy. In that regard, the news story does not have null effects on opinions. Instead, audience members are quite sensitive to certain aspects about which the issue gets framed (Graber, 1987; Nelson, Clawson, & Oxley, 1997; Petrocik, 1996).

The negative story is used because it seems to portray that alternative energy only contributes a small portion of the total energy consumption in the U.S. In addition, after the energy crisis when this type of energy started to get reduced funding or was discontinued, the energy consumption in this country does not seem to demonstrate a huge problem. However, the audience may be picking up the urgency message from the story. The long lines of cars waiting to get gas in the 1970s did not act as a soothing message for the abundance of traditional energy. Instead, it may lead the audience to worry about the potential of experiencing anything similar. This may further lead them to be more supportive of alternative energy.

Table 5-13. Mean and Standard Deviation for Dependent Variables, Information, and Knowledge by News Groups

Variables	Mean and SD (in Parenthesis) for Different News Groups		
	Respondents Who Viewed a Story in Support of Alternative Energy Research (N=141)	Respondents Who Viewed a Story against Alternative Energy Research (N=141)	Those Who did not View Any Story about Alternative Energy Research (N=142)
Information Scale (0-1)	0.60 (0.26)	0.63 (0.28)	0.63 (0.26)
Political Knowledge (0-1)	0.75 (0.31)	0.79 (0.29)	0.78 (0.28)
Support for Alternative Energy(-1.40 to 3.41)	0.17 (1.09)	-0.13 (0.95)	-0.04 (0.93)
Support for Traditional Energy (-2.16 to 2.32)	0.00 (0.99)	-0.07 (1.02)	0.07 (1.00)
Q.1---Traditional energy will run out soon or will sustain long (1=Run out soon, 2=Sustain long)	1.55 (0.45)	1.52 (0.46)	1.50 (0.46)
Q.2---Alternative energy a better source (1=Yes, 2=Same as traditional energy and 3=No)	1.62 (0.74)	1.46 (0.69)	1.57 (0.78)
Q.3---Government increase/decrease incentive to develop alternative energy research (1=Increase, 2=No change and 3=Decrease)	1.51 (0.69)	1.39 (0.63)	1.44 (0.58)
Q.4---Government increase/decrease incentive to develop alternative energy research (1=Increase, 2=No change and 3=Decrease)	1.79 (0.69)	1.74 (0.70)	1.87 (0.74)
Q.5---Alternative energy beneficial/harmful to environment (1=Beneficial 2=Neither and 3=Harmful)	1.33 (0.56)	1.18 (0.41)	1.26 (0.50)
Q.6---Alternative energy beneficial/harmful to economy (1=Beneficial 2=Neither and 3=Harmful)	1.52 (0.71)	1.36 (0.55)	1.35 (0.57)
Q.7---Increase gas tax to support alternative energy research (1=Definitely support through 4=Definitely not support)	2.66 (1.00)	2.54 (0.99)	2.72 (0.94)

Table 5-14. ANOVA Results for post-test respondents: Effect of Media News Stories

Variables	Mean Difference between		
	Respondents Who Viewed a Story in Support of Alternative Energy Research and Those Who did not View Such a Story	Respondents Who Viewed a Story against Alternative Energy Research and Those Who did not View Any Such Story	Respondents Who Viewed a Story in Support of Alternative Energy Research and Those Who Viewed a Story against It
Information Scale (0-1)	0.03	-0.004	-0.03
Political Knowledge (0-1)	-0.03	0.02	-0.04
Support for Alternative Energy(-1.45 to 3.26)	0.21	0.08	0.30**
Support for Incentives for Traditional Energy(-1.84 to 2.42)	0.07	-0.07	0.14
Q.1---Traditional energy will run out soon or will sustain long (1=Run out soon, 2=Sustain long)	0.02	0.05	0.03
Q.2---Alternative energy a better source (1=Yes, 2=Same as traditional energy and 3=No)	0.05	-0.11	0.16
Q.3---Government increase/decrease incentive to develop alternative energy research (1=Increase, 2=No change and 3=Decrease)	0.07	-0.05	0.12
Q.4---Government increase/decrease incentive to develop alternative energy research (1=Increase, 2=No change and 3=Decrease)	-0.07	-0.12	0.05
Q.5---Alternative energy beneficial/harmful to environment (1=Beneficial 2=Neither and 3=Harmful)	0.07	-0.08	0.15**
Q.6---Alternative energy beneficial/harmful to economy (1=Beneficial 2=Neither and 3=Harmful)	0.17**	0.02	0.15
Q.7---Increase gas tax to support alternative energy research (1=Definitely support through 4=Definitely not support)	0.06	-0.18	0.12

**Significant at 0.05 level. *Significant at 0.10 level.

Table 5-15. Mean and Standard Deviation for Dependent Variables, Information, and Knowledge by Information Card Groups

Variables	Mean and SD (in Parenthesis) for Different Information Card Groups	
	Information Cards (N=213)	No Information Cards (N=211)
Information Scale (0-1)	0.65 (0.27)	0.59 (0.26)
Political Knowledge (0-1)	0.79 (0.28)	0.76 (0.31)
Support for Alternative Energy(-1.45 to 3.26)	-0.02 (1.00)	0.02 (1.00)
Support for Incentives for Traditional Energy(-1.84 to 2.42)	-0.07 (1.01)	0.07 (0.98)
Q.1---Traditional energy will run out soon or will sustain long (1=Run out soon, 2=Sustain long)	1.47 (0.46)	1.57 (0.45)
Q.2---Alternative energy a better source (1=Yes, 2=Same as traditional energy and 3=No)	1.52 (0.74)	1.59 (0.73)
Q.3---Government increase/decrease incentive to develop alternative energy research (1=Increase, 2=No change and 3=Decrease)	1.42 (0.64)	1.47 (0.63)
Q.4---Government increase/decrease incentive to develop alternative energy research (1=Increase, 2=No change and 3=Decrease)	1.79 (0.70)	1.82 (0.72)
Q.5---Alternative energy beneficial/harmful to environment (1=Beneficial 2=Neither and 3=Harmful)	1.27 (0.51)	1.25 (0.47)
Q.6---Alternative energy beneficial/harmful to economy (1=Beneficial 2=Neither and 3=Harmful)	1.39 (0.59)	1.43 (0.65)
Q.7---Increase gas tax to support alternative energy research (1=Definitely support through 4=Definitely not support)	2.66 (1.03)	2.63 (0.93)

Table 5-16. ANOVA Results for post-test respondents: Effect of Information Cards (Short Term Informational Effects)

Variables	Mean Difference between Respondents Who Received Information Cards and Those Who did not
Information Scale (0-1)	0.06**
Political Knowledge (0-1)	0.03
Support for Alternative Energy(-1.45 to 3.26)	-0.04
Support for Incentives for Traditional Energy(-1.84 to 2.42)	0.14
Q.1---Traditional energy will run out soon or will sustain long (1=Run out soon, 2=Sustain long)	-0.10
Q.2---Alternative energy a better source (1=Yes, 2=Same as traditional energy and 3=No)	-0.07
Q.3---Government increase/decrease incentive to develop alternative energy research (1=Increase, 2=No change and 3=Decrease)	-0.06
Q.4---Government increase/decrease incentive to develop alternative energy research (1=Increase, 2=No change and 3=Decrease)	-0.03
Q.5---Alternative energy beneficial/harmful to environment (1=Beneficial 2=Neither and 3=Harmful)	0.03
Q.6---Alternative energy beneficial/harmful to economy (1=Beneficial 2=Neither and 3=Harmful)	-0.04
Q.7---Increase gas tax to support alternative energy research (1=Definitely support through 4=Definitely not support)	0.03

**Significant at 0.05 level

Viewing Information Cards

The univariate effect of information cards in the study of alternative energy research is again similar to those in the study of North Korean nuclear threat and health care reform. That is, information cards do not have any impact on the specific opinions about the alternative energy research (Table 5-15 and 5-16). Nor do information cards make any difference on the level of general political knowledge. They are only found to have effects on specific information measures. The average score on the information scale constructed based on the five specific information questions is higher for those who received the information cards than for those who did not receive them (0.65 versus 0.59, difference significant at the 0.05 level).

Interaction Effect from News Stories and Information Cards

Using the same method to test the univariate interaction effect from news stories and information cards as in the previous two experiments found that the magnitude of the mean differences between any two of the three news groups is similar for all the dependent variables for those who received and did not receive information cards about alternative energy research (Table 5-17 and Table 5-18). This pattern is indicated by the fact that the 90% confidence intervals for each pair of the differences overlap with each other in Table 5-18.

As Hypothesis 2 predicts that specific information would weaken the effects from exposing to alternative energy research news, the univariate results about the interaction effect in this study do not support these two hypotheses.

However, there seems to be a pattern, even though not statistically significant, that those who viewed a story supposedly in support of alternative energy research lean toward opposing alternative energy. This pattern is stronger among those who received the information cards. That is, they are even less likely to follow the main perspective of the news story to support alternative energy as compared to those who viewed the same story yet did not receive the information cards. Such a pattern can be seen for the alternative energy support scale, Question 3, 5, and Question 6. For Question 7, regarding increasing the gas tax to support alternative energy research, it seems that those who did not receive the information cards are less likely to oppose this proposal than those who did not receive the information cards. In summary, when viewing the news story reduces the support for alternative energy, the issue specific information acquired tends to have a mixed tendency to moderate such effect, depending on the opinion questions asked.

Among those who viewed a story that is supposedly against alternative energy, the participants who received the information cards are more likely to favor, i.e. less likely to oppose alternative energy than those who did not receive the cards on some dependent variable questions, such as Question 4, 5, 6, and 7. This means that for some of the opinion questions asked, the moderating effect of information tends to be in the opposite direction as what Hypothesis 2 predicts, even though such a pattern is not statistically significant.

When looking at the difference between those who viewed a story in support of alternative energy and those who viewed a story against it, those who received the specific information cards tend to be less favorable of, or more opposing to it compared to those who did not receive the cards (alternative energy support scale, Question 2 and 7). For Question 6, it seems that among those who viewed a positive story about this issue, those who did not receive the information cards are more likely to think alternative energy is harmful for the economy.

Overall, these observed trends in the magnitude of news effects between those received and those who did not receive information cards are only marginal as the 90% confidence intervals overlap each other. However, it seems that reading the information cards has a mixed pattern of influence on viewing a news story about alternative energy, depending on the opinion questions asked. Hypothesis 2 predicts that specific information would weaken the effects from exposing to relevant issue coverage in the news. These trends provide some but not overall marginal support for the interaction effect that Hypothesis 2 predicts, although such support is certainly not statistically significant. This trend is in line with the pattern in Experiment 1 and 2 together, as in Experiment 1, we

find a trend that contradicts what Hypothesis 2 predicts. While in Experiment 2, there is a trend that supports what Hypothesis 2 predicts.

Table 5-17. Mean and Standard Deviation for Dependent Variables, Information, and Knowledge by Experimental Groups

Variables	Mean and SD (in Parenthesis) for Different Experimental Groups					
	Information Cards			No Information Cards		
	Viewed a Story Supporting Alternative Energy Research (N=71)	Viewed a Story against Alternative Energy Research (N=71)	No Story about Alternative Energy Research (N=71)	Viewed a Story Supporting Alternative Energy Research (N=70)	Viewed a Story against Alternative Energy Research (N=70)	No Story about Alternative Energy Research (N=71)
Information Scale (0-1)	0.64 (0.27)	0.63 (0.29)	0.67 (0.24)	0.56 (0.24)	0.62 (0.26)	0.59 (0.27)
Political Knowledge (0-1)	0.76 (0.28)	0.82 (0.28)	0.77 (0.27)	0.73 (0.34)	0.76 (0.3)	0.78 (0.29)
Support for Alternative Energy(-1.45 to 3.26)	0.07 (0.97)	-0.12 (1.02)	-0.01 (1.01)	0.28 (1.19)	-0.14 (0.89)	-0.07 (0.86)
Support for Incentives for Traditional Energy(-1.84 to 2.42)	0.00 (0.99)	-0.20 (1.00)	-0.02 (1.05)	0.00 (0.99)	0.06 (1.03)	0.16 (0.94)
Q.1---Traditional energy will run out soon or will sustain long (1=Run out soon, 2=Sustain long)	1.51 (0.46)	1.48 (0.47)	1.42 (0.46)	1.59 (0.44)	1.56 (0.46)	1.58 (0.44)
Q.2---Alternative energy a better source (1=Yes, 2=Same as traditional energy and 3=No)	1.65 (0.78)	1.39 (0.67)	1.51 (0.77)	1.60 (0.71)	1.53 (0.72)	1.63 (0.78)
Q.3---Government increase/decrease incentive to develop alternative energy research (1=Increase, 2=No change and 3=Decrease)	1.44 (0.69)	1.42 (0.67)	1.39 (0.55)	1.59 (0.69)	1.36 (0.59)	1.48 (0.61)
Q.4---Government increase/decrease incentive to develop alternative energy research (1=Increase, 2=No change and 3=Decrease)	1.77 (0.66)	1.69 (0.69)	1.90 (0.74)	1.81 (0.73)	1.8 (0.71)	1.83 (0.74)
Q.5---Alternative energy beneficial/harmful to environment (1=Beneficial 2=Neither and 3=Harmful)	1.31 (0.52)	1.20 (0.43)	1.31 (0.58)	1.36 (0.59)	1.17 (0.38)	1.21 (0.41)

Q.6---Alternative energy beneficial/harmful to economy (1=Beneficial 2=Neither and 3=Harmful)	1.39 (0.60)	1.35 (0.56)	1.42 (0.62)	1.64 (0.80)	1.37 (0.54)	1.27 (0.51)
Q.7---Increase gas tax to support alternative energy research (1=Definitely support through 4=Definitely not support)	2.76 (0.97)	2.47 (1.10)	2.74 (1.00)	2.56 (1.03)	2.61 (0.87)	2.70 (0.88)

Table 5-18. ANOVA Results for post-test respondents: Interaction Effect of Information Cards and Media News Stories

Variables	Mean Difference between					Respondents Who Viewed a Story in Support of Alternative Energy Research and Those Who Viewed a Story against It
	Information Cards			No Information Cards		
	Respondents Who Viewed a Story in Support of Alternative Energy Research and Those Who did not View Such a Story	Respondents Who Viewed a Story against Alternative Energy Research and Those Who did not View Any Such Story	Respondents Who Viewed a Story in Support of Alternative Energy Research and Those Who Viewed a Story against It	Respondents Who Viewed a Story in Support of Alternative Energy Research and Those Who did not View Such a Story	Respondents Who Viewed a Story against Alternative Energy Research and Those Who did not View Any Such Story	
Information Scale (0-1)	-0.04 (-0.15, 0.08)	-0.04 (-0.15, 0.07)	0.003 (-0.11, 0.12)	-0.03 (-0.14, 0.09)	0.031 (-0.08, 0.15)	-0.06 (-0.17, 0.06)
Political Knowledge (0-1)	-0.01 (-0.14, 0.12)	0.05 (-0.08, 0.18)	-0.06 (-0.19, 0.07)	-0.05 (-0.18, 0.08)	-0.02 (-0.15, 0.11)	-0.03 (-0.16, 0.10)
Support for Alternative Energy(-1.45 to 3.26)	0.08 (-0.35, 0.52)	-0.11 (-0.54, 0.33)	0.19 (-0.24, 0.62)	0.35 (-0.08, 0.79)	-0.06 (-0.50, 0.37)	0.42 (-0.02, 0.85)
Support for Incentives for Traditional Energy(-1.84 to 2.42)	0.02 (-0.41, 0.46)	-0.18 (-0.61, 0.26)	0.20 (-0.24, 0.63)	-0.16 (-0.60, 0.27)	-0.10 (-0.54, 0.34)	-0.06 (-0.50, 0.38)
Q.1---Traditional energy will run out soon or will sustain long (1=Run out soon, 2=Sustain long)	0.10 (-0.10, 0.30)	0.06 (-0.16, 0.26)	0.04 (-0.16, 0.23)	0.01 (-0.19, 0.21)	0.03 (-0.17, 0.23)	-0.02 (-0.22, 0.18)
Q.2---Alternative energy a better source (1=Yes, 2=Same as traditional energy and 3=No)	0.14 (-0.18, 0.46)	-0.11 (-0.43, 0.21)	0.25 (-0.07, 0.58)	-0.03 (-0.36, 0.29)	-0.11 (-0.43, 0.22)	0.07 (-0.25, 0.40)
Q.3---Government increase/decrease incentive to develop alternative energy research (1=Increase, 2=No change and 3=Decrease)	0.04 (-0.23, 0.32)	0.03 (-0.25, 0.31)	0.01 (-0.27, 0.29)	0.11 (-0.17, 0.39)	-0.12 (-0.40, 0.16)	0.23 (-0.05, 0.51)
Q.4---Government increase/decrease incentive to	-0.13 (-0.44, 0.18)	-0.21 (-0.52, 0.10)	0.08 (-0.23, 0.40)	-0.01 (-0.33, 0.29)	-0.03 (-0.34, 0.28)	0.01 (-0.30, 0.33)

develop alternative energy research (1=Increase, 2=No change and 3=Decrease)						
Q.5---Alternative energy beneficial/harmful to environment (1=Beneficial 2=Neither and 3=Harmful)	<0.001 (-0.21, 0.21)	-0.11 (-0.33, 0.10)	0.11 (-0.10, 0.33)	0.15 (-0.07, 0.36)	-0.04 (-0.26, 0.18)	0.19 (-0.03, 0.40)
Q.6---Alternative energy beneficial/harmful to economy (1=Beneficial 2=Neither and 3=Harmful)	-0.03 (-0.30, 0.24)	-0.07 (-0.34, 0.20)	0.04 (-0.22, 0.31)	0.38* (0.11, 0.64)	0.10 (-0.16, 0.37)	0.27* (0.002, 0.54)
Q.7---Increase gas tax to support alternative energy research (1=Definitely support through 4=Definitely not support)	0.02 (-0.41, 0.45)	-0.27 (-0.69, 0.16)	0.29 (-0.14, 0.72)	-0.14 (-0.57, 0.29)	-0.10 (-0.53, 0.33)	-0.04 (-0.47, 0.39)

*Significant at 0.10 level.

Note: 90% Confidence interval in parenthesis.

Multivariate Effects

Short-term News Exposure and Information Card Reception

Regression models were fitted on dependent variable questions and the scale separately. The results are shown in Table A-28 through A-30 in Appendix V. Viewing a news story about alternative energy is found to influence the opinions of the participants on this issue. However, it is found that viewing the story in support of alternative energy actually would decrease the general support for this type of energy (support for alternative energy scale, $\beta=0.15$ and $p\text{-value}=0.03$). It would also make the participants less likely to say that the government should increase incentives to develop alternative energy (Question 3, $\beta=0.09$ and $p\text{-value}=0.06$), and less likely to say that alternative energy is beneficial to the environment or the economy (Question 5, $\beta=0.08$ and $p\text{-value}=0.03$; Question 6, $\beta=0.10$ and $p\text{-value}=0.03$).

Subjects who viewed the information cards demonstrate consistent, although not always significant, lower favorability or support of alternative energy. Such an effect is significant on the alternative energy support scale ($\beta=0.69$ and $p\text{-value}=0.01$), opinions of whether alternative energy is beneficial to the environment (Question 5, $\beta=0.63$ and $p\text{-value}<0.0001$), and of increasing the gas tax to support the related research (Question 7, $\beta=0.79$ and $p\text{-value}<0.0001$). Given the news content examined more closely in the univariate analysis, this set of findings is reasonable.

Significant interaction effect of the news story and information cards is only found for the opinion of whether the gas tax should be increased to support alternative energy research (Question 7, $\beta=0.21$ and $p\text{-value}=0.06$), but not for all of the other opinion questions. The positive sign of the coefficient suggests that among those who

viewed the positive news about alternative energy, those who read the information cards show less support for such a proposal compared to those who did not read the cards. That is, those with information cards are more likely to show a larger effect from the news. Similarly, among those who viewed the negative news about the reform, those who read the information cards are less likely to oppose such a proposal. This effect contradicts Hypothesis 2 that specific information tends to mitigate the effect of the news story. The effect from the news story tends to be strengthened among those who have more specific information.

This finding is consistent with that in the first experiment on the North Korean nuclear threat. It's also true that the moderating effect of information is not significant across all of the opinion questions asked in the study. This indicates that the context of the opinion questions is relevant as well in discussing the moderating role of specific information.

Long-term Information and General Political Knowledge Acquired

Longer-term information acquired about the alternative energy leads to more support of this energy source (alternative energy scale, $\beta=-0.62$ and $p\text{-value} < 0.0001$), more likely to think that such energy is a better source (Question 2, $\beta=-0.27$ and $p\text{-value}=0.07$), that the government should increase the support to develop it (Question 3, $\beta=-0.41$ and $p\text{-value} < 0.0001$), and that alternative energy is beneficial to the environment (Question 8, $\beta=-0.41$ and $p\text{-value} < 0.0001$).

Those who have higher levels of general political knowledge are also found more likely to say that the government should decrease the support for traditional energy

(Question 4, $\beta=-0.25$ and $p\text{-value}=0.09$), and that alternative energy is beneficial to the environment (Question 5, $\beta=-0.31$ and $p\text{-value}<0.0001$); They are also more likely to say that the traditional energy would sustain long rather than running out soon (Question 1, $\beta=0.20$ and $p\text{-value}=0.02$).

Issue Salience, Media Exposure, Issues News Following and Discussion

Issue salience tends to increase the support for traditional energy sources and at the same time decrease the support for alternative energy sources. The positive coefficient for the issue salience scale in the regression for alternative energy support scale indicates that those who think this issue is more salient are less likely to support alternative energy ($\beta=0.44$ and $p\text{-value} <0.0001$). At the same time, the positive coefficient for this variable in the regression for traditional energy support indicates that those who feel that this issue is more salient are more likely to support traditional energy ($\beta=0.20$ and $p\text{-value} <0.0001$). This is because on the traditional energy scale, higher scores mean more support.

Similarly, those who feel that this issue is more salient are more likely to think that traditional energy will sustain long (Question 1, $\beta=0.10$ and $p\text{-value} <0.0001$), that alternative energy is more similar to even not as good as traditional energy (Question 2, $\beta=0.27$ and $p\text{-value} <0.0001$). They are also more likely to say that the government should decrease the incentive to support alternative energy research (Question 3, $\beta=0.22$ and $p\text{-value} <0.0001$) and increase incentives to support traditional energy research (Question 4, $\beta=0.12$ and $p\text{-value} <0.0001$). They are also less likely to feel that alternative energy is beneficial (Question 5, $\beta=0.17$ and $p\text{-value} <0.0001$) to the

environment or the economy (Question 6, $\beta=0.24$ and $p\text{-value} < 0.0001$). In addition, they are less likely to support increasing gas tax for alternative energy research (Question 7, $\beta=0.18$ and $p\text{-value} < 0.0001$)

Again, general media exposure does not significantly influence respondents' opinions on this issue, which is similar to the findings in the previous two experiments. Nor does the extent of following the news coverage or participation in discussion of this issue make any difference on the issue opinions.

Self-evaluation of Information Cards and News Story's Impact

Self-evaluation of whether the news story about alternative energy affects one's own opinion is only significantly related to the support of this type of energy (alternative energy support scale, $\beta=-0.15$ and $p=0.02$). The negative sign of the coefficient indicate that those who think the news story has more effect on their own opinions tend to support alternative energy more. On the other hand, whether or not the participants think that the story would affect other people's opinions about alternative energy is not found to have a significant yet opposite impact on the general support scale ($\beta=0.15$ and $p=0.02$). This suggests that the more likely one thinks the news story has an impact on other people's opinions, the less support he or she feels for alternative energy research. Such a pattern for the impact of a news story on one's own opinion and others' opinions is also found for the support of government incentives to develop alternative energy research (Question 3, $\beta=-0.12$ and $p=0.02$; $\beta=0.11$ and $p=0.01$) and for the support of an increase in the gas tax to subsidize the research (Question 7, $\beta=-0.25$ and $p < 0.0001$; $\beta=0.19$ and $p=0.01$).

Those who think that the information cards are informative to the issue of alternative energy research are more likely to support this energy in general (alternative energy support scale, $\beta=-0.09$ and $p=0.04$). They are more likely to think that traditional energy will run out soon (Question 1, $\beta=-0.20$ and $p=0.04$) and to support this type of energy (Question 3, $\beta=-0.11$ and $p=0.06$). They are also more likely to think that alternative energy is beneficial to the environment and support increasing the gas tax for alternative energy research (Question 5, $\beta=-0.13$ and $p<0.0001$; Question 7, $\beta=-0.20$ and $p=0.04$).

Those who think that the information cards are relevant to the issue of alternative energy are also found to be more likely to think it is beneficial to the environment (Question 5, $\beta=-0.07$ and $p<0.08$).

Political Predispositions

Republicans are more likely to support alternative energy (the scale, $\beta=-0.08$ and $p=0.10$; and Question 4, $\beta=-0.07$ and $p=0.04$). They are also more likely to think that alternative energy is beneficial to the environment (Question 5, $\beta=-0.07$ and $p=0.01$).

Political ideology has a consistently significant impact on the opinions about alternative energy. The more liberal a respondent is, the more favorable he or she feels about alternative energy (general alternative energy support scale, $\beta=0.20$ and $p<0.0001$; traditional energy support scale, $\beta=0.09$ and $p=0.06$). They are more likely to think that traditional energy will run out soon (Question 1, $\beta=0.07$ and $p<0.0001$), that alternative energy is a better source of energy (Question 3, $\beta=0.13$ and $p<0.0001$). They are also more likely to feel that alternative energy is beneficial (Question 5, $\beta=0.05$ and $p\text{-value} =$

0.01) to the environment or the economy (Question 6, $\beta=0.10$ and $p\text{-value} < 0.0001$). In addition, they are less likely to support increasing the gas tax for alternative energy research (Question 7, $\beta=0.18$ and $p\text{-value} < 0.0001$)

Those who are more interested in politics in general are more likely to be less supportive of alternative energy (general favorability scale, $\beta=-0.17$ and $p=0.01$), and are less likely to think alternative energy is better than traditional energy (Questions 2, $\beta=-0.19$ and $p < 0.0001$). In addition, they are less likely to think that alternative energy research is beneficial to the environment (Question 5, $\beta=-0.07$ and $p=0.07$) or the economy (Question 6, $\beta=-0.12$ and $p=0.01$).

Demographic Variables

Gender is not found to be significantly related to opinions about alternative energy. Whites are the most likely to support alternative energy as compared to other races (general alternative energy support scale, $\beta=0.06$ and $p=0.07$). They are also most likely to think that traditional energy is going to run out soon (Question 1, $\beta=0.05$ and $p=0.01$) and that alternative energy is a better source of energy (Question 2, $\beta=0.06$ and $p=0.01$).

Higher education is significantly related to lower support for traditional energy (traditional energy scale, $\beta=-0.12$ and $p=0.02$) and to thinking that the government should decrease incentives for it (Question 4, $\beta=-0.09$ and $p=0.02$). Older participants are found to be more likely to support traditional energy (traditional energy scale, $\beta=0.11$ and $p < 0.0001$). They are also more likely to think that traditional energy will last long rather than running out soon (Question 1, $\beta=0.05$ and $p < 0.0001$) and that alternative energy is

not better than the traditional one (Question 2, $\beta=0.06$ and $p=0.01$). Wealthier participants are more likely to support the government to increase incentives for alternative energy research (Question 4, $\beta=0.05$ and $p=0.05$).

Summary of Results from the Three Experiments

The results from the panel data analysis and the analysis of data collected from the post-test sample of the three experiments in this dissertation are briefly summarized in the Summary Table of Results in Appendix V. These results provide the following general observations about news media effects, issue-specific information effects, and the impact of their interactions on issue opinions. Effects of other covariates in the three experiments, such as general media exposure, political predisposition, and demographic variables are also summarized in this table for easy reference.

First of all, short-term exposure to issue news coverage is found to affect issue opinions in the three experiments. Even though such effects are not significant on all of the opinion questions asked in each study, there is a pattern that suggests exposure to news stories that have positive issue positions tend to lead the audience to feel more positive about the issue. Those who view news stories of negative issue positions are more likely to have opinions leaning toward the issue positions in the news as well. This is true for at least a few opinion questions in both the North Korean nuclear study and the Health Care Reform study, either through the univariate analysis, the multivariate regression analysis, or the panel analysis. Thus, we find some empirical support for Hypothesis 1 that exposure to issue coverage in the news has some association with the issue position an individual has.

News effects in the alternative energy study seem to be exceptions at first glance. It seems that the issue positions in the news and the opinion positions held by the participants after viewing the news are in the opposite direction. A closer look at the news story presented in the study reveals that the effects from the news stories are

actually in line with certain specific aspects or frames in the news. Thus, what Hypothesis 1 predicts about news effect of stories about alternative energy research is also supported.

Secondly, short-term issue-specific information, provided by information cards in each study, does not have influence on issue opinions through univariate analysis. This conclusion is true in all three studies. In the multivariate and panel analysis, short-term information still does not have a significant effect on the attitudes about the North Korean nuclear threat. However, information cards have some effect on the opinions about health care reform and alternative energy.

This is not an intended effect of the study design. It could be due to the fact that the information cards in the North Korean nuclear study are not only factual but also not directly related to opinions about the nuclear threat. The information cards in the other two studies, however, contain some arguments about both sides of the issues, which may lead to some direct effects on the issue opinions. Preferably, such a design of the information cards should be avoided in future studies, so that information cards only provide factual issue information without directly affecting opinions.

Longer-term issue-specific information acquired over time and during the current experiment is associated with issue opinions of the North Korean nuclear threat and alternative energy. There is also such a trend in the health care reform study, even though not statistically significant.

In the North Korean nuclear study, specific information acquired over the long run makes the participants feel that the country is more of a threat. In the health care reform study, those with more specific information tend to think that health care reform is

beneficial to the American people. In the alternative energy study, those who have more specific information are more likely to be supportive of this type of energy.

These observed effects of specific information are after controlling for general political knowledge. They strongly suggest that political knowledge is only part of the story that needs to be told about issue opinion formation and change. Specific information has additional power in explaining and predicting public opinions. Sometimes, information and knowledge influence opinions in a similar way. For example, those with more information or more knowledge are both more likely to feel that North Korea is more of a threat. In other circumstances, such as in the alternative energy study, information and knowledge even have quite different impacts on the same opinion construct. Those who are more informed are more likely to support alternative energy, while those who are more knowledgeable feel the opposite way.

Thirdly, as for the interaction effects from short-term news exposure and issue-specific information, i.e. the moderating effect of information on news exposure, it is discovered that the evidence for the hypotheses in this dissertation is mixed, depending on the issue and the opinion question. No significant interaction effect is found in the univariate or panel data analysis in the three experiments.

In the multivariate analysis, the interaction effect on the opinion of whether North Korea poses a threat to other countries (Question 4) is in the opposite direction of what Hypothesis 1b and 2b predict. After viewing the stories, those who are provided with more specific information have more agreement with the respective issue position in the news. This is also the case for Question 8, whether peace talks are a possible solution to this issue. The findings contradict Hypothesis 1b and 2b. Those who viewed a threat story

and received information cards are even less likely to feel that peace talks are a solution than those who viewed the same story but did not receive any cards, thus contradicting Hypothesis 1. Similarly, of those who viewed a threat eased story, individuals who received information cards are also more likely to feel that peace talks are a solution than those who did not receive any additional information, thus contradicting Hypothesis 2.

In the Health Care Reform study, Hypothesis 2 regarding the moderating role of information, is confirmed for favorability of a system that everyone in the U.S. has health insurance coverage (Question 2).

For the findings in the alternative energy study, a significant interaction effect of news story and information cards is only found for the opinion of whether the gas tax should be increased to support alternative energy research (Question 7), but not for the other opinion questions. This effect also contradicts Hypothesis 1 that specific information tends to mitigate the effect of the news story. Those who have more specific information tend to show stronger effect from media communication.

Chapter 6

CONCLUSIONS & DISCUSSION

There is little doubt that the social, political, and cultural implications of media communication have great significance in both daily discussions and academic research. The main scientific goal of mass communication studies is to investigate and demonstrate whether, when, and how such communication influences the attitudes, opinions or behavior of its audience.

In the specific area of political communication, the news media, identified sometimes as the fourth estate (Schultz, 1998) in a democratic political system, tend to have at least some influence on how much the public learns about politics (Chaffee, 1997). The scientific evidence with regard to the impact of media messages on opinions and attitudes, on the other hand, is less consistent (McGuire, 1986; Byrant and Zillmerman, 1994).

At the same time, attitudes and opinions matter in all aspects of personal, social, and political life. Elections of public officials are simply the behavioral expressions of which candidates the public or the voters prefer (Lavine, 2001; Shah, Watts, Domke, Fan, & Fibison, 1999). Public opinion matters in many cases of policy making (Burstein,

2003). In the commercial realm, whether or not consumers like a certain product or service determines, to a great extent, the viability of a business entity.

The advent and development of modern mass media have certainly brought particular experiences for attitudes and opinions. It is natural and significant for scholars and lay persons to think about and theorize whether and how such experiences can affect the formation and change of attitudes and opinions. The sheer amount and proportion of studies in mass communication research and related fields on this topic (Neuman & Guggenheim, 2009) suggest that this intriguing research question is probably one of the most important questions of the field.

This dissertation tries to build upon this line of research literature by linking the opinion formation and change process and the influence of the mass media through the construct of issue information, i.e., how much the public knows about a specific political topic. It tests the moderating effect of such information on the media's impact on opinions using three public issues: the North Korean nuclear threat, health care reform, and alternative energy research.

The constructs proposed and tested in previous literature, such as political knowledge, issue obtrusiveness or proximity, and impersonal influence have provided insights for the varying magnitude of media effects either at the individual difference level or at the issue level. The theory and empirical tests in this dissertation aim to provide a unifying theoretical explanation for media effects at both levels, so that we can improve our understanding and predictions about media effects.

Three experiments conducted in this dissertation test the theory proposed in this study about the moderating role of issue specific information on media effects, using the

issue of the North Korean nuclear program, health care reform, and alternative energy research, respectively. In each experiment, both exposure to news stories about the issue and how much specific information the study participants have were manipulated. About 420 subjects completed the post-test questionnaire in each experiment. Among these participants, about 100 also filled out the pre-test questionnaire for each study. Another group of 90 or so subjects only completed the pre-test portion of each study. Within each experiment, participants were randomly assigned to the experimental and the control groups. The degree of agreement with issue opinion positions presented in the news for post-test only subjects or the change of agreement for panel subjects is compared among the experimental groups after manipulation in each experiment.

The findings as detailed in the previous chapter provide the following general observations about news media effects, issue-specific information effects, and the impact of their interactions on issue opinions. First of all, short-term exposure to issue news coverage affects issue opinions. Even though such effects are not significant on all of the opinion questions asked in each study, there is a pattern that exposure to news stories tends to lead the opinions of the audience in the same or opposite direction as compared to the relevant issue position in the news. In experimental settings where the exposure to news content is more certain than in natural settings and where the news message can be designed to be one directional, we can clearly observe some short term news effects. This finding is consistent with what the previous literature on media effects has found (e.g. (Hovland, Janis, & Kelley, 1982; Iyengar & Simon, 1993). It also provides some evidence to contradict that the media may have very little effect (Klapper, 1960; Lazarsfeld, Berelson, & Gaudet, 1948). As some scholars have pointed out, the mystery

of media effects that no direct effects are observed simply suggests that sometimes the instrument we use to measure them is not appropriate or precise enough.

Secondly, the findings about the direct impact of short-term issue-specific information on issue opinions are mixed. Even though this study does not intend to design the information cards as to have direct impact on opinions, information nevertheless has such effects, especially when the information cards have some arguments for either side of the issues. In designing future studies, such arguments are preferably avoided in the specific information provided so that tests can be more precise about whether factual issue information would affect opinions.

The findings in this dissertation with regard to issue-specific information acquired over time, within or outside of the study context, suggest that it is not a construct that can be easily dismissed from future research on attitudes and opinions. In fact, unlike what is suggested by a few studies (e.g. Zaller, 1992; Delli Carpini & Keeter, 1996) that general knowledge or awareness well captures the effect of specific information, findings in this dissertation show that specific information acquired tends to influence the opinions held by individuals, even after controlling for general political knowledge. Sometimes, such influence is in the same direction as general knowledge. Sometimes, it is in the opposite direction. This finding is also in line with what Iyengar (1986) finds about the relation between political knowledge and information as not always consistent.

It may be the case that general political knowledge or awareness measures are simpler to use in the sense that they can be measured using the same set of questions to predict issue opinions no matter what issue is involved. Information measurement, on the other hand, has to be issue specific or at least issue domain specific. This may pose a

challenge as to how to use the information construct as one has to come up with specific measures whenever the issue or issue domain changes. However, the potential difficulty in measurement does not warrant the dismissal of this construct in theory building about media effects. The empirical findings in this study also suggest that specific information can refine our prediction about news effects in addition to general political knowledge.

Thirdly, as for the interaction effects from short-term news exposure and issue-specific information, i.e. the moderating effect of information, the results presented here show that the evidence for the hypotheses in this dissertation is rather mixed after controlling for the relevant covariates. The direction and size of such moderating effect depend upon the issue, how the issue is framed in the news, and the specific opinion questions asked.

For example, the interaction effect on the opinion of whether North Korea poses a threat to other countries (Question 4 in Experiment 1) is in the opposite direction of what Hypothesis 1b and 2b predict. After viewing the stories, those who are provided with more specific information about North Korea have more agreement with the respective issue position in the news. Similarly for Question 8, whether peace talks are a possible solution to this issue, the findings also contradict Hypothesis 1b and 2b. Those who viewed a threat story and received information cards are even less likely to feel that peace talks are a solution than those who viewed the same story but did not receive any cards. Of those who viewed a threat eased story, individuals who received information cards are also more likely to feel that peace talks are a solution than those did not receive any additional information.

In the Health Care Reform study, Hypothesis 2 regarding the moderating role of information is confirmed for favorability of a system that everyone in the U.S. has health insurance coverage (Question 2), but not for other opinion questions.

For the findings in the alternative energy study, there is a significant interaction effect of news story and information cards on the opinion of whether the gas tax should be increased to support alternative energy research (Question 7). However, there is no such effect found for the other opinion questions. This effect also contradicts Hypothesis 2 that specific information tends to mitigate the effect of the news story. Those who have more specific information tend to show stronger effect from media communication.

Overall, the empirical testing demonstrates some support for the theory proposed in this dissertation about the moderating impact of specific information on news media effects. Even though there are some inconsistencies with regard to the direction, magnitude, and how wide spread such effects are, the evidence from this study surely supports the argument that specific issue information is a construct that has the potential to improve the theory building in media effects and public opinion research. Future studies may use news stories about different public issues or even promotional messages in political or commercial campaigns. They may also use a different study design such as natural experiments. However, this dissertation provides an initial theoretical proposal and empirical assessment with promising findings that lay the ground for future research that can address some of these issues in the theory building and empirical testing of the moderating effects of specific information.

Even though this dissertation has significant findings with regard to the impact of issue specific information on news effect, it is only the beginning of an effort taken to

understand the complicated yet intriguing question of opinion formation and change. The foremost limitation of the current study is the level of testing that has been done. The theory in this dissertation provides a theoretical and conceptual possibility to explain the size of news effect on both the individual level and the issue level. However, this study has only tested the individual level differences in information. Testing the issue level differences will show with empirical evidence, in addition to the logical arguments provided in this dissertation, whether the theory can explain differences in the magnitude of media effects on the issue level.

Secondly, the moderating impact of information is only tested in experimental settings. This has both advantages and disadvantages. On the one hand, experimental settings make it possible to manipulate news exposure and information reception. Effects from the manipulations may be examined immediately after without too much concern about “noise” in the news environment or the decay of effects over time. On the other hand, only using this one study design to test the theory raises a few issues, such as artificial environment and limited generalizability to the general population.

On the bright side though, as learning about information or the effect from any news story may take more than simply one time of exposure, the results about media effects and informational effects are thus possibly conservative. Repetition and intensity of the news messages and the issue specific information are probably important factors that may influence the process of acquiring information, forming or changing opinions. In the context of the experiments conducted in this dissertation, media messages about the three topics were only presented once among other news stories, while in the real media environment, an issue of similar importance in the public agenda usually receives

repetitive coverage and through a wide variety of media outlets. With such repetition, it is possible that stronger news effect could be found with a different study design. This may facilitate the detection of the moderating impact of issue specific information. A natural experiment, for example, that carefully utilizes the difference in media coverage of an issue topic in different regions may address the lack of repetition in news exposure.

In addition, the empirical testing of this study only uses news stories about public issues. Media stimuli are not limited to this type of messages for testing the theory proposed. Further testing of the theory in future studies can also use promotional messages for issues, political candidates or even commercial products. These messages have more pronounced positions on issues, candidates or products than news stories. It is interesting and important to test if the moderating effect of specific information would be different when strictly one-sided promotional messages are shown to the audience. Such tests would greatly increase the explanatory power of the theory for messages communicated through the media in general rather than only in the public affairs area.

Last but not least, the concept of information is conceptualized in this dissertation as the amount of facts that an individual has toward a certain topic in the media. The way it is operationalized certainly leaves room for improvement in future studies, especially in studies with different designs. Providing information cards to participants in the experiments provides some assurance that the participants receive these facts. However, there are obvious problems associated with such an operationalization.

For example, the amount of information provided may not be enough so that we can only observe the moderating impact of information conservatively. With only a short time period for the participants to learn about these facts, the effect from it may be quite

different than the effects from learning and accumulating information in natural settings. Natural experiments and survey studies may address these two concerns. In addition, consulting expert opinions may be helpful for designing the information cards provided for different issues and thus facilitates the theory testing by providing the audience or the study participants with more relevant information.

It will also be greatly helpful in future studies to ask more questions in order to measure issue specific information levels. Indirect measures of information acquired in the daily lives of the public may also be included. For example, differences in profession, career or social network may have an influence on how much an individual knows about certain issues. Measures in these areas can provide a different dimension for the measurement of the information construct. The design of such questions is challenging as what questions are relevant and necessary to be asked may very well depend on the issues discussed in the news media message. For example, if we would like to examine the magnitude of effects from exposing to the news about the sub prime mortgage issue, the questions asked may be quite different from if we would examine the news effects about environmental issues.

Even though information is provided to the subjects in this dissertation, it is not suggested that issue opinions should necessarily be measured through deliberation (Fishkin, 1991). The information cards only act as a way to measure and manipulate the information condition in the experiments. In future studies, using different designs to test the theory proposed in this dissertation, issue opinions can certainly be well measured as existed through regular public opinion polls.

In closing, I am still very intrigued by how the public would react to a series of reports about a new issue or reports about a renewed issue. It seems that only a program of well-designed studies can address this question. With answers we draw from multiple studies, it may be possible to put together a map that can provide the directions and the guidance for this important question in the democratic system.

APPENDICES

I. Information Cards

For Experiment 1 on North Korea Nuclear Threat

Card 1. Geographic Location and Size of North Korea

North Korea is located in the northern half of the Korean Peninsula in Eastern Asian. It borders with South Korea, China and Russia. The area of North Korea is 120,540 sq km. The other five countries in the Six-Party Talks are South Korea, Japan, Russia, China and the U.S. The following table lists the relative sizes of these five countries as compared to North Korea.

Country	Geographic Area Compared to North Korea
South Korea	0.8 times
Japan	3 times
Russia	142 times
China	80 times
U.S.	100 times

Card 2. Economic and Military Capacity Comparisons among Countries in the Six-Party Talks

Country	2007 GDP Compared to North Korea	Male Manpower Fit for Military Compared to North Korea
North Korea	1 times	1 times
South Korea	30 times	2.1 times
Japan	108 times	4.6 times
Russia	52 times	6.0 times
China	176 times	48.0 times
U.S.	344 times	11.6 times

Card 3. Historical Relations between North Korea and other Countries in the Six-Party Talks

An independent kingdom for much of its long history, Korea was occupied by Japan in 1905 following the Russo-Japanese War. Five years later, Japan formally annexed the entire peninsula.

Following World War II, Korea was split into northern and southern halves sponsored by the Soviet Union and the U.S. respectively. Even after the fierce fighting during the Korean War from 1950 to 1953, the Korean peninsula failed to become unified for both sides, the US-backed Republic of Korea (ROK) in the southern portion and North Korea (DPRK) backed by Soviet Union and China.

After the war, North Korea adopted a policy of ostensible diplomatic and economic "self-reliance." There is no official diplomatic relations between North Korea and Japan since 1945. The U.S. has maintained economic sanctions against North Korea for nearly fifty years. On the other hand, North Korea generally maintains a closer relationship with Russia and China and after the Cold War due to shared ideology and economic assistance.

For Experiment 2 on Health Care Reform

Card 1. Health Care in the U.S.

In 2007, the U.S. spent \$2.26 trillion on health care, or \$7,439 per person, up from \$2.1 trillion, or \$7,026 per capita, the previous year. Spending in 2006 represented 16% of GDP, an increase of 6.7% over 2004 spending. Growth in spending is projected to average 6.7% annually over the period 2007 through 2017.

However, the U.S. is the leader in medical innovation, with three times higher per-capita spending than Europe and producing more new pharmaceuticals, medical devices, and affiliated biotechnology than any other country. The U.S. also has higher survival rates than most other countries for certain conditions, such as some less common cancers, but has a higher infant mortality rate than all other developed countries.

In terms of health insurance costs, they are rising faster than wages or inflation, and medical causes were cited by about half of bankruptcy filers in the United States in 2001. According to U.S. Census Bureau, in 2007, 45.7 million people in the U.S. (15.3% of the population) were without health insurance for at least part of the year.

Card 2. American's Affordable Health Choice Act of 2009

President Obama's American's Affordable Health Choice Act of 2009 proposes to achieve three goals. Firstly, it proposes to provide more security to those who have health insurance. To achieve this goal, it is proposed that legislations be passed such as capping out-of-pocket medical expenses and preventing insurance companies from discriminating pre-existing conditions or dropping coverage when people need it most. Secondly, it proposes to provide insurance to those who don't have health insurance, mostly by

offering a public insurance option as well as tax credits for those who are uninsured to buy affordable coverage. Thirdly, it proposes to lower the cost of health care by reducing waste and fraud in the health care system. The cost of this proposed reform is projected to be 1.6 trillion dollars in the next 10 years.

Card 3. The Health Care Reform Debate

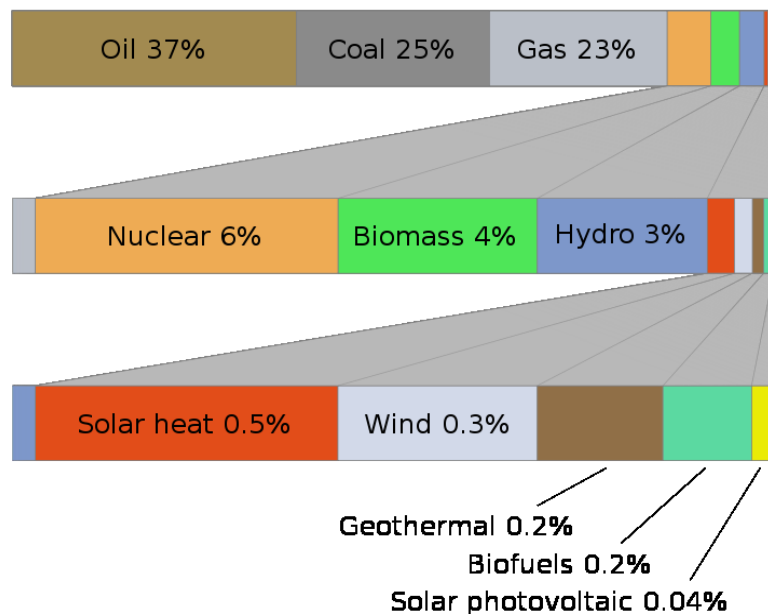
Free-market advocates claim that there is direct correlation between government's intervention in the health care market and increases in health care costs. Government intervention removes the patient as a major participant in the financial and medical choices that affect costs. Low reimbursement rates for Medicare and Medicaid have increased cost-shifting pressures on hospitals and doctors, who charge higher rates for the same services to private payers, which eventually affects health insurance rates.

On the other hand, advocates for single-payer health care or some form of public insurance option, such as Physicians for a National Health Program, the American Medical Student Association and the California Nurses Association, believe that the profit motive is the biggest threat in health care. It leads to for-profit insurance companies applying high deductibles, high co-pays, and refusing to fund pre-existing conditions. Rescinding policies or denying care by private insurance corporations after perhaps a lifetime of premium payments is, in their view, an abuse of corporate power against people who are sometimes too ill to stand up for their rights.

For Experiment 3 on Alternative Energy Research

Card 1. World Energy Resources and Consumptions

As indicated in the following graph of World Energy Usage Composition of 2006, the “traditional” energies still comprises the majority source (85%) of energy consumptions, with oil contributing 37%, coal 25% and gas 23%. Nuclear and biomass energies make up another 10% of the consumptions, with 6% from nuclear and 4% from biomass sources. Energy produced through hydro sources contributes another 3% to the world energy consumption. Alternative energies such as solar, wind, geothermal, and solar photovoltaic provide for about 2% of energy consumptions.



Card 2. Sustainability of Traditional Energy

The American Petroleum Institute estimated in 1999 the world's oil supply would be depleted between 2062 and 2094. In 2004, total world reserves were estimated to be 1.25 trillion barrels and daily consumption was about 85 million barrels, shifting the estimated oil depletion year to 2057, which is close to 50 years from now.

However, a prediction of when the fossil fuel based energy will run out is very difficult simply because we do not know whether there will be new discoveries of these fuels. Nor can we estimate precisely how quickly we will use such fuels in the future.

Card 3. Advantages and Disadvantages of Alternative Energy Sources

Please read the following table for the advantages and disadvantages of alternative energy sources.

Type	Advantages	Disadvantages
Solar Energy	Always available Zero pollution	Low efficiency High initial cost
Wind Energy	Moderate initial and low operate cost Best alternative for homeowners Zero pollution	Highly variable source Low efficiency
Hydro Energy	High efficiency Zero pollution Low cost	High initial cost High dependency on location and landscape
Geothermal Energy	Very high efficiency Low initial cost	High dependency on location Non-renewable

For Information Card Control Conditions

Card 1. Geographic Sizes of G8 (the Group of Eight) countries

The Group of Eight (G8) is an international forum for the governments of Canada, France, Germany, Italy, Japan, Russia, the United Kingdom and the United States. Together, these countries represent about 65% of the world economy. The G8 can refer to the member states or to the annual summit meeting of the G8 heads of government.

Country	Geographic Area Compared to the U.S.
Canada	1.02 times
France	0.065 times
Germany	0.036 times
Italy	0.031 times
Japan	0.038 times
Russia	1.74 times
United Kingdom	0.025 times
U.S.	1 times

Card 2. Economic and Military Capacity Comparisons among G8 Countries

Country	2007 GDP Compared to the U.S.	Male Manpower Fit for Military Service Compared to the U.S.
Canada	0.092 times	0.12 times
France	0.15 times	0.20 times
Germany	0.21 times	0.28 times
Italy	0.13 times	0.20 times
Japan	0.32 times	0.33 times
Russia	0.15 times	0.52 times
United Kingdom	0.16 times	0.22 times
U.S.	1 times	1 times

Card 3. History of G8

The concept of a forum for the world's major industrialized countries emerged following the 1973 oil crisis and subsequent global recession. In 1974 the United States created the Library Group, an informal gathering of senior financial officials from the

United States, the United Kingdom, West Germany, Japan and France. In 1975, French President Valéry Giscard d'Estaing invited the heads of government from West Germany, Italy, Japan, the United Kingdom and the United States to a summit in Rambouillet. The six leaders agreed to an annual meeting organized under a rotating presidency, forming the Group of Six (G6). The following year, Canada joined the group at the behest of U.S. President Gerald Ford, and the group became known as the Group of Seven (G7). The Cold War ended with the dissolution of the Soviet Union in 1991, and Russia became the successor state. At the initiative of United States President Bill Clinton, Russia formally joined the group in 1997, resulting in the Group of Eight (G8).

II. Survey Questionnaires

For each experiment in this dissertation, there are two sets of questionnaires, pre-test and post-test. For pre-test in each experiment, there are two versions. The first version has the information cards for the relevant issue for the experiment. The second version has the information cards for the control condition, i.e. about G8 countries.

There are six versions of the post-test questionnaire in each experiment. Three of them have the information cards about the specific issue, each of which has a different link to the three versions of TV news video used in the experiment. The other three questionnaires are almost identical with the first three questionnaires except that the information cards in them are about G8 countries.

The pre- and post-questionnaires also differ in the following ways. The pre-test questionnaires do not have news video stimuli embedded. They also don't have questions regarding the effect of the issue news stories on oneself and on others. In addition, questions about demographics are only asked in the post-tests but not the pre-tests.

In this appendix, only one version of the post-test questionnaire is provided as most of the content and questions are the same among all the versions. Please refer to Chapter 4 and the above paragraph with regard to the differences in the questionnaires used in pre- and post-tests and for different experimental groups.

News & Opinions of Current Affairs Survey I

Created: November 03 2009, 2:22 PM
Last Modified: November 03 2009, 2:22 PM
Design Theme: Basic Blue
Language: English
Button Options: Labels
Disable Browser "Back" Button: False

News & Opinions of Current Affairs Survey

Page 1 - Heading

First, we would like you to read the following three information cards about an issue in the news these days. Please read them carefully before proceeding to the next section of the questionnaire, as it is an important part of this study. Thank you so much.

Page 1 - Image

Card 1. Geographic Location and Size of North Korea

North Korea is located in the northern half of the Korean Peninsula in Eastern Asian. It borders with South Korea, China and Russia. The area of North Korea is 120,540 sq km. The other five countries in the Six-Party Talks are South Korea, Japan, Russia, China and the U.S. The following table lists the relative sizes of these five countries as compared to North Korea.

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Page 1 - Heading

We would now like you to view two news stories of current affairs by following the link below. Please watch them carefully before proceeding to the next section of the questionnaire, as it is an important part of this study.

It takes a few seconds for the video to load after you click on the link. The entire video is about three and a half minutes in duration. Thank you so much.

Page 1 - Heading

<http://www.umich.edu/~yingq/News/v1.html>

Page 1 - Heading

Now, please continue to complete a questionnaire for this study. Thank you so much for your time and efforts.

Page 1 - Heading

The U.S. has been thought of as the world leader. In the current time of general world peace and some regional conflicts, we'd like to get your feelings about a few countries in the news. We'd like you to rate how much of a friend or foe each country is to the U.S. using the feeling thermometer. You can choose any number between 0 and 100. The higher the number, the warmer or more friendly you feel they are to the US. The lower the number, the colder or less friendly they are.

Page 1 - Question 1 - Open Ended - One Line

Using the feeling thermometer, where 0 is very unfriendly and 100 is very friendly, how friendly or unfriendly do you think Great Britain is to the U.S.?

Page 1 - Question 2 - Open Ended - One Line

Using the feeling thermometer, where 0 is very unfriendly and 100 is very friendly, how friendly or unfriendly do you think China is to the U.S.?

Page 1 - Question 3 - Open Ended - One Line

Using the feeling thermometer, where 0 is very unfriendly and 100 is very friendly, how friendly or unfriendly do you think North Korea is to the U.S.?

Page 1 - Question 4 - Choice - One Answer (Bullets)

Do you agree or disagree with the statement that North Korea poses a nuclear threat to countries such as the U.S., South Korea, China, Russia or Japan?

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree
- Don't know/Refused

Page 1 - Question 5 - Choice - One Answer (Bullets)

Do you agree or disagree with the statement that North Korea is a danger to world peace?

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree
- Don't know/Refused

Page 1 - Question 6 - Choice - One Answer (Bullets)

Do you think that North Korea has a real intention to use its nuclear power to strike countries such as the U.S, South Korea, Japan, China, or Russia, or do you think North Korea is using its nuclear power to threaten these countries to get more financial assistance?

- North Korea has a real intention to use its nuclear power to strike any countries.
- North Korea is using its nuclear power to threaten these countries to get more financial assistance.
- Both
- Neither
- Don't know/Refused

Page 1 - Question 7 - Choice - One Answer (Bullets)

Do you agree or disagree with the statement that North Korea poses a nuclear threat to other countries in the world because it will be involved in nuclear arms dealership?

- Strongly Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

Page 1 - Question 8 - Choice - One Answer (Bullets)

Do you think that the North Korean nuclear issue can be resolved by peace talks among the Six-Party countries?

- Yes
- No
- Hard to say
- Don't know/Refused

Page 1 - Question 9 - Choice - One Answer (Bullets)

Thinking about the issue of North Korean nuclear threat, do you think it is interesting or boring?

- Very interesting
- Somewhat interesting
- A little boring

- Very boring
- Don't Know/Refused

Page 1 - Question 10 - Choice - One Answer (Bullets)

Thinking about the issue of health care reform, do you think it is interesting or boring?

- Very interesting
- Somewhat interesting
- A little boring
- Very boring
- Don't Know/Refused

Page 1 - Question 11 - Choice - One Answer (Bullets)

Thinking about the issue of North Korean nuclear threat, do you think it affects you personally or it does not affect you personally?

- It greatly affects me personally
- It somewhat affects me personally
- It does not affect me much personally
- It does not affect me personally at all
- Don't Know/Refused

Page 1 - Question 12 - Choice - One Answer (Bullets)

Thinking about the issue of health care reform, do you think it affects you personally or it does not affect you personally?

- It greatly affects me personally
- It somewhat affects me personally
- It does not affect me much personally
- It does not affect me personally at all
- Don't Know/Refused

Page 1 - Question 13 - Choice - One Answer (Bullets)

Do you think the issue of North Korean nuclear threat is easy to understand or hard to understand?

- Very easy to understand
- Easy to understand
- Hard to understand
- Very hard to understand
- Don't Know/Refused

Page 1 - Question 14 - Choice - One Answer (Bullets)

Do you think the issue of health care reform is easy to understand or hard to understand?

- Very easy to understand
- Easy to understand
- Hard to understand

- Very hard to understand
- Don't Know/Refused

Page 1 - Question 15 - Choice - One Answer (Bullets)

Do you think the issue of North Korean nuclear threat is important or unimportant?

- Very important
- Somewhat important
- Not important
- Not important at all
- Don't Know/Refused

Page 1 - Question 16 - Choice - One Answer (Bullets)

Do you think the issue of health care reform is important or unimportant?

- Very important
- Somewhat important
- Not important
- Not important at all
- Don't Know/Refused

Page 1 - Question 17 - Choice - One Answer (Bullets)

How much, if at all, do you worry about future terrorist attacks against the United States?

- Very much
- Somewhat
- Not much
- Not at all
- Don't know/Refused

Page 1 - Question 18 - Choice - One Answer (Bullets)

Having watched a news story about North Korea nuclear threat just now, how much do you think what's presented in the news would affect your opinion about North Korea?

- Very much
- Somewhat
- Not much
- Not at all
- Don't Know/Refused

Page 1 - Question 19 - Choice - One Answer (Bullets)

Having watched a news story about North Korea nuclear threat just now, how much do you think what's presented in the news would affect other people's opinions about North Korea?

- Very much
- Somewhat
- Not much

- Not at all
- Don't Know/Refused

Page 1 - Question 20 - Choice - One Answer (Bullets)

With regard to the three information cards that you read at the beginning of this survey, how informative would you say that they are about the North Korean nuclear issue?

- Greatly informative
- Somewhat informative
- Not very informative
- Not informative at all
- Don't Know/Refused

Page 1 - Question 21 - Choice - One Answer (Bullets)

With regard to the three information cards that you read at the beginning of this survey, how relevant would you say that they are to your opinion about the North Korean nuclear issue?

- Greatly relevant
- Somewhat relevant
- Not very relevant
- Not relevant at all
- Don't Know/Refused

Page 1 - Question 22 - Choice - One Answer (Bullets)

Generally speaking, do you consider yourself

- Strongly Democrat
- Moderately Democrat
- Strongly Republican
- Moderately Republican
- Independent
- Don't know/Refused

Page 1 - Question 23 - Choice - One Answer (Bullets)

We hear a lot of talk these days about liberals and conservatives. Would you consider yourself

- Extremely liberal
- Liberal
- Slightly liberal
- Moderate, middle of the road
- Slightly conservative
- Conservative
- Extremely conservative
- Don't know/Refused

Page 1 - Question 24 - Choice - One Answer (Bullets)

How would you describe your interest in politics in general? Would you say you are very much interested in politics, somewhat interested, or hardly interested at all?

- Very much interested
- Somewhat interested
- Hardly interested at all
- Don't know/Refused

Page 1 - Question 25 - Choice - One Answer (Bullets)

How many days in the PAST WEEK did you watch the news on TV?

- None
- One day
- Two days
- Three days
- Four days
- Five days
- Six days
- Every day
- Don't know/Refused

Page 1 - Question 26 - Choice - One Answer (Bullets)

How many days in the PAST WEEK did you read a daily newspaper?

- None
- One day
- Two days
- Three days
- Four days
- Five days
- Six days
- Every day
- Don't know/Refused

Page 1 - Question 27 - Choice - One Answer (Bullets)

How many days in the PAST WEEK did you listen to the news on the radio?

- None
- One day
- Two days
- Three days
- Four days
- Five days
- Six days
- Every day
- Don't know/Refused

Page 1 - Question 28 - Choice - One Answer (Bullets)

How many days in the PAST WEEK did you read or watch the news on the Internet (online)?

- None
- One day
- Two days
- Three days
- Four days
- Five days
- Six days
- Every day
- Don't know/Refused

Page 1 - Heading

Next, we would like to ask about whether you follow the news about a few issues. Not everyone will have followed these news stories. How about you?

Page 1 - Question 29 - Choice - One Answer (Bullets)

How closely would you say that you follow the news about North Korean nuclear issue?

- Very closely
- Closely
- Not very closely
- Do not follow at all

Page 1 - Question 30 - Choice - One Answer (Bullets)

How closely would you say that you follow the news about health care reform?

- Very closely
- Closely
- Not very closely
- Do not follow at all

Page 2 - Question 31 - Choice - One Answer (Bullets)

Do you happen to know in terms of its geographic size, how much larger is the U.S. as compared to North Korea?

- The U.S. is 100 times larger than North Korea.
- The U.S. is 50 times larger than North Korea.
- The U.S. is 10 times larger than North Korea.
- The U.S. is 2 times larger than North Korea.
- The U.S. is about the same size as North Korea.
- Don't know/Refused

Page 2 - Question 32 - Choice - One Answer (Bullets)

Do you happen to know when North Korea started to conduct nuclear tests? Was it

- In the 1980s
- In the 1990s
- After the year of 2000
- Don't Know/Refused

Page 2 - Question 33 - Choice - One Answer (Bullets)

Do you happen to know whether North Korea has ever tested any long distance missiles?

- Yes, North Korea has tested long distance missiles.
- No, North Korea has not tested long distance missiles.
- Don't Know/Refused

Page 2 - Question 34 - Choice - One Answer (Bullets)

Do you happen to know which of the following countries is in the Six-Party Talks trying to resolve the North Korea nuclear issue?

- Canada
- Japan
- Great Britain
- India
- Don't Know/Refused

Page 2 - Question 35 - Choice - One Answer (Bullets)

Do you happen to know when the Korean War took place? Was it in

- the 1940s
- the 1950s
- the 1960s
- the 1970s
- the 1980s
- the 1990s
- Don't know/Refused

Page 2 - Question 36 - Choice - One Answer (Bullets)

Did you participate in any discussions with someone close to you such as your family members, friends or co-workers, about North Korean nuclear issue in the past month?

- Yes
- No
- Don't know/Refused

Page 2 - Question 37 - Choice - One Answer (Bullets)

Did you participate in any discussions with someone close to you such as your family members, friends or co-workers, about health care reform in the past month?

- Yes
- No
- Don't know/Refused

Page 2 - Question 38 - Choice - One Answer (Bullets)

Do you happen to know who the Vice-President of the United States is?

- Donald Rumsfeld
- Dick Cheney/Richard Cheney
- Joe Biden
- Or it is someone else
- Don't Know/Refused

Page 2 - Question 39 - Choice - One Answer (Bullets)

Whose responsibility is it to determine whether a law is constitutional or not? Is it the President, the Congress, or the Supreme Court?

- the President
- the Congress
- the Supreme Court
- Don't Know/Refused

Page 2 - Question 40 - Choice - One Answer (Bullets)

How much of a majority is required for the U.S. House and Senate to override a presidential veto?

- Two thirds
- Four fifths
- Five Sixths
- Don't Know/Refused

Page 2 - Question 41 - Choice - One Answer (Bullets)

Do you happen to know which party has the most members in the House of Representatives in Washington?

- Democratic Party
- Republican Party
- Don't Know/Refused

Page 2 - Question 42 - Choice - One Answer (Bullets)

Which party is more conservative?

- Democrat Party

- Republican Party
- Don't Know/Refused

Page 2 - Question 43 - Choice - One Answer (Bullets)

What is your gender?

- Male
- Female

Page 2 - Question 44 - Choice - One Answer (Bullets)

Which of the racial or ethnic groups best describes you?

- White
- African American/Black
- Asian or Pacific Islander
- Hispanic
- American Indian/Native American
- Other (Specify)
- Don't Know/Refused

Page 2 - Question 45 - Choice - One Answer (Bullets)

Were both of your parents born in this country?

- Yes
- No
- Don't know/Refused

Page 2 - Question 46 - Choice - One Answer (Bullets)

What is your highest level of education?

- Less than high school (K-12)
- High school graduate
- Some college/community college/vocational school
- College graduate/undergraduate degree
- Post graduate work/graduate degree
- Don't know/ Refused

Page 2 - Question 47 - Choice - One Answer (Bullets)

What is your age? Please select from the following categories:

- 18-25 years old
- 26-30 years old
- 31-40 years old
- 41-50 years old
- 51-60 years old
- 60 or more years old

- Don't know/Refused

Page 2 - Question 48 - Choice - One Answer (Bullets)

What is the approximate household income range for your family?

- Less than 20,000
- 20,000 to less than 40,000
- 40,000 to less than 60,000
- 60,000 to less than 80,000
- 80,000 to less than 100,000
- 100,000 or more
- Don't Know/Refused

Thank You Page

You have now completed this study. Your responses will be kept confidential. None of them will be released in any way that would identify you as an individual. We greatly appreciate your participation in this study. If you have questions about this particular study, please contact the lead investigator – a Ph.D. candidate at the Department of Communication Studies by phone at 734-764-0420 or by email at yingq@umich.edu.

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News & Opinions of Current Affairs Survey II

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News & Opinions of Current Affairs Survey

Page 1 - Heading

First, we would like you to read the following three information cards about an issue in the news these days. Please read them carefully before proceeding to the next section of the questionnaire, as it is an important part of this study. Thank you so much.

Card 1. Health Care in the U.S.

In 2007, the U.S. spent \$2.26 trillion on health care, or \$7,439 per person, up from \$2.1 trillion, or \$7,026 per capita, the previous year. Spending in 2006 represented 16% of GDP, an increase of 6.7% over 2004 spending. Growth in spending is projected to average 6.7% annually over the period 2007 through 2017.

However, the U.S. is the leader in medical innovation, with three times higher per-capita spending than Europe and producing more new pharmaceuticals, medical devices, and affiliated biotechnology than any other country. The U.S. also has higher survival rates than most other countries for certain conditions, such as some less common cancers, but has a higher infant mortality rate than all other developed countries.

In terms of health insurance costs, they are rising faster than wages or inflation, and medical causes were cited by about half of bankruptcy filers in the United States in 2001. According to U.S. Census Bureau, in 2007, 45.7 million people in the U.S. (15.3% of the population) were without health insurance for at least part of the year.

Card 2. American's Affordable Health Choice Act of 2009

President Obama's American's Affordable Health

Choice Act of 2009 proposes to achieve three goals. Firstly, it proposes to provide more security to those who have health insurance. To achieve this goal, it is proposed that legislations be passed such as capping out-of-pocket medical expenses and preventing insurance companies from discriminating pr-existing conditions or dropping coverage when people need it most. Secondly, it proposes to provide insurance to those who don't have health insurance, mostly by offering a public insurance option as well as tax credits for those who are uninsured to buy affordable coverage. Thirdly, it proposes to lower the cost of health care by reducing waste and fraud in the health care system. The cost of this proposed reform is projected to be 1.6 trillion dollars in the next 10 years.

Card 3. The Health Care Reform Debate

Free-market advocates claim that there is direct correlation between government's intervention in the health care market and increases in health care costs. Government intervention removes the patient as a major participant in the financial and medical choices that affect costs. Low reimbursement rates for Medicare and Medicaid have increased cost-shifting pressures on hospitals and doctors, who charge higher rates for the same services to private payers, which eventually affects health insurance rates.

On the other hand, advocates for single-payer health care or some form of public insurance option, such as Physicians for a National Health Program, the American Medical Student Association and the California Nurses Association, believe that the profit motive is the biggest threat in health care. It leads to for-profit insurance companies applying high deductibles, high co-pays, and refusing to fund pre-existing conditions. Rescinding policies or denying care by private insurance corporations after perhaps a lifetime of premium payments is, in their view, an abuse of corporate power against people who are sometimes too ill to stand up for their rights.

Page 1 - Heading

We would now like you to view two news stories of current affairs by following the link below. Please watch them carefully before proceeding to the next section of the questionnaire, as it is an important part of this study.
It takes a few seconds for the video to load after you click on the link. The entire video is about five minutes long. Thank you so much.

Page 1 - Heading

<http://www.umich.edu/~yingq/News/v3.html>

Page 1 - Heading

Now, please continue to complete a questionnaire for this study. Thank you so much for your time and efforts.

Page 1 - Question 1 - Choice - One Answer (Bullets)

President Obama is proposing to reform the health care system, do you in general favor or oppose the proposed health care reform?

- Favor
- Oppose
- No opinion
- Don't know/Refused

Page 1 - Heading

Do you favor or oppose the following specifics that are in discussions of possible health care reform?

Page 1 - Question 2 - Choice - One Answer (Bullets)

Do you favor or oppose a system to be established so that everyone in the U.S. has medical insurance coverage?

- Favor
- Oppose
- No opinion
- Don't know/Refused

Page 1 - Question 3 - Choice - One Answer (Bullets)

Do you favor or oppose a system to be established so that there are both public and private providers of health insurance?

- Favor
- Oppose
- No opinion
- Don't know/Refused

Page 1 - Question 4 - Choice - One Answer (Bullets)

Do you think that the U.S. should follow other developed countries to set up a singler payer insurance system, such as those in France, Great Britain or Canada?

- Yes
- No
- Don't know/Refused

Page 1 - Heading

Do you favor or oppose the following possible ways to pay for changes to the health care system?

Page 1 - Question 5 - Choice - One Answer (Bullets)

How about requiring employers to pay a fee if they do not provide health insurance for their employees?

- Strongly favor
- Favor
- Neither favor nor oppose
- Oppose
- Strongly oppose
- Don't know/Refused

Page 1 - Question 6 - Choice - One Answer (Bullets)

How about saving money by cutting back on Medicare costs?

- Strongly favor
- Favor
- Neither favor nor oppose
- Oppose
- Strongly oppose
- Don't know/Refused

Page 1 - Question 7 - Choice - One Answer (Bullets)

How about increasing income taxes on upper income Americans?

- Strongly favor
- Favor
- Neither favor nor oppose
- Oppose
- Strongly oppose
- Don't know/Refused

Page 1 - Question 8 - Choice - One Answer (Bullets)

Do you think that the proposed health care reform would be beneficial to the American people or do you think the reform would be harmful to the American people?

- Greatly beneficial

- Somewhat beneficial
- Neither beneficial nor harmful
- Somewhat harmful
- Greatly harmful
- Don't Know/Refused

Page 1 - Question 9 - Choice - One Answer (Bullets)

Do you think that the proposed health care reform would be beneficial to the economy or do you think it would be harmful to the economy?

- Greatly beneficial
- Somewhat beneficial
- Neither beneficial nor harmful
- Somewhat harmful
- Greatly harmful
- Don't Know/Refused

Page 1 - Question 10 - Choice - One Answer (Bullets)

Thinking about the issue of health care reform, do you think it is interesting or boring?

- Very interesting
- Somewhat interesting
- A little boring
- Very boring
- Don't Know/Refused

Page 1 - Question 11 - Choice - One Answer (Bullets)

Thinking about the issue of North Korean nuclear threat, do you think it is interesting or boring?

- Very interesting
- Somewhat interesting
- A little boring
- Very boring
- Don't Know/Refused

Page 1 - Question 12 - Choice - One Answer (Bullets)

Thinking about the issue of health care reform, do you think it affects you personally or does it not affect you personally?

- It greatly affects me personally
- It somewhat affects me personally
- It does not affect me much personally
- It does not affect me personally at all
- Don't Know/Refused

Page 1 - Question 13 - Choice - One Answer (Bullets)

Thinking about the issue of North Korean nuclear threat, do you think it affects you personally or does it not affect you personally?

- It greatly affects me personally
- It somewhat affects me personally
- It does not affect me much personally
- It does not affect me personally at all
- Don't Know/Refused

Page 1 - Question 14 - Choice - One Answer (Bullets)

Do you think the issue of health care reform is easy to understand or hard to understand?

- Very easy to understand
- Easy to understand
- Hard to understand
- Very hard to understand
- Don't Know/Refused

Page 1 - Question 15 - Choice - One Answer (Bullets)

Do you think the issue of North Korean nuclear threat is easy to understand or hard to understand?

- Very easy to understand
- Easy to understand
- Hard to understand
- Very hard to understand
- Don't Know/Refused

Page 1 - Question 16 - Choice - One Answer (Bullets)

Do you think the issue of health care reform is important or unimportant?

- Very important
- Somewhat important
- Not important
- Not important at all
- Don't Know/Refused

Page 1 - Question 17 - Choice - One Answer (Bullets)

Do you think the issue of North Korean nuclear threat is important or unimportant?

- Very important
- Somewhat important
- Not important
- Not important at all
- Don't Know/Refused

Page 1 - Question 18 - Choice - One Answer (Bullets)

Having watched a news story about Health Care Reform just now, how much do you think what's presented in the news would affect your opinion about the proposed reform?

- Very much
- Somewhat
- Not much
- Not at all
- Don't Know/Refused

Page 1 - Question 19 - Choice - One Answer (Bullets)

Having watched a news story about Health Care Reform just now, how much do you think what's presented in the news would affect other people's opinions about the proposed reform?

- Very much
- Somewhat
- Not much
- Not at all
- Don't Know/Refused

Page 1 - Question 20 - Choice - One Answer (Bullets)

With regard to the three information cards that you read at the beginning of this survey, how informative would you say that they are about Health Care Reform?

- Greatly informative
- Somewhat informative
- Not very informative
- Not informative at all
- Don't Know/Refused

Page 1 - Question 21 - Choice - One Answer (Bullets)

With regard to the three information cards that you read at the beginning of this survey, how relevant would you say that they are to your opinion about Health Care Reform?

- Greatly relevant
- Somewhat relevant
- Not very relevant
- Not relevant at all
- Don't Know/Refused

Page 1 - Question 22 - Choice - One Answer (Bullets)

Do you approve or disapprove of the way Barack Obama is handling his job as president?

- Strongly approve
- Approve
- Neither approve nor disapprove
- Disapprove

- Strongly disapprove
- Don't Know/Refused

Page 1 - Question 23 - Choice - One Answer (Bullets)

Generally speaking, do you consider yourself

- Strongly Democrat
- Moderately Democrat
- Strongly Republican
- Moderately Republican
- Independent
- Don't know/Refused

Page 1 - Question 24 - Choice - One Answer (Bullets)

We hear a lot of talk these days about liberals and conservatives. Would you consider yourself

- Extremely liberal
- Liberal
- Slightly liberal
- Moderate, middle of the road
- Slightly conservative
- Conservative
- Extremely conservative
- Don't know/Refused

Page 1 - Question 25 - Choice - One Answer (Bullets)

How would you describe your interest in politics in general? Would you say you are very much interested in politics, somewhat interested, or hardly interested at all?

- Very much interested
- Somewhat interested
- Hardly interested at all
- Don't know/Refused

Page 1 - Question 26 - Choice - One Answer (Bullets)

How many days in the PAST WEEK did you watch the news on TV?

- None
- One day
- Two days
- Three days
- Four days
- Five days
- Six days
- Every day
- Don't know/Refused

Page 1 - Question 27 - Choice - One Answer (Bullets)

How many days in the PAST WEEK did you read a daily newspaper?

- None
- One day
- Two days
- Three days
- Four days
- Five days
- Six days
- Every day
- Don't know/Refused

Page 1 - Question 28 - Choice - One Answer (Bullets)

How many days in the PAST WEEK did you listen to the news on the radio?

- None
- One day
- Two days
- Three days
- Four days
- Five days
- Six days
- Every day
- Don't know/Refused

Page 1 - Question 29 - Choice - One Answer (Bullets)

How many days in the PAST WEEK did you read or watch the news on the Internet (online)?

- None
- One day
- Two days
- Three days
- Four days
- Five days
- Six days
- Every day
- Don't know/Refused

Page 1 - Heading

Next, we would like to ask about whether you follow the news about a few issues. Not everyone will have followed these news stories. How about you?

Page 1 - Question 30 - Choice - One Answer (Bullets)

How closely would you say that you follow the news about health care reform?

- Very closely

- Closely
- Not very closely
- Do not follow at all

Page 2 - Question 31 - Choice - One Answer (Bullets)

How closely would you say that you follow the news about North Korean nuclear issue?

- Very closely
- Closely
- Not very closely
- Do not follow at all

Page 2 - Question 32 - Choice - One Answer (Bullets)

Do you happen to know approximately how many Americans do not have health insurance at least for part of the year?

- 20 million
- 47 million
- 65 million
- 80 million
- Don't know/Refused

Page 2 - Question 33 - Choice - One Answer (Bullets)

Do you happen to know approximately how much the health care costs of the U.S. Gross Domestic Product (GDP)?

- About 5%
- About 15%
- About 20%
- About 25%
- Don't know/Refused

Page 2 - Question 34 - Choice - One Answer (Bullets)

Do you happen to know how much the health care reform would approximately cost?

- 0.6 trillion in 10 years
- 1.6 trillion in 10 years
- 3.6 trillion in 10 years
- Don't know/Refused

Page 2 - Question 35 - Choice - One Answer (Bullets)

Which of the following is not one of the key issues that the health care reform is trying to address?

- Establishing a single payer system
- Full coverage
- Both private and public health insurance options
- Reducing health care cost

- Don't know/Refused

Page 2 - Question 36 - Choice - One Answer (Bullets)

Are Medicare and Medicaid government sponsored health insurance programs?

- Yes
- No
- Don't know/Refused

Page 2 - Question 37 - Choice - One Answer (Bullets)

Did you participate in any discussions with someone close to you such as your family members, friends or co-workers, about health care reform in the past month?

- Yes
- No
- Don't know/Refused

Page 2 - Question 38 - Choice - One Answer (Bullets)

Did you participate in any discussions with someone close to you such as your family members, friends or co-workers, about North Korean nuclear issue in the past month?

- Yes
- No
- Don't know/Refused

Page 2 - Question 39 - Choice - One Answer (Bullets)

Do you happen to know who the Vice-President of the United States is?

- Donald Rumsfeld
- Dick Cheney/Richard Cheney
- Joe Biden
- Or it is someone else
- Don't Know/Refused

Page 2 - Question 40 - Choice - One Answer (Bullets)

Whose responsibility is it to determine whether a law is constitutional or not? Is it the President, the Congress, or the Supreme Court?

- the President
- the Congress
- the Supreme Court
- Don't Know/Refused

Page 2 - Question 41 - Choice - One Answer (Bullets)

How much of a majority is required for the U.S. House and Senate to override a presidential veto?

- Two thirds
- Four fifths
- Five Sixths
- Don't Know/Refused

Page 2 - Question 42 - Choice - One Answer (Bullets)

Do you happen to know which party has the most members in the House of Representatives in Washington?

- Democratic Party
- Republican Party
- Don't Know/Refused

Page 2 - Question 43 - Choice - One Answer (Bullets)

Which party is more conservative?

- Democratic Party
- Republican Party
- Don't Know/Refused

Page 2 - Question 44 - Choice - One Answer (Bullets)

What is your gender?

- Male
- Female

Page 2 - Question 45 - Choice - One Answer (Bullets)

What racial or ethnic groups best describes you?

- White
- African American/Black
- Asian or Pacific Islander
- Hispanic
- American Indian/Native American
- Other (Specify)
- Don't Know/Refused

Page 2 - Question 46 - Choice - One Answer (Bullets)

What is your highest level of education?

- Less than high school (K-12)
- High school graduate
- Some college/community college/vocational school
- College graduate/undergraduate degree
- Post graduate work/graduate degree
- Don't know/ Refused

What is your age? Please select from the following categories:

- 18-25 years old
- 26-30 years old
- 31-40 years old
- 41-50 years old
- 51-60 years old
- 60 or more years old
- Don't know/Refused

What is the approximate household income range for your family?

- Less than 20,000
- 20,000 to less than 40,000
- 40,000 to less than 60,000
- 60,000 to less than 80,000
- 80,000 to less than 100,000
- 100,000 or more
- Don't Know/Refused

Thank You Page

You have now completed this study. Your responses will be kept confidential. None of them will be released in any way that would identify you as an individual. We greatly appreciate your participation in this study. If you have questions about this particular study, please contact the lead investigator – a Ph.D. candidate at the Department of Communication Studies by phone at 734-764-0420 or by email at yingq@umich.edu.

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News & Opinions of Current Affairs Survey III

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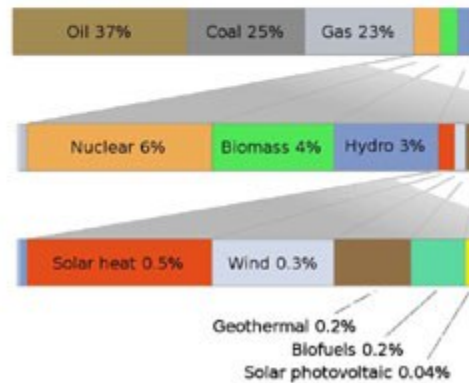
News & Opinions of Current Affairs Survey

Page 1 - Heading

First, we would like you to read the following three information cards about an issue in the news these days. Please read them carefully before proceeding to the next section of the questionnaire, as it is an important part of this study. Thank you so much.

Card 1. World Energy Resources and Consumption

As indicated in the following graph of World Energy Usage Composition of 2006, the “traditional” energies still comprise the majority source (85%) of energy consumption, with oil contributing 37%, coal 25% and gas 23%. Nuclear and biomass energies make up another 10% of the consumptions, with 6% from nuclear and 4% from biomass sources. Energy produced through hydro sources contributes another 3% to the world energy consumption. Alternative energies such as solar, wind, geothermal, and solar photovoltaic provide for about 2% of energy consumption.



Card 2. Sustainability of Traditional Energy

The American Petroleum Institute estimated in 1999 the world's oil supply would be depleted between 2062 and 2094. In 2004, total world reserves were estimated to be 1.25 trillion barrels and daily consumption was about 85 million barrels, shifting the estimated oil depletion year to 2057, which is close to 50 years from now.

However, a prediction of when the fossil fuel based energy will run out is very difficult simply because we do not know whether there will be new discoveries of these fuels. Nor can we estimate precisely how quickly we will use such fuels in the future.

Card 3. Advantages and Disadvantages of Alternative

Energy Sources

Please read the following table for the advantages and disadvantages of alternative energy sources.

Type	Advantages	Disadvantages
Solar Energy	Always available Zero pollution	Low efficiency High initial cost
Wind Energy	Moderate initial and low operating cost Best alternative for homeowners Zero pollution	Highly variable source Low efficiency
Hydro Energy	High efficiency Zero pollution Low cost	High initial cost High dependency on location and landscape
Geothermal Energy	Very high efficiency Low initial cost	High dependency on location Non-renewable

We would now like you to view two news stories of current affairs by following the link below. Please watch them carefully before proceeding to the next section of the questionnaire, as it is an important part of this study.

It takes a few seconds for the video to load after you click on the link. The entire video is three minutes long. Thank you so much.

<http://www.umich.edu/~yingq/News/v5.html>

Now, please continue to complete a questionnaire for this study. Thank you so much for your time and efforts.

Some people worry that traditional energy sources such as oil and natural gas will run out soon. Some people think that these traditional energy sources will sustain for a long enough time. What do you think? Do you think traditional energy sources such as oil and natural gas will run out soon or do you think they will sustain for a long time?

- They will run out very soon.
- They will sustain for a long time.
- Don't know/Refused

Overall, do you think that alternative energy resources such as wind or solar energies are better sources of energy than traditional energies such as oil and natural gas?

- Alternative energies are better sources of energy.
- Traditional energies are better sources of energy.
- They are the same.
- Don't know/Refused

Would you prefer the government to increase, decrease, or not change the financial support and incentives it gives for producing energy from alternative sources, such as solar and wind?

- Increase
- No change
- Decrease
- Don't know/Refused

Would you prefer the government to increase, decrease, or not change the financial support and incentives it gives for producing energy from traditional sources, such as coal and oil?

- Increase
- No change
- Decrease
- Don't know/Refused

Do you think investing in alternative energy research would be beneficial or harmful to the environment?

- Beneficial to the environment.
- Harmful to the environment.
- Neither beneficial nor harmful.

- Don't know/Refused

Page 1 - Question 6 - Choice - One Answer (Bullets)

Some people think that investing in alternative energy research would create new job opportunities, and thus be beneficial to the economy. Some people think that investing in alternative energy research is very costly, thus harmful to the economy. What do you think? Do you think investing in alternative energy research would be beneficial or harmful to the economy?

- Beneficial to the economy.
- Harmful to the economy.
- Neither beneficial nor harmful.
- Don't know/Refused

Page 1 - Question 7 - Choice - One Answer (Bullets)

Would you support an increase in federal gasoline taxes if the increase was earmarked specifically for research and development for clean, alternative energy sources? Would you definitely support, probably support, probably not support or definitely not support an increase in federal gasoline taxes?

- Definitely support
- Probably support
- Probably not support
- Definitely no
- Don't know/Refused

Page 1 - Question 8 - Choice - One Answer (Bullets)

Thinking about the issue of alternative energy research, do you think it is interesting or boring?

- Very interesting
- Somewhat interesting
- A little boring
- Very boring
- Don't Know/Refused

Page 1 - Question 9 - Choice - One Answer (Bullets)

Thinking about the issue of health care reform, do you think it is interesting or boring?

- Very interesting
- Somewhat interesting
- A little boring
- Very boring
- Don't Know/Refused

Page 1 - Question 10 - Choice - One Answer (Bullets)

Thinking about the issue of alternative energy research, do you think it affects you personally or does it not affect you personally?

- It greatly affects me personally

- It somewhat affects me personally
- It does not affect me much personally
- It does not affect me personally at all
- Don't Know/Refused

Page 1 - Question 11 - Choice - One Answer (Bullets)

Thinking about the issue of health care reform, do you think it affects you personally or does it not affect you personally?

- It greatly affects me personally
- It somewhat affects me personally
- It does not affect me much personally
- It does not affect me personally at all
- Don't Know/Refused

Page 1 - Question 12 - Choice - One Answer (Bullets)

Do you think the issue of alternative energy research is easy to understand or hard to understand?

- Very easy to understand
- Easy to understand
- Hard to understand
- Very hard to understand
- Don't Know/Refused

Page 1 - Question 13 - Choice - One Answer (Bullets)

Do you think the issue of health care reform is easy to understand or hard to understand?

- Very easy to understand
- Easy to understand
- Hard to understand
- Very hard to understand
- Don't Know/Refused

Page 1 - Question 14 - Choice - One Answer (Bullets)

Do you think the issue of alternative energy research is important or unimportant?

- Very important
- Somewhat important
- Not important
- Not important at all
- Don't Know/Refused

Page 1 - Question 15 - Choice - One Answer (Bullets)

Do you think the issue of health care reform is important or unimportant?

- Very important

- Somewhat important
- Not important
- Not important at all
- Don't Know/Refused

Page 1 - Question 16 - Choice - One Answer (Bullets)

Having watched a news story about alternative energy just now, how much do you think what's presented in the news would affect your opinion about alternative energy research?

- Very much
- Somewhat
- Not much
- Not at all
- Don't Know/Refused

Page 1 - Question 17 - Choice - One Answer (Bullets)

Having watched a news story about alternative energy just now, how much do you think what's presented in the news would affect other people's opinions about alternative energy research?

- Very much
- Somewhat
- Not much
- Not at all
- Don't Know/Refused

Page 1 - Question 18 - Choice - One Answer (Bullets)

With regard to the three information cards that you read at the beginning of this survey, how informative would you say that they are about alternative energy?

- Greatly informative
- Somewhat informative
- Not very informative
- Not informative at all
- Don't Know/Refused

Page 1 - Question 19 - Choice - One Answer (Bullets)

With regard to the three information cards that you read at the beginning of this survey, how relevant would you say that they are to your opinion about alternative energy?

- Greatly informative
- Somewhat informative
- Not very informative
- Not informative at all
- Don't Know/Refused

Page 1 - Question 20 - Choice - One Answer (Bullets)

Generally speaking, do you consider yourself

- Strongly Democrat
- Moderately Democrat
- Strongly Republican
- Moderately Republican
- Independent
- Don't know/Refused

Page 1 - Question 21 - Choice - One Answer (Bullets)

We hear a lot of talk these days about liberals and conservatives. Would you consider yourself

- Extremely liberal
- Liberal
- Slightly liberal
- Moderate, middle of the road
- Slightly conservative
- Conservative
- Extremely conservative
- Don't know/Refused

Page 1 - Question 22 - Choice - One Answer (Bullets)

How would you describe your interest in politics in general? Would you say you are very much interested in politics, somewhat interested, or hardly interested at all?

- Very much interested
- Somewhat interested
- Hardly interested at all
- Don't know/Refused

Page 1 - Question 23 - Choice - One Answer (Bullets)

How many days in the PAST WEEK did you watch the news on TV?

- None
- One day
- Two days
- Three days
- Four days
- Five days
- Six days
- Every day
- Don't know/Refused

Page 1 - Question 24 - Choice - One Answer (Bullets)

How many days in the PAST WEEK did you read a daily newspaper?

- None
- One day
- Two days
- Three days
- Four days
- Five days
- Six days
- Every day
- Don't know/Refused

Page 1 - Question 25 - Choice - One Answer (Bullets)

How many days in the PAST WEEK did you listen to the news on the radio?

- None
- One day
- Two days
- Three days
- Four days
- Five days
- Six days
- Every day
- Don't know/Refused

Page 1 - Question 26 - Choice - One Answer (Bullets)

How many days in the PAST WEEK did you read or watch the news on the Internet (online)?

- None
- One day
- Two days
- Three days
- Four days
- Five days
- Six days
- Every day
- Don't know/Refused

Page 1 - Heading

Next, we would like to ask about whether you follow the news about a few issues. Not everyone will have followed these news stories. How about you?

Page 1 - Question 27 - Choice - One Answer (Bullets)

How closely would you say that you follow the news about alternative energy research?

- Very closely
- Closely
- Not very closely
- Do not follow at all

Page 1 - Question 28 - Choice - One Answer (Bullets)

How closely would you say that you follow the news about health care reform?

- Very closely
- Closely
- Not very closely
- Do not follow at all

Page 1 - Question 29 - Choice - One Answer (Bullets)

Which one of the following is the majority source of energy in today's world?

- Coal
- Oil
- Solar energy
- Natural gas
- Wind energy
- Don't know/Refused

Page 1 - Question 30 - Choice - One Answer (Bullets)

In your opinion, approximately how many years will the traditional energy sources such as coal and oil sustain our energy consumption?

- 10 Years
- 50 Years
- 100 Years
- 150 Years
- 200 years
- Don't Know/Refused

Page 2 - Question 31 - Choice - One Answer (Bullets)

Which one of the following is usually considered alternative or renewable energy?

- Natural gas
- Coal
- Solar energy
- Nuclear energy
- Don't Know/Refused

Page 2 - Question 32 - Choice - One Answer (Bullets)

Which of the following is an advantage of traditional fossil fuel based energies compared to alternative energy?

- Relatively easier to be stored for future use
- More environmental friendly
- Higher initial cost
- Don't Know/Refused

Page 2 - Question 33 - Choice - One Answer (Bullets)

Currently, about what percentage of world energy consumption is provided by alternative energy?

- 1 percent
- 10 percent
- 30 percent
- 50 percent
- 80 percent
- Don't know/Refused

Page 2 - Question 34 - Choice - One Answer (Bullets)

Did you participate in any discussions with someone close to you such as your family members, friends or co-workers, about alternative energy research in the past month?

- Yes
- No
- Don't know/Refused

Page 2 - Question 35 - Choice - One Answer (Bullets)

Did you participate in any discussions with someone close to you such as your family members, friends or co-workers, about health care reform in the past month?

- Yes
- No
- Don't know/Refused

Page 2 - Question 36 - Choice - One Answer (Bullets)

Do you happen to know who the Vice-President of the United States is?

- Donald Rumsfeld
- Dick Cheney/Richard Cheney
- Joe Biden
- Or it is someone else
- Don't Know/Refused

Page 2 - Question 37 - Choice - One Answer (Bullets)

Whose responsibility is it to determine whether a law is constitutional or not? Is it the President, the Congress, or the Supreme Court?

- the President
- the Congress
- the Supreme Court
- Don't Know/Refused

Page 2 - Question 38 - Choice - One Answer (Bullets)

How much of a majority is required for the U.S. House and Senate to override a presidential veto?

- Two thirds
- Four fifths
- Five Sixths
- Don't Know/Refused

Page 2 - Question 39 - Choice - One Answer (Bullets)

Do you happen to know which party currently has the most members in the House of Representatives in Washington?

- Democratic Party
- Republican Party
- Don't Know/Refused

Page 2 - Question 40 - Choice - One Answer (Bullets)

Which party is more conservative?

- Democrat Party
- Republican Party
- Don't Know/Refused

Page 2 - Question 41 - Choice - One Answer (Bullets)

What is your gender?

- Male
- Female

Page 2 - Question 42 - Choice - One Answer (Bullets)

What racial or ethnic group or groups best describes you?

- White
- African American/Black
- Asian or Pacific Islander
- Hispanic
- American Indian/Native American
- Other (Specify)
- Don't Know/Refused

Page 2 - Question 43 - Choice - One Answer (Bullets)

What is your highest level of education?

- Less than high school (K-12)
- High school grad
- Some college/community college/vocational school

- College graduate/undergraduate degree
- Post graduate work/graduate degree
- Don't know/ Refused

Page 2 - Question 44 - Choice - One Answer (Bullets)

What is your age? Please select from the following categories:

- 18-25 years old
- 26-30 years old
- 31-40 years old
- 41-50 years old
- 51-60 years old
- 60 or more years old
- Don't know/Refused

Page 2 - Question 45 - Choice - One Answer (Bullets)

What is the approximate household income range for your family?

- Less than 20,000
- 20,000 to less than 40,000
- 40,000 to less than 60,000
- 60,000 to less than 80,000
- 80,000 to less than 100,000
- 100,000 or more
- Don't Know/Refused

Thank You Page

You have now completed this study. Your responses will be kept confidential. None of them will be released in any way that would identify you as an individual. We greatly appreciate your participation in this study. If you have questions about this particular study, please contact the lead investigator – a Ph.D. candidate at the Department of Communication Studies by phone at 734-764-0420 or by email at yingq@umich.edu.

Screen Out Page

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Survey Closed Page

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III. Missing Data Treatment

Missing Data Treatment for Post-test Subjects

As with most studies involving a survey questionnaire, there are some missing data from the three experiments. The total number of participants (Ns) for the post-tests in Experiment 1 through 3 is 420, 423 and 424, respectively. There is a varying level of missing data for each question in the three post-test questionnaires. The number of complete answers for each question ranges from 358 to 413 for Experiment 1 questionnaire, 319 to 420 for Experiment 2 questionnaire, and 356 to 422 for Experiment 3 questionnaire.

Although the amount of missing data for each question is not large enough to raise serious concerns, the number of missing cases can be added up when many of the questions are used in the multiple regression analysis used for hypothesis testing. This may greatly reduce the power of this study to detect the effects from news exposure and specific information. Thus, it is reasonable and necessary to treat the missing data first.

Even though the most commonly used missing data treatment is multiple imputations, simpler methods, i.e., the mean imputation method and the logical recode of missing values, are used in this dissertation as the percentage of missing data is not very large.

The statistics for the raw data, mean imputed data, and logically recoded data for the dependent and the independent variable questions for each of the three experiments are listed in the tables on this webpage ([link to the page](#)) and can also be requested through the author. Due to page limit, these tables are not listed here in the dissertation.

For all three experiments, both the mean imputation method and the logical recode method increase the number of complete answers for each question in the three experiments. The mean values using the mean imputation method are the same as the raw data. The logical recode method tends to yield slightly higher means as compared to the raw and the mean imputed data. However, such differences across all questions are quite small. The standard deviations of the raw, mean imputed, and logically recoded measures are very close for each question. One pattern is that in a majority of questions, the mean imputed measures tend to have the lowest standard deviation. Overall, the two methods used for missing data treatment yield similar results. It should be equivalent to use values produced by either method.

For the dependent measures in these three experiments, if there is some mid-point in the response scale, the logical recode method is used for the missing values. In Experiment 1, such measures are Question 4, 5, and 7, each of which uses a five-point Likert scale as the response options, and Question 8, asking whether the nuclear threat issue can be resolved by peace talks. The mid-point of “Hard to say” is used for categorizing any missing answers. For the dependent variables in Experiment 2 and 3, all of the opinion questions have some mid-point, which indicates no preference for either direction of the attitude being measured. It seems that logically recoded data tend to have slightly better representation of the potentially mixed feelings about health care reform and are thus selected.

For the remaining two dependent measures from Experiment 1, Question 3, the feeling thermometer toward North Korea, and Question 6, intention of North Korea to use its nuclear capacity, mean imputation is used. For these two questions, there does not

seem to be a clear logical mid-point to be employed. Mean imputation, on the other hand, does seem reasonable to use.

For the independent measures in the three experiments, mean imputation is utilized for the issue salience measures (Question 9, 11, 13 and 15, Question 10, 12, 14 and 16, Question 8, 10, 12 and 14 in the three experiments, respectively), media exposure questions (Question 25 through 28, Question 26 through 30; Question 23 through 26, respectively), future terrorist attacks concerns (Question 17 in Experiment 1), political interest (Question 24, 25 and 22, respectively), follow-up of news report and discussions about the specific issue in the experiment (Question 29 and 36, Question 30 and 37, Question 27 and 34, respectively). For demographic variables such as gender, birth country of parents, education, age and income (Question 43, 45 through 48, Question 44 and 46 through 48, and Question 41, 43 through 45, respectively), mean imputation is also used.

A logical recode is used for party identification, ideology, and race (Question 22, 23 and 44 in Experiment 1, Question 23, 24 and 44 in Experiment 2 and Question 20, 21 and 22 in Experiment 3). “Independent” was assigned to missing values in the party ID question. “Neither liberal nor conservative” was assigned to missing values in political ideology. A racial category other than the provided categories was assigned to missing values in the race measure. A logical recode, i.e. “Neither approve or disapprove” is used for the Obama job approval (Question 22) in Experiment 2.

The treatment of missing cases for self-evaluations of effectiveness or relevance of news stories and information cards (Question 18 through 21 in Experiment 1 and 2, Question 16 through 19 in Experiment 2) is different for various experimental groups in

the study. For those respondents randomly assigned to groups in which no news story or information cards about the experimental issue were provided, their response to these questions are recoded to be zero, indicating the absence of opinions provided for these four questions. For those who viewed such news stories or information cards, mean imputation was used to replace any missing values in the response.

Missing Data Treatment for Pre-test Only Subjects and Panel Subjects

Missing data for the pre-tests of pre-test only and panel subjects are also treated before the panel data analysis regarding the effects of news and issue specific information is conducted. The two methods, mean imputation and logical replacement, are the same as what is used in the analysis of data for the post-test subjects. The raw score, the mean imputed score, and the logically replaced score of each question in the three experiments as well as their respective standard deviations are listed in the tables listed on this webpage ([link to the page](#)).

The number of respondents who participated in the pre-test of Experiment 1, 2 and 3 is 196, 203, and 192 respectively. Among these participants, 91, 95, and 95 participated only in the pre-test portion of the three experiments. The remaining participants (101 in Experiment 1, 108 in Experiment 2, and 97 in Experiment 3) continued to participate in the post-test portion of the studies. Thus, the size of the panel groups for the three experiments is 101, 108, and 97, respectively.

The number of complete responses to each of the questions in the pre-test questionnaire among pre-test only subjects ranges from 76 to 90 in Experiment 1, 75 to 93 in Experiment 2, and 78 to 95 in Experiment 3. The number of complete responses for

each question in the pre-test questionnaires among panel subjects range from 88 to 98 in Experiment 1, 74 to 95 in Experiment 2, and 71 to 89 in Experiment 3.

It is found that the mean and standard deviation of the three sets of scores are very similar and comparable. This is also true for both the pre-test only population and the panel subjects. If mean imputation is used for treating missing data for a question in the analysis of the post-test data, mean imputation is used again for the corresponding pre-test question answered by the pre-test only and the panel subjects. This is also the case when logically replaced scores are used. Please refer to the above section of Missing Data Treatment of Post-test Subjects for specific information about which method is used for each question.

IV. Descriptive Statistics

Detailed tables listing descriptive statistics for the dependent variables, independent variables, and covariates are available on this webpage ([link to the page](#)) and can be requested through the author.

Dependent Variable Measures and Scales Constructed

In Experiment 1 for the North Korean nuclear threat study, there are six questions in total that measure the opinions toward North Korea and its nuclear threat. The first (Question 3) is the feeling thermometer toward North Korea, with a response scale ranging from 0 to 100. The higher the score, the friendlier feeling one has toward North Korea. The mean response for this question is 17 points, which indicates unfriendly feelings toward this country overall.

Question 4, 5, and 7 ask whether North Korea poses a nuclear threat, whether it poses a danger to world peace, and whether its nuclear threat comes from potential involvement in the nuclear arms dealership. The first two of these three questions tap respondents' attitudes toward the nuclear threat issue in general, while the third one asks more specifically about a particular aspect from which the threat feeling comes. The response categories for these three questions are all 5-point Likert scales, with 1 being strongly agreeing with the opinion that North Korea poses a nuclear threat and 5 being strongly disagreeing. Thus, the lower the scores on these questions, the more of a threat that one would feel about North Korea. The mean responses for these three questions are 1.89, 1.89, and 1.94, respectively. These values indicate that an average response to these questions lies close to feeling North Korea poses a nuclear threat.

Question 6 asks about the intention of North Korea's use of its nuclear capacity. The response categories range from posing a real threat, getting financial aid, both or neither of these two intentions. The mean response to this question is 2.37, which means that the respondents tend to identify North Korea's intention to be both posing a real threat and getting financial aid. When asked about whether such a threat can be resolved by peace talks (Question 8), the respondents tend to have a feeling between "no" and "hard to say" as the mean score for this question is 1.74.

As there are multiple questions that measure the same conceptual construct for the dependent variable in Experiment 1, scale constructions were conducted to see if these measures can be combined in some way. Exploratory factor analysis was conducted. Question 4, 5, and 7 tend to form a scale of North Korea Nuclear Threat Opinions, with Cronbach's alpha equal to 0.88. The range of normalized values for this scale is from -1.28 to 3.14, with higher values representing less feelings of nuclear threat posed by North Korea (See Table A-1 below).

The feeling thermometer (Question 3), North Korea's nuclear intent (Question 6), and resolution of this nuclear issue (Question 8) are not highly correlated with the North Korea Nuclear Threat Opinions scale. Nor do they form a scale of their own with a high Cronbach's alpha. So these three questions are used separately in the hypothesis testing process. This scale pattern of the six questions measuring dependent variables remains consistent when tested using the pre-test data of the same study.

Table A-1. Scale Construction: Dependent Variables for Post-test

Scale	Construction	Factors Extracted (Eigenvalue >= 1)	Cronbach's alpha
North Korea Nuclear Threat (-1.28 to 3.14, higher score, less agreement)	Exploratory Factor Analysis of Q4, 5 and 7*	1	0.88

*Confirmatory factor analysis using pre-test dataset yields similar factor pattern. One factor is extracted in the confirmatory factor analysis with variance explained equal to 2.26.

**Q3, Q6, and Q8 are used as separate dependent measures in model building.

In Experiment 2 about Health Care Reform, there are nine questions measuring opinions about this reform (See Appendix). Question 1 through 7 ask about general or specific favorability toward the reform, such as opinions about universal coverage, having both public and private health insurance options, or about favorability toward a single payer system. Question 8 and 9 ask the respondents whether they think the reform would be beneficial to the American people or the economy.

When missing data were assigned logically, 38% of the participants generally favor the reform, while 43% oppose. About 19% have no opinion on this question (Question 1). When asked about favorability of universal coverage (Question 2), 56% of the participants are in favor, 27% oppose, and 17% are in the middle. A slight majority (56%) of the participants indicated that they would favor a health care system with both private and public health insurance, while 22% oppose, and 22% have no opinion on this (Question 3). More people think that the U.S. should not follow a few European countries to have a single payer system (45% versus 30% who favor such a move). As for requiring employers to pay a fee if they do not provide health insurance, 50% either strongly favor or favor this. About 39% said they oppose or strongly oppose (Question 5). Considerably more respondents said that they oppose or strongly oppose cutting Medicare cost to save money to finance the reform (47% versus 26% who either favor or strongly favor,

Question 6). On the contrary, more respondents favor increasing taxes on upper income Americans (43%) as compared to 23% who oppose or strongly oppose this option to finance the reform. When asked whether the reform would benefit the American people (Question 8) and the economy (Question 9), more respondents think that it would benefit the American people (23%) than the economy (13%).

Exploratory factor analysis of the dependent variable questions yielded two factors (see Table A-2), favorability of the health care reform in general (Q1-Q5, Q7-Q9) and favorability of financing the reform by cutting Medicare costs (Q6). The favorability of the health care reform in the general scale has a range of -1.72 to 2.10, with a higher score indicating less favorable attitudes. The Cronbach's alpha is 0.89, suggesting that the scale has relatively high reliability. The favorability of financing the reform by cutting Medicare costs loads almost solely on Question 6. It has a range of -2.57 to 2.12, with higher scores also indicating lower favorability.

Table A-2. Scale Construction: Dependent Variables for Post-test Respondents

Scale	Construction	Factors Extracted (Eigenvalue >= 1)	Cronbach's alpha
1. General Favorability of Health Care Reform (Q1-Q5, Q7-Q9) (-1.72 to 2.10, higher score, less agreement)	Exploratory Factor Analysis of Q1-Q9*	2	0.89
2. Favorability of Health Care Reform by Cutting Medicare Costs (Q6) (-2.57 to 2.12, higher score, less agreement)	Exploratory Factor Analysis of Q1-Q9*	2	N.A.

*Confirmatory factor analysis using pre-test dataset yields 1 factor for the nine dependent variable measures. The Cronbach's alpha for all dependent questions is 0.87 in both wave 1 and wave 2 datasets. Both 2 factors extracted and 1 factor extracted based on exploratory and confirmatory factor analysis are used for hypothesis testing.

In Experiment 3 about Alternative Energy Research, seven questions were asked about opinions on alternative energy research (See Appendix II). About the same

proportion of the participants think that traditional energy will run out soon or be sustained for a long time (40% vs. 44%). About 16% have no opinion on this question (Question 1).

When asked about whether alternative energy is a better source as compared to traditional energy (Question 2), 62% think it is better while 19% think otherwise. About 20% think the two sources are the same.

About 63% of the respondents prefer that the government increase financial support for producing alternative energy. Only 8% think that such support should be decreased and 29% prefer no change (Question 3). The preference for the government to increase support for producing traditional energy only gained support from 17% of the respondents, while 37% prefer decreasing such support and 46% prefer no change (Question 4).

A majority of the respondents think that alternative energy research is beneficial to the environment (77%, Question 5) and to the economy (66%, Question 6). Only 3% or 7% of them think that alternative energy research is harmful to the environment or the economy, respectively. The remaining respondents think that it is neither beneficial nor harmful (21% and 27%, respectively, for Question 5 and 6).

When asked if they would support a gas tax increase to support alternative energy research and production, 13% of the respondents said they would definitely support it. About 29% said they would support. In addition, 48% said they would not support such a tax increase (including 24% definitely not support and another 24% not support). Ten percent of the respondents have missing values on this question. They were assigned to a mid-point value of 2.5.

Exploratory factor analysis of the dependent variable questions yielded two factors (see Table A-3), support for alternative energy (Question 2, 3, 5 to 7) and support for traditional energy (Question 1 and 4).

The support for alternative energy has a range of -1.40 to 3.41, with a higher score indicating less support. The Cronbach's alpha is 0.83, suggesting that the scale has relatively high reliability. The support for traditional energy has a range of -2.16 to 2.32, with higher scores also indicating less support and a Cronbach's alpha of 0.68.

Table A-3. Scale Construction: Dependent Variables for Post-test Respondents

Scale	Construction	Factors Extracted (Eigenvalue ≥ 1)	Cronbach's alpha
1. Support for Alternative Energy (Q2, 3, 5-7, -1.40 to 3.41, higher score, less support)	Exploratory Factor Analysis of Q1-Q7*	2	0.83
2. Support for Incentives for Traditional Energy (Q1 and 4, -2.16 to 2.32, higher score, more support)	Exploratory Factor Analysis of Q1-Q7*	2	0.68

*Confirmatory factor analysis using pre-test dataset also yields 2 factors for the nine dependent variable measures, with Q1 to Q3, Q5 to Q7 loading on the first factor and Q4 loading on the second factor.

Independent Variable Measures and Scales Constructed

An average respondent feels that the issue discussed in the experiment in which he or she participates is somewhat interesting, may somewhat affect him/her personally, and is relatively easy to understand and somewhat important. The mean values for the four corresponding questions are 1.91, 2.32, 2.35, and 1.52 (Question 9, 11, 13 and 15 in Experiment 1); 2.03, 1.77, 2.79, and 1.44 (Question 10, 12, 14 and 16 in Experiment 2); and 1.75, 1.91, 2.18, and 1.43 (for Question 8, 10, 12, and 14 in Experiment 3).

The mean values for following news about the issue in the respective study, Question 29 for Experiment 1, Question 30 for Experiment 2, and Question 27 in Experiment 3) fall between “follow closely” and “does not follow closely”. The mean

values for the participation in discussion of each issue in the three experiments is 1.86, 1.42 and 1.66, respectively, with 1 being some discussion and 2 being no discussion.

The relative reliance on news media sources for issue specific news (TV, the Internet, newspapers or radio) is similar among participants in the three experiments. The mean values for the four media exposure questions (Question 25 through 28, Question 26 through 29, Question 23 through 26 in Experiment 1, 2, and 3) are 5.38, 4.69, 4.11, and 3.64 in Experiment 1, 5.98, 4.17, 3.86, and 4.31 in Experiment 2 and 5.53, 3.86, 3.60, and 4.49 in Experiment 3. All of these news source questions are on a scale of 0 to 7, representing the number of days with exposure to each of the four types of news media. TV still remains the top source of news for an average citizen, followed by news on the Internet, then newspapers, and then radio.

The distribution of party ID and political ideology (Question 22 and 23 in Experiment 1, Question 23 and 24 in Experiment 2, and Question 20 and 21 in Experiment 3) is as follows. About 10%, 10%, and 12% said that they are strong Democrats in these three experiments, respectively. 22%, 20% and 23% said they are moderate Democrats. About 41%, 47%, and 36% are Independent, including those who said they are Independent and those who have missing values for this question. The percentages of moderate and strong Republicans are 12% and 15% in Experiment 1, 9% and 13% in Experiment 2, and 12% and 17% in Experiment 3.

As for the political ideology of the participants in Experiment 2 and 3 (Question 24 and 21), 24% and 30% indicated that they are liberals (including extremely liberal, liberal and slightly liberal). About 39% and 30% said that they are in the middle category

in terms of ideology, including those who were assigned to be in this middle category. Thirty-five percent and 40% said that they are conservatives.

The mean values for political interest (Question 24, 25, and 22 in Experiment 1, 2 and 3) are 1.86, 1.87, and 1.88, suggesting that an average respondent feels very interested or interested in politics in general. The level of reported political interest is very similar among the three groups of participants.

An important control question for the opinions about the North Korean nuclear threat asks about respondents' concerns about future terrorist attacks (Question 17). The mean value for this question is 2.03 on a scale of 1 to 4, with 1 being very much worried and 4 being not worried at all. Similarly, presidential job approval (Question 22) is asked in Experiment 2 as an important control question. The mean value for this question is 3.18 on a scale of 1 to 5, with 1 being strongly approve and 5 being strongly disapprove. As the mean value is very close to the mid-point on the scale of "Neither approve nor disapprove," the general public is rather divided in their evaluations of the president.

The demographic characteristics of the participants in the three experiments are comparable. About 58% of the respondents in this study are male and 42% are female in Experiment 1. In Experiment 2, the percentages are 52% and 48%. In Experiment 3, the percentages are 53% and 47%.

A majority of the respondents are White (84%, 82%, and 83% in Experiment 1, 2 and 3 respectively). Three, six and five percent of the respondents in the three studies are African Americans, 5%, 2%, and 4% Asian or Pacific Island, 4%, 4%, and 3% Hispanic, 0.2%, 2%, and 1% American Indian/Native American and 4%, 1%, and 6% other race. In Experiment 1, 84% of the respondents' parents were born in this country.

As far as education is concerned, 3%, 2%, and 2% have less than a high school education in Experiment 1, 2 and 3 respectively, 15%, 16%, and 19% are high school graduates, 34%, 29%, and 32% have some college, 29%, 33%, and 30% are college graduates, and 19%, 18%, and 14% have done postgraduate work.

In terms of age, 11%, 9%, and 13% belong to the age group of 18 to 25 years old, 9%, 8%, and 11% are from the 26 to 30 years old group, 22%, 18%, and 18% are between 31 to 40 years old, 18%, 22%, and 19% belong to the 41 to 50 years old group. Fifteen, sixteen and thirteen percent are from 51 to 60 years old, and 25%, 25%, are 60 or older in all of the three experiments.

As for annual household income, 12%, 8%, and 11% reported less than \$20,000 of annual income, 21%, 24%, and 26% said that their income is between \$20,000 and less than \$40,000, 20%, 22%, and 17% said it is between \$40,000 and less than \$60,000, 19%, 12% ,and 14% are between \$60,000 and \$80,000, 12%, 7%, and 6% are between \$80,000 and \$100,000, and 16%, 12%, and 15% said they earn \$100,000 or more each year.

As for self-evaluations of effectiveness or relevance of news stories and information cards about the specific issue (Question 18 through 21 in Experiment 1 and 2, Question 16 through 19 in Experiment 3), those respondents, who are randomly assigned to groups in which no news story or information cards about the issue are provided, have their response to these questions recoded as zero (indicating no attitude is expressed). For those who viewed such news stories or information cards, the mean values for these four questions indicate that the news stories and information cards are not considered to have strong effects or relevance on opinions (1.79, 2.03, 1.34, and 1.04, respectively, in

Experiment 1; 1.67, 2.02, 1.48, and 1.39 in Experiment 2 and 1.77, 1.93, 1.61, and 1.53 in Experiment 3) The response categories are 1 (not at all) through 4 (very much).

Exploratory factor analysis is used to construct the issue salience scale and the media exposure scale (see Table A-4, A-5 and A-6). The issue salience scale is constructed by extracting one factor from four questions in each experiment (Question 9, 11, 13, and 15, Question 10, 12, 14 ,and 16, Question 8, 10, 12, and 14 in the three Experiments respectively). The Cronbach’s alpha’s for the three issue salience scales are 0.63, 0.54 and 0.66 for the three experiments, respectively. The ranges are -1.67 to 3.81, -1.67 to 3.81 and -1.55 to 3.67, respectively, with higher scores representing less issue salience overall for the respondents.

Table A-4. Scale Construction: Independent Variables for Post-test Respondents

Scale	Construction	Factors Extracted (Eigenvalue ≥ 1)	Cronbach’s alpha
Issue Salience (-1.90 to 3.25, higher score, less salient)	Exploratory Factor Analysis of Q9, 11, 13, and 15*	1	0.63
Media Exposure (-1.90 to 1.94, higher score, more exposure)	Exploratory Factor Analysis of Q25-Q28**	1	0.61

*Confirmatory factor analysis using pre-test dataset suggests that two factors are extracted for these four questions. Variance explained for these two factors are 1.86 and 1.03. Q9, 11, and 15 load mostly on the first factor, while Q13 loads mostly on the second factor.

**Confirmatory factor analysis using pre-test dataset yields a similar factor pattern. One factor is extracted in the confirmatory factor analysis with variance explained equal to 1.77.

Table A-5. Scale Construction: Independent Variables for Post-test Respondents

Scale	Construction	Factors Extracted (Eigenvalue ≥ 1)	Cronbach's alpha
Issue Saliency (-1.67 to 3.81, higher score, less salient)	Exploratory Factor Analysis of Q10, 12, 14, and 16*	1	0.54
Media Exposure (-2.06 to 1.88, higher score, more exposure)	Exploratory Factor Analysis of Q26-Q29**	1	0.57

*Confirmatory factor analysis using pre-test dataset suggests that two factors are extracted for these four questions. Variance explained for these two factors are 1.68 and 1.01. Q10, 12, and 16 load mostly on the first factor, while Q14 loads mostly on the second factor.

**Confirmatory factor analysis using pre-test dataset yields a similar factor pattern. One factor is extracted in the confirmatory factor analysis with variance explained equal to 1.68.

Table A-6. Scale Construction: Independent Variables for Post-test Respondents

Scale	Construction	Factors Extracted (Eigenvalue ≥ 1)	Cronbach's alpha
Issue Saliency (-1.55 to 3.67)	Exploratory Factor Analysis of Q8, 10, 12 and 14*	1	0.66
Media Exposure (-1.87 to 2.01)	Exploratory Factor Analysis of Q23-Q26**	1	0.56

*Confirmatory factor analysis using pre-test dataset yields a similar factor pattern. One factor is extracted in the confirmatory factor analysis with variance explained equal to 2.60.

**Confirmatory factor analysis using pre-test dataset yields a similar factor pattern. One factor is extracted in the confirmatory factor analysis with variance explained equal to 1.77.

The confirmatory factor analysis using the pre-test dataset of Experiment 1 and 2 yields a slightly different factor pattern for the issue saliency questions. Two factors are extracted from the four questions in each study. In Experiment 1, Question 9, 11, and 15 load heavily on one factor, while Question 13 acts as the other factor. Similarly, Question 10, 12, and 16 loaded heavily on one factor, while Question 14 acts as the other factor in Experiment 2. Question 13 in Experiment 1 and Question 14 in Experiment 2 both ask about the ease of understanding the specific issue. Thus, they may be somewhat different conceptually with the other three issue saliency questions. However, the Cronbach's

alpha for the scale constructed using Question 9, 11, and 15 is only 0.68, not much higher than the scale constructed using the four questions. The confirmatory factor analysis using the pre-test dataset of Experiment 3 yielded one factor from the four issue salience questions, similar to the exploratory factor analysis conducted above. Thus, in the following analysis, the one factor issue salience scale is applied.

One factor was extracted for media exposure questions in each of the three experiments (Question 25 through 28, Question 26 through 30; Question 23 through 26, respectively). The Cronbach's alpha is 0.61, 0.57, and 0.56 respectively for the scales formed. The confirmatory factor analysis using the pre-test dataset yielded the same factor pattern. The ranges of values for these scale are -1.90 to 1.94, -2.06 to 1.88, and -1.87 to 2.01, with higher values indicating more exposure to the four types of news media overall.

In each of the three experiments, the information and political knowledge scales were constructed by taking the average of the number of correct answers to the five specific information questions and general knowledge questions, respectively (see Table A-7, A-8, and A-9). The information scale has a range of 0 to 1, with 1 being correct in all five information questions and 0 being incorrect in all of the five questions. The mean values for the information scales in the three experiments are 0.47, 0.44, and 0.62. These mean values suggest that an average respondent knows the correct answers to roughly 2 to 3 questions out of the 5 questions about one of the three issues. Respondents are somewhat more informed about the alternative energy issue than the North Korean nuclear threat or health care reform, suggesting that there may be some issue differences in specific information levels. On the same scale of 0 to 1, the mean value for political

knowledge is 0.78, 0.75, and 0.77, all of which are higher than the mean values of the information scale. It shows that an average respondent could score four out of the five knowledge questions correctly. The political knowledge level in the respondents who participated in the three different studies is about the same.

In addition, the three knowledge scales from the three experiments have a Cronbach's alpha of 0.76, 0.77, and 0.75 as compared to those for the three information scales of 0.51, 0.52, and 0.47. This indicates that the scale construction for political knowledge is relatively well tested with previous research (Delli Carpini & Keeter, 1996), while information questions for forming the scales still need additional testing for improving reliability and validity.

Table A-7. Scale Construction: Moderators for Post-test Respondents: Information and Political Knowledge

Scale	Construction	Mean Value (SE)	Cronbach's alpha
Information (0 to 1, higher score, more informed)	Average of Q31-Q35*	0.47 (0.28)	0.51
Knowledge (0 to 1, higher score, more knowledge)	Average of Q38-Q42*	0.78 (0.29)	0.76

*Answers to these factual questions were recoded to be 1 if they are correct, 0 if incorrect first.

Table A-8. Scale Construction: Moderators for Post-test Respondents: Information and Political Knowledge

Scale	Construction	Mean Value (SE)	Cronbach's alpha
Information (0 to 1, higher score, more informed)	Average of Q32-Q36*	0.44 (0.27)	0.53
Knowledge (0 to 1, higher score, more knowledge)	Average of Q39-Q43*	0.75 (0.31)	0.77

*Answers to these factual questions were recoded to be 1 if they are correct, 0 if incorrect first.

Table A-9. Scale Construction: Moderators for Post-test Respondents: Information and Political Knowledge

Scale	Construction	Mean Value (SE)	Cronbach's alpha
Information (0 to 1, higher score, more informed)	Average of Q29-Q33*	0.62 (0.26)	0.47
Knowledge (0 to 1, higher score, more knowledge)	Average of Q36-Q40*	0.77 (0.29)	0.75

*Answers to these factual questions were recoded to be 1 if they are correct, 0 if incorrect first.

The information scale and the knowledge scale have a statistically significant correlation of 0.50 at the alpha level of 0.05 for the North Korean nuclear threat (See Table A-10). This correlation pattern is also consistent across the other two studies in this dissertation research, with 0.43 for the Health Care Reform study and 0.49 for the Alternative Energy study. Both correlations are also significant at the 0.05 level. Given the similarity of these three issues in terms of their salience in the news media, it would still require more extensive testing using issues that are less salient in the media to be conclusive about whether or not general political knowledge and specific information are consistently correlated.

Table A-10. Correlation between Information and Knowledge Measures

Issues	Correlation between Information and Knowledge
North Korea Nuclear Threat	0.50**
Health Care Reform	0.43**
Alternative Energy	0.49**

**Significant at 0.05 level

Comparison of Pre-test Only and Panel Subjects

There are 192, 203, and 192 subjects who completed the pre-test of Experiment 1, 2, and 3. Only 101, 108, and 97 of those who completed the pre-test of these three experiments finished the post-test of the respective study. About 47% to 49% of the subjects chose to drop out of the study in which they completed the pre-test. A comparison of pre-test only and panel subjects was conducted to see if there are significant differences in these two groups in each of the experiments. The means and standard deviations of the responses to the pre-test questionnaires for these two groups of subjects are listed in Table E1MD-3 and E1MD-4 for Experiment 1, Table E2MD-3, and E2MD-4 for Experiment 2, and Table E3MD-3 and E3MD-4 and Experiment 3 (see Tables on this webpage ([link to the page](#))).

The mean values for the dependent variables (Question 3 through 8 in Experiment 1, Question 1 through 9 in Experiment 2 and Question 1 through 7 in Experiment 3) are very close for the pre-test only subjects and the panel subjects (Table E1MD-3, E2MD-3 and E3MD-3). In Experiment 1, the difference in the means of Question 3, the feeling thermometer, for these two groups of subjects is 1.56 on a scale of 0 to 100, a very small difference. For Question 4 through 8, the mean differences are smaller than 0.10 on scales of 1 to 3, 1 to 4 or 1 to 5.

In Experiment 2 and 3, the magnitude of differences in the means of the dependent questions ranges from 0 to 0.27, and 0.03 to 0.24. The largest mean difference in Experiment 2, 0.27, is between responses to Question 5, the agreement to requiring the employer to pay a fee if they do not provide health insurance, by the pre-test only subjects and the panel subjects. The response category of this question is a five-point

Likert scale. Given the standard deviations for the two means are 1.14 and 1.16, a difference of 0.27 is not very large. In Experiment 3, the largest mean difference, 0.34, is between responses to Question 7, whether or not the respondent would support increasing the gas tax to subsidize alternative energy research. The response category of this question is on a four-point scale. Again, given the standard deviations for the two means are 1.05 and 1.04, a difference of 0.27 is not very large.

Pre-test only subjects are also very comparable to panel subjects in terms of their responses to issue salience questions (Question 9, 11, 13 and 15, Table E1MD-4; Question 10, 12, 14, and 16, Table E2MD-4; Question 8, 10, 12, and 14, Table E3MD-4), worrying about future terrorist attacks (Question 17, Table E1MD-4), presidential job approval (Question 20, Table E2MD-4), political predispositions (Question 20, 21, and 22, Table E1MD-4; Question 21, 22 and 23, Table E2MD-4; Question 18, 19, and 20, Table E3MD-4), and following the news and participation in discussion about the issue in the respective experiments (Question 28 and 36, Table E1MD-4; Question 30 and 37, Table E2MD-4; Question 25 and 32, Table E3MD-4).

As for self-reported media exposure, these two groups of subjects are comparable for the amount of TV news exposure (Question 23) in Experiment 1, the amount of news exposure from newspaper, radio, and the Internet (Question 25, 26, and 27) in Experiment 2, and the amount of news exposure from TV, radio and the Internet (Question 21, 23, and 24) in Experiment 3. However, panel subjects seem to have somewhat more news exposure from radio, newspaper and the Internet (Question 24 through 26) in Experiment 1. The largest difference, 1.08 on a scale of 1 to 7, was found for receiving news from the Internet (Question 26). In Experiment 2, panel subjects seem

to get more TV news exposure (Question 24, Table E2MD-4). A mean difference of 0.69, on a scale of 1 to 7, is found for watching TV news. In Experiment 3, pre-test only subjects seem to get more newspaper exposure (Question 22, Table E3MD-4). A mean difference of 0.58, on a scale of 0 to 7, is found for watching TV news.

As demographic questions, such as gender, race, education, and income, were not asked during the pre-test in all three experiments, it is not possible to compare the demographics of the two groups of subjects.

Comparison of Pre-test and Post-test Responses for Panel Subjects

The differences between the pre-test and post-test responses for panel subjects are calculated and presented in Table E1MD-5 and E1MD-6 for Experiment 1, Table E2MD-5 and E2MD-6 for Experiment 2, and Table E3MD-5 and E3MD-6 for Experiment 3. The magnitude of change in the dependent variables is relatively small on all of the dependent questions in the three studies. None of the changes reached statistical significance at the 0.10 level.

The responses to the independent variables during the pre-test and the post-test do not differ too much from each other either, with the largest mean difference being 0.32, -0.32 and -0.15 on a scale of 0 to 7 with the standard deviation being 1.89, 1.83, and 2.07 for Experiment 1, 2 and 3, respectively (Question 24, 29 and 24, the number of days reading a newspaper). This suggests that the independent measures are not subject to large random variation when repeatedly tested.

V. Tables of Results

Study 1: North Korea Nuclear Threat (Wave 2)

Table A-11. Regression Results for Panel Respondents

Independent Variables	Dependent Variables											
	North Korea Nuclear Threat Scale (-1.28 to 3.14, higher score, less agreement) (N=101, R ² =0.19)			Feeling Thermostat toward North Korea (0-100) (N=101, R ² =0.28)			Q.6-Recoded---NK Intension to use nuclear capacity? (1=pose threat 2=both 3=get financial aid 4=neither) (N=101, R ² =0.20)			Q.8-Recoded---NK nuclear issue resolved by peace talks? (1=No, 2=Hard to say, 3=Yes) (N=101, R ² =0.21)		
	β	SE	p	β	SE	p	β	SE	p	β	SE	p
Pre-test score in dependent variable	1.00	n.a.	n.a.	1.00	n.a.	n.a.	1.00	n.a.	n.a.	1.00	n.a.	n.a.
Intercept	1.19	1.04	0.26	-24.32	25.4	0.34	-1.55	1.03	0.14	-0.54	0.78	0.49
News Story Stimuli (1=North Korea Posing a Threat Story, -1=North Korea No Longer a Threat Story, 0=No North Korea Story)	-0.05	0.16	0.76	-8.01	3.92	0.04	0.04	0.16	0.81	-0.09	0.12	0.46
Information Card on North Korea Stimuli (0=without card 1=with card)	-0.28	0.93	0.76	6.63	22.6	0.77	-0.5	0.92	0.59	-0.05	0.7	0.95
Interaction	-0.09	0.24	0.70	4.58	5.77	0.43	-0.03	0.23	0.90	-0.04	0.18	0.83
Difference in Information Scale (0-1)	0.38	0.45	0.39	-11.94	10.91	0.28	-0.3	0.44	0.50	-0.25	0.34	0.46
Political Knowledge (0-1)	-0.28	0.43	0.51	16.61	10.47	0.12	0.02	0.43	0.97	0.42	0.32	0.20
Media Exposure Scale (-1.90 to 1.94)	-0.11	0.14	0.46	1.16	3.49	0.74	0.17	0.14	0.25	-0.05	0.11	0.65
Issue Salience Scale (-1.90 to 3.25)	0.19	0.16	0.23	0.05	3.8	0.99	0.07	0.15	0.64	-0.07	0.12	0.53
Q.17---Worry about terrorist attack in general (1=Very much through 4=Not at all)	-0.36	0.16	0.03	2.15	4.01	0.59	-0.08	0.16	0.61	0.08	0.12	0.51
Q.29---how closely one follows news about NK (1=Very closely through 4=Does not follow at all)	-0.03	0.17	0.85	-3.32	4.05	0.41	-0.11	0.16	0.51	-0.02	0.12	0.86

Q.36---Participation in discussion about NK (1=Yes and 0=No)	-0.18	0.28	0.51	8.98	6.87	0.20	0.49	0.28	0.08	0.06	0.21	0.76
Q.18 Recoded---news story affects one's own opinion (0 for news control groups, 1 for not at all, to 4 for very much)	-0.14	0.2	0.48	3.13	4.84	0.52	-0.06	0.2	0.75	0.36	0.15	0.02
Q.19 Recoded---news story affects others' opinion (0 for news control groups, 1 for not at all, to 4 for very much)	0.09	0.18	0.64	-4.2	4.47	0.35	0.04	0.18	0.84	-0.37	0.14	0.01
Q.20--- Recoded Information cards informative (0 for information control groups, 1 for not at all, to 4 for very much)	0.06	0.29	0.84	-12.87	6.95	0.07	-0.02	0.28	0.93	0.07	0.21	0.73
Q.21--- Recoded Information cards relevant (0 for information control groups, 1 for not at all, to 4 for very much)	-0.03	0.25	0.90	12.94	5.98	0.03	0.2	0.24	0.41	-0.03	0.18	0.88
Q.22---Recoded---Party ID (1=Strongly Democrat through 5=Strongly Republican)	0.13	0.1	0.21	-0.32	2.47	0.90	0.15	0.1	0.14	-0.09	0.08	0.24
Q.23---Ideology (1=Extremely liberal through 7=Extremely conservative)	-0.02	0.08	0.76	3.64	1.83	0.05	0	0.07	0.96	0.03	0.06	0.64
Q.24---Political interest (1=Very much interested through 3=Hardly interested at all)	-0.24	0.19	0.20	-1.21	4.55	0.79	0.28	0.19	0.13	0	0.14	0.98
Q.43---Gender (1=Male and 2=Female)	0.08	0.24	0.74	-1.29	5.74	0.82	-0.02	0.23	0.94	0.14	0.18	0.42
Q.44---Race (1=White, 2=African American/Black, etc)	-0.01	0.09	0.91	-1.3	2.12	0.54	-0.1	0.09	0.26	-0.04	0.07	0.55
Q.45---Parents born in the country or not (1=Yes and 2=No)	0.31	0.3	0.31	2.79	7.42	0.71	0.39	0.3	0.20	0.07	0.23	0.75
Q.46---Education (1=Less than high school through 5=Post graduate work)	0.01	0.12	0.91	-1.55	2.9	0.60	0.21	0.12	0.08	0.07	0.09	0.45
Q.47---Age (1=18-25 through 6=60 or older)	-0.07	0.07	0.36	-1.1	1.77	0.54	-0.05	0.07	0.46	-0.03	0.05	0.57
Q.48---Income (1=Less than 20,000 through 6=100,000 or more)	0.06	0.07	0.39	-0.2	1.7	0.91	-0.2	0.07	0.00	-0.03	0.05	0.62

**Significant at 0.05 level. *Significant at 0.10 level.

Table A-12. Regression Results for Panel Respondents: Continued

Independent Variables	Dependent Variables								
	Q.4---NK posing a nuclear threat (1=Strongly agree, through 5=Strongly disagree) (N=101, R ² =0.27)			Q.5---NK a danger to world peace (1=Strongly agree, through 5=Strongly disagree) (N=101, R ² =0.15)			Q.7---NK threat due to nuclear arms dealership (1=Strongly agree, through 5=Strongly disagree) (N=101, R ² =0.22)		
	β	SE	p	β	SE	p	β	SE	p
Pre-test score in dependent variable	1.00	n.a.	n.a.	1.00	n.a.	n.a.	1.00	n.a.	n.a.
Intercept	0.99	0.82	0.23	-0.01	0.99	0.99	1.47	0.89	0.10
News Story Stimuli (1=North Korea Posing a Threat Story, -1=North Korea No Longer a Threat Story, 0=No North Korea Story)	-0.02	0.13	0.90	-0.08	0.15	0.60	-0.01	0.14	0.95
Information Card on North Korea Stimuli (0=without card 1=with card)	-0.26	0.73	0.72	-0.18	0.88	0.84	-0.23	0.79	0.77
Interaction	-0.13	0.19	0.48	-0.06	0.23	0.80	0	0.2	1.00
Information Scale (0-1)	0.2	0.35	0.57	0.3	0.43	0.48	0.33	0.38	0.40
Political Knowledge (0-1)	-0.13	0.34	0.71	-0.26	0.41	0.53	-0.2	0.37	0.59
Media Exposure Scale (-1.90 to 1.94)	-0.19	0.11	0.09	-0.02	0.14	0.91	0	0.12	0.99
Issue Salience Scale (-1.90 to 3.25)	0.05	0.12	0.66	0.17	0.15	0.27	0.18	0.13	0.19
Q.17---Worry about terrorist attack in general (1=Very much through 4=Not at all)	-0.43	0.13	0.00	-0.18	0.16	0.27	-0.13	0.14	0.38
Q.29---how closely one follows news about NK (1=Very closely through 4=Does not follow at all)	0.01	0.13	0.93	-0.04	0.16	0.78	-0.03	0.14	0.84
Q.36---Participation in discussion about NK (1=Yes and 0=No)	-0.11	0.22	0.62	-0.2	0.27	0.47	-0.11	0.24	0.66
Q.18 Recoded---news story affects one's own opinion (0 for news control groups, 1 for not at all, to 4 for very much)	-0.26	0.16	0.09	-0.11	0.19	0.56	0.08	0.17	0.65
Q.19 Recoded---news story affects others' opinion (0 for news control groups, 1 for not at all, to 4 for very much)	0.19	0.14	0.19	0.11	0.17	0.54	-0.12	0.16	0.46
Q.20--- Recoded Information cards informative (0 for information control groups, 1 for not at all, to 4 for very much)	-0.08	0.22	0.73	0.02	0.27	0.93	0.22	0.24	0.37

Q.21--- Recoded Information cards relevant (0 for information control groups, 1 for not at all, to 4 for very much)	0.12	0.19	0.54	0.01	0.23	0.98	-0.21	0.21	0.31
Q.22---Recoded---Party ID (1=Strongly Democrat through 5=Strongly Republican)	0.05	0.08	0.50	0.11	0.1	0.24	0.09	0.09	0.28
Q.23---Ideology (1=Extremely liberal through 7=Extremely conservative)	0	0.06	0.95	0.02	0.07	0.76	-0.07	0.06	0.28
Q.24---Political interest (1=Very much interested through 3=Hardly interested at all)	-0.1	0.15	0.49	-0.2	0.18	0.27	-0.2	0.16	0.22
Q.43---Gender (1=Male and 2=Female)	0.08	0.19	0.65	0.27	0.22	0.24	-0.19	0.2	0.34
Q.44---Race (1=White, 2=African American/Black, etc)	-0.01	0.07	0.83	-0.05	0.08	0.54	0.05	0.07	0.48
Q.45---Parents born in the country or not (1=Yes and 2=No)	0.13	0.24	0.60	0.31	0.29	0.29	0.19	0.26	0.46
Q.46---Education (1=Less than high school through 5=Post graduate work)	0.01	0.09	0.93	0.15	0.11	0.20	-0.13	0.1	0.19
Q.47---Age (1=18-25 through 6=60 or older)	-0.04	0.06	0.48	-0.07	0.07	0.32	-0.03	0.06	0.62
Q.48---Income (1=Less than 20,000 through 6=100,000 or more)	0.06	0.05	0.30	0.01	0.07	0.83	0.06	0.06	0.31

**Significant at 0.05 level. *Significant at 0.10 level.

Table A-13. Regression Results for post-test respondents

Independent Variables	Dependent Variables											
	North Korea Nuclear Threat Scale (-1.28 to 3.14, higher score, less agreement) (N=420, R ² =0.41)			Feeling Thermostat toward North Korea (0-100) (N=420, R ² =0.21)			Q.6-Recoded---NK Intension to use nuclear capacity? (1=pose threat 2=both 3=get financial aid 4=neither) (N=420, R ² =0.17)			Q.8-Recoded---NK nuclear issue resolved by peace talks? (1=No, 2=Hard to say, 3=Yes) (N=420, R ² =0.10)		
	B	SE	p	B	SE	p	B	SE	p	B	SE	p
Intercept	0.79*	0.44	0.08	38.05**	10.04	<0.001	2.31	0.43	<0.001	2.14	0.34	<0.001
News Story Stimuli (1=North Korea Posing a Threat Story, -1=North Korea No Longer a Threat Story, 0=No North Korea Story)	0.01	0.07	0.83	-1.97	1.53	0.20	0.08	0.07	0.20	0.04	0.05	0.49
Information Card on North Korea Stimuli (0=without card 1=with card)	0.04	0.27	0.89	-2.76	6.08	0.65	0.2	0.26	0.46	-0.25	0.2	0.22
Interaction	-0.08	0.1	0.41	0.45	2.19	0.84	-0.02	0.09	0.87	-0.14**	0.07	0.05
Information Scale (0-1)	-0.23	0.18	0.20	-8.46**	4.12	0.04	0.13	0.18	0.48	-0.20	0.14	0.14
Political Knowledge (0-1)	-0.59**	0.17	<0.001	-13.77**	3.73	0.00	-0.07	0.16	0.66	-0.04	0.13	0.77
Media Exposure Scale (-1.90 to 1.94)	-0.03	0.05	0.57	-1.41	1.12	0.21	-0.04	0.05	0.37	-0.02	0.04	0.53
Issue Salience Scale (-1.90 to 3.25)	0.46**	0.05	<0.001	4.6**	1.17	0.00	0.25*	0.05	<0.001	0.01	0.04	0.88
Q.17---Worry about terrorist attack in general (1=Very much through 4=Not at all)	0.17**	0.06	<0.001	0.47	1.31	0.72	0.07	0.06	0.20	-0.01	0.04	0.74
Q.29---how closely one follows news about NK (1=Very closely through 4=Does not follow at all)	0.04	0.07	0.53	-1.04	1.49	0.49	0.04	0.06	0.55	0.02	0.05	0.68
Q.36---Participation in discussion about NK (1=Yes	-0.12	0.13	0.35	2.01	2.93	0.49	-0.11	0.13	0.40	-0.04	0.1	0.66

and 0=No)												
Q.18 Recoded---news story affects one's own opinion (0 for news control groups, 1 for not at all, to 4 for very much)	-0.06	0.07	0.40	1.06	1.5	0.48	-0.07	0.06	0.28	0.08*	0.05	0.10
Q.19 Recoded---news story affects others' opinion (0 for news control groups, 1 for not at all, to 4 for very much)	0.04	0.06	0.52	-0.38	1.43	0.79	0.06	0.06	0.30	-0.10**	0.05	0.03
Q.20--- Recoded Information cards informative (0 for information control groups, 1 for not at all, to 4 for very much)	-0.03	0.09	0.75	-0.46	2.06	0.82	-0.07	0.09	0.43	0.05	0.07	0.47
Q.21--- Recoded Information cards relevant (0 for information control groups, 1 for not at all, to 4 for very much)	0.03	0.08	0.71	1.85	1.9	0.33	0.01	0.08	0.95	0.05	0.06	0.47
Q.22---Recoded---Party ID (1=Strongly Democrat through 5=Strongly Republican)	0.03	0.04	0.44	0.84	0.96	0.38	<0.001	0.04	0.94	0.03	0.03	0.35
Q.23---Ideology (1=Extremely liberal through 7=Extremely conservative)	-0.09**	0.03	0.01	-0.32	0.73	0.66	-0.01	0.03	0.77	-0.07**	0.02	<0.001
Q.24---Political interest (1=Very much interested through 3=Hardly interested at all)	-0.20**	0.07	0.01	-3.29**	1.65	0.05	-0.10	0.07	0.17	-0.04	0.06	0.52
Q.43---Gender (1=Male and 2=Female)	-0.02	0.09	0.78	0.12	1.98	0.95	-0.15*	0.09	0.08	-0.01	0.07	0.92
Q.44---Race (1=White, 2=African American/Black, etc)	0.02	0.04	0.64	0.04	0.8	0.96	-0.04	0.03	0.21	0.01	0.03	0.62
Q.45---Parents born in the	-0.01	0.12	0.97	0.64	2.62	0.81	0.13	0.11	0.24	0.12	0.09	0.17

country or not (1=Yes and 2=No)												
Q.46---Education (1=Less than high school through 5=Post graduate work)	0.08**	0.04	0.05	-0.46	0.96	0.63	0.03	0.04	0.42	0.05**	0.03	0.09
Q.47---Age (1=18-25 through 6=60 or older)	-0.04	0.03	0.15	-1.24**	0.64	0.05	0.03	0.03	0.25	-0.02	0.02	0.43
Q.48---Income (1=Less than 20,000 through 6=100,000 or more)	0.02	0.03	0.53	0.18	0.64	0.77	0.03	0.03	0.29	-0.04**	0.02	0.05

**Significant at 0.05 level. *Significant at 0.10 level.

Table A-14. Regression Results Continued for Post-test Respondents - Continued

Independent Variables	Dependent Variables								
	Q.4---NK posing a nuclear threat (1=Strongly agree, through 5=Strongly disagree) (N=420, R ² =0.34)			Q.5---NK a danger to world peace (1=Strongly agree, through 5=Strongly disagree) (N=420, R ² =0.38)			Q.7---NK threat due to nuclear arms dealership (1=Strongly agree, through 5=Strongly disagree) (N=420, R ² =0.32)		
	β	SE	p	β	SE	p	β	SE	p
Intercept	2.69**	0.4	<0.001	2.50*	0.4	<0.001	2.51**	0.39	<0.001
News Story Stimuli (1=North Korea Posing a Threat Story, -1=North Korea No Longer a Threat Story, 0=No North Korea Story)	0.07	0.06	0.23	<0.001	0.06	0.99	-0.04	0.06	0.46
Information Card on North Korea Stimuli (0=without card 1=with card)	-0.03	0.24	0.89	0.08	0.24	0.74	0.04	0.24	0.86
Interaction	-0.17**	0.09	0.05	<0.001	0.09	1.00	-0.01	0.08	0.92
Information Scale (0-1)	-0.11	0.16	0.51	-0.18	0.16	0.27	-0.24	0.16	0.13
Political Knowledge (0-1)	-0.41**	0.15	0.01	-0.59**	0.15	<0.001	-0.35**	0.14	0.02
Media Exposure Scale (-1.90 to 1.94)	-0.05	0.04	0.26	-0.03	0.04	0.48	0.02	0.04	0.66
Issue Saliency Scale (-1.90 to 3.25)	0.35**	0.05	<0.001	0.35**	0.05	<0.001	0.33**	0.05	<0.001
Q.17---Worry about terrorist attack in general (1=Very much through 4=Not at all)	0.13**	0.05	0.01	0.15**	0.05	<0.001	0.11**	0.05	0.04
Q.29---how closely one follows news about NK (1=Very closely through 4=Does not follow at all)	0.05	0.06	0.37	0.06	0.06	0.27	-0.02	0.06	0.68
Q.36---Participation in discussion about NK (1=Yes and 0=No)	-0.08	0.12	0.50	-0.16	0.12	0.17	-0.03	0.11	0.77
Q.18 Recoded---news story affects one's own opinion (0 for news control groups, 1 for not at all, to 4 for very much)	-0.02	0.06	0.80	-0.12**	0.06	0.04	0.01	0.06	0.92
Q.19 Recoded---news story affects others' opinion (0 for news control groups, 1 for not at all, to 4 for very much)	0.01	0.06	0.93	0.11**	0.06	0.05	-0.02	0.06	0.66
Q.20--- Recoded Information cards informative (0 for information control groups, 1 for not at all, to 4 for very much)	0.04	0.08	0.65	-0.04	0.08	0.65	-0.07	0.08	0.39
Q.21--- Recoded Information cards relevant (0 for	<0.001	0.08	1.00	0.03	0.08	0.70	0.04	0.07	0.57

information control groups, 1 for not at all, to 4 for very much)									
Q.22---Recoded---Party ID (1=Strongly Democrat through 5=Strongly Republican)	<0.001	0.04	0.94	0.04	0.04	0.31	0.04	0.04	0.29
Q.23---Ideology (1=Extremely liberal through 7=Extremely conservative)	-0.05*	0.03	0.07	-0.08*	0.03	<0.001	-0.06**	0.03	0.03
Q.24---Political interest (1=Very much interested through 3=Hardly interested at all)	-0.17**	0.07	0.01	-0.20**	0.06	<0.001	-0.07	0.06	0.26
Q.43---Gender (1=Male and 2=Female)	-0.07	0.08	0.38	-0.01	0.08	0.89	0.03	0.08	0.73
Q.44---Race (1=White, 2=African American/Black, etc)	-0.01	0.03	0.85	0.01	0.03	0.64	0.03	0.03	0.35
Q.45---Parents born in the country or not (1=Yes and 2=No)	-0.09	0.1	0.40	0.04	0.1	0.69	0.04	0.1	0.71
Q.46---Education (1=Less than high school through 5=Post graduate work)	0.08**	0.04	0.05	0.09**	0.04	0.01	0.02	0.04	0.66
Q.47---Age (1=18-25 through 6=60 or older)	-0.03	0.03	0.29	-0.03	0.03	0.31	-0.04	0.02	0.11
Q.48---Income (1=Less than 20,000 through 6=100,000 or more)	-0.02	0.03	0.55	0.03	0.03	0.27	0.03	0.02	0.25

**Significant at 0.05 level. *Significant at 0.10 level.

Table A-15. Regression Results for post-test respondents: Reduced Model

Independent Variables	Dependent Variables											
	North Korea Nuclear Threat Scale (-1.28 to 3.14, higher score, less agreement) (N=420, R ² =0.41)			Feeling Thermostat toward North Korea (0-100) (N=420, R ² =0.21)			Q.6-Recoded---NK Intension to use nuclear capacity? (1=pose threat 2=both 3=get financial aid 4=neither) (N=420, R ² =0.16)			Q.8-Recoded---NK nuclear issue resolved by peace talks? (1=No, 2=Hard to say, 3=Yes) (N=420, R ² =0.10)		
	β	SE	p	β	SE	p	β	SE	p	β	SE	p
Intercept	0.67*	0.36	0.06	39.91**	8.2	<0.001	2.17**	0.35	<0.001	2.16**	0.28	<0.001
News Story Stimuli (1=North Korea Posing a Threat Story, -1=North Korea No Longer a Threat Story, 0=No North Korea Story)	0.01	0.07	0.87	-1.90	1.53	0.21	0.08	0.07	0.22	0.03	0.05	0.50
Information Card on North Korea Stimuli (0=without card 1=with card)	0.04	0.08	0.62	1.08	1.86	0.56	0.01	0.08	0.91	0.02	0.06	0.80
Interaction	-0.07	0.10	0.44	0.54	2.17	0.80	-0.02	0.09	0.87	-0.14*	0.07	0.06
Information Scale (0-1)	-0.25	0.18	0.17	-8.10**	4.06	0.05	0.12	0.18	0.50	-0.22*	0.14	0.10
Political Knowledge (0-1)	-0.59**	0.16	<0.001	-14.35**	3.68	<0.001	-0.07	0.16	0.66	-0.04	0.12	0.76
Media Exposure Scale (-1.90 to 1.94)	-0.03	0.05	0.58	-1.37	1.05	0.19	-0.04	0.05	0.36	-0.02	0.04	0.50
Issue Salience Scale (-1.90 to 3.25)	0.46**	0.05	<0.001	4.36**	1.08	<0.001	0.25**	0.05	<0.001	<0.001	0.04	0.92
Q.17---Worry about terrorist attack in general (1=Very much through 4=Not at all)	0.17**	0.06	<0.001	0.34	1.3	0.79	0.08	0.06	0.16	-0.02	0.04	0.70
Q.18 Recoded---news story affects one's own opinion (0 for news control groups, 1 for not at all, to 4 for very much)	-0.05	0.07	0.42	1.16	1.47	0.43	-0.07	0.06	0.24	0.10**	0.05	0.05
Q.19 Recoded---news story affects others' opinion (0 for news control groups, 1 for not at all, to 4 for	0.04	0.06	0.55	-0.53	1.41	0.71	0.07	0.06	0.26	-0.12**	0.05	0.01

very much)												
Q.22---Recoded---Party ID (1=Strongly Democrat through 5=Strongly Republican)	0.04	0.04	0.37	0.76	0.95	0.43	0	0.04	0.95	0.03	0.03	0.35
Q.23---Ideology (1=Extremely liberal through 7=Extremely conservative)	-0.09**	0.03	0.01	-0.3	0.72	0.68	-0.01	0.03	0.71	-0.07**	0.02	<0.001
Q.24---Political interest (1=Very much interested through 3=Hardly interested at all)	-0.20**	0.07	0.01	-3.36**	1.63	0.04	-0.09	0.07	0.19	-0.04	0.05	0.41
Q.43---Gender (1=Male and 2=Female)	-0.01	0.09	0.86	-0.28	1.94	0.88	-0.13	0.08	0.11	-0.01	0.06	0.88
Q.44---Race (1=White, 2=African American/Black, etc)	0.02	0.04	0.59	0.01	0.79	0.99	-0.04	0.03	0.22	0.02	0.03	0.55
Q.45---Parents born in the country or not (1=Yes and 2=No)	-0.01	0.12	0.91	0.79	2.6	0.76	0.12	0.11	0.28	0.12	0.09	0.16
Q.46---Education (1=Less than high school through 5=Post graduate work)	0.08**	0.04	0.05	-0.33	0.95	0.73	0.03	0.04	0.41	0.05*	0.03	0.09
Q.47---Age (1=18-25 through 6=60 or older)	-0.04	0.03	0.15	-1.22**	0.63	0.05	0.03	0.03	0.24	-0.02	0.02	0.45
Q.48---Income (1=Less than 20,000 through 6=100,000 or more)	0.02	0.03	0.55	0.15	0.63	0.81	0.03	0.03	0.26	-0.04**	0.02	0.04

**Significant at 0.05 level. *Significant at 0.10 level.

Table A-16. Regression Results Continued for Post-test Respondents: Reduced Model -Continued

Independent Variables	Dependent Variables								
	Q.4---NK posing a nuclear threat (1=Strongly agree, through 5=Strongly disagree) (N=420, R ² =0.33)			Q.5---NK a danger to world peace (1=Strongly agree, through 5=Strongly disagree) (N=420, R ² =0.37)			Q.7---NK threat due to nuclear arms dealership (1=Strongly agree, through 5=Strongly disagree) (N=420, R ² =0.32)		
	β	SE	p	β	SE	p	β	SE	p
Intercept	2.69**	0.33	<0.001	2.36**	0.32	<0.001	2.38**	0.32	<0.001
News Story Stimuli (1=North Korea Posing a Threat Story, -1=North Korea No Longer a Threat Story, 0=No North Korea Story)	0.07	0.06	0.24	<0.001	0.06	0.94	-0.04	0.06	0.46
Information Card on North Korea Stimuli (0=without card 1=with card)	0.07	0.07	0.34	0.06	0.07	0.45	-0.04	0.07	0.60
Interaction	-0.16*	0.09	0.06	0.01	0.09	0.95	-0.01	0.08	0.92
Information Scale (0-1)	-0.14	0.16	0.40	-0.2	0.16	0.20	-0.23	0.16	0.15
Political Knowledge (0-1)	-0.40**	0.15	0.01	-0.58**	0.15	<0.001	-0.37**	0.14	0.01
Media Exposure Scale (-1.90 to 1.94)	-0.05	0.04	0.19	-0.03	0.04	0.47	0.03	0.04	0.50
Issue Salience Scale (-1.90 to 3.25)	0.36**	0.04	<0.001	0.36**	0.04	<0.001	0.33**	0.04	<0.001
Q.17---Worry about terrorist attack in general (1=Very much through 4=Not at all)	0.13**	0.05	0.01	0.16**	0.05	<0.001	0.10**	0.05	0.04
Q.18 Recoded---news story affects one's own opinion (0 for news control groups, 1 for not at all, to 4 for very much)	-0.01	0.06	0.90	-0.12**	0.06	0.05	<0.001	0.06	0.95
Q.19 Recoded---news story affects others' opinion (0 for news control groups, 1 for not at all, to 4 for very much)	<0.001	0.06	1.00	0.11**	0.06	0.05	-0.02	0.05	0.67
Q.22---Recoded---Party ID (1=Strongly Democrat through 5=Strongly Republican)	<0.001	0.04	0.98	0.05	0.04	0.22	0.04	0.04	0.25
Q.23---Ideology (1=Extremely liberal through 7=Extremely conservative)	-0.05*	0.03	0.06	-0.08**	0.03	<0.001	-0.06**	0.03	0.03
Q.24---Political interest (1=Very much interested through 3=Hardly interested at all)	-0.17**	0.06	0.01	-0.20**	0.06	<0.001	-0.07	0.06	0.27
Q.43---Gender (1=Male and 2=Female)	-0.06	0.08	0.44	0	0.08	0.95	0.02	0.08	0.76
Q.44---Race (1=White, 2=African American/Black, etc)	0	0.03	0.90	0.02	0.03	0.57	0.03	0.03	0.34

Q.45---Parents born in the country or not (1=Yes and 2=No)	-0.09	0.1	0.38	0.03	0.1	0.77	0.03	0.1	0.73
Q.46---Education (1=Less than high school through 5=Post graduate work)	0.07**	0.04	0.05	0.09**	0.04	0.01	0.02	0.04	0.56
Q.47---Age (1=18-25 through 6=60 or older)	-0.03	0.02	0.30	-0.02	0.02	0.32	-0.04*	0.02	0.09
Q.48---Income (1=Less than 20,000 through 6=100,000 or more)	-0.02	0.03	0.52	0.03	0.02	0.28	0.03	0.02	0.25

**Significant at 0.05 level. *Significant at 0.10 level.

Study 2: Health Care Reform (Wave 2)
 Table A-17. Regression Results for Panel Respondents

Independent Variables	Dependent Variables					
	General Favorability (-1.77 to 2.47) (N=108, R ² =0.19)			Favorability by Cutting Medicare Cost (-2.25 to 2.18) (N=108, R ² =0.33)		
	β	SE	p	β	SE	p
Pre-test score independent variable	1.00	n.a.	n.a.	1.00	n.a.	n.a.
Intercept	0.33	0.64	0.61	-0.6	1.07	0.57
News Story Stimuli (1=A story in support of the reform, -1= A story against the reform, 0=No health care reform story)	-0.16	0.11	0.15	0.06	0.18	0.74
Information Card on North Korea Stimuli (0=without card 1=with card)	-0.02	0.52	0.96	-0.4	0.86	0.65
Interaction	0.04	0.15	0.80	-0.15	0.25	0.55
Information Scale (0-1)	-0.15	0.26	0.56	0.08	0.42	0.86
Political Knowledge (0-1)	0.18	0.26	0.49	0.12	0.43	0.77
Media Exposure Scale (-2.06 to 1.88)	0.06	0.08	0.46	0.03	0.13	0.81
Issue Salience Scale (-1.67 to 3.81)	0.09	0.08	0.26	-0.27	0.14	0.05
Q.30---how closely one follows news about HC (1=Very closely through 4=Does not follow at all)	-0.02	0.06	0.74	0.35	0.11	0.00
Q.37---Participation in discussion about HC (1=Yes and 0=No)	0.11	0.11	0.33	-0.15	0.18	0.40
Q.18 Recoded---news story affects one's own opinion (0 for news control groups, 1 for not at all, to 4 for very much)	-0.27	0.17	0.11	0.33	0.27	0.23
Q.19 Recoded---news story affects others' opinion (0 for news control groups, 1 for not at all, to 4 for very much)	0.01	0.1	0.88	0.02	0.16	0.91
Q.20--- Recoded Information cards informative (0 for information control groups, 1 for not at all, to 4 for very much)	-0.02	0.09	0.80	-0.14	0.15	0.34
Q.21--- Recoded Information cards relevant (0 for information control groups, 1 for not at all, to 4 for very much)	0.2	0.18	0.26	-0.8	0.29	0.01
Q.22---Obama job approval (1=Strongly approve through 5=Strongly disapprove)	-0.19	0.2	0.35	1.04	0.33	0.00
Q.23- Recoded---Party ID (1=Strongly Democrat through 5=Strongly Republican)	0.11	0.06	0.10	-0.13	0.11	0.24
Q.24---Ideology (1=Extremely liberal through 7=Extremely conservative)	-0.03	0.05	0.52	-0.03	0.09	0.72

Q.25---Political interest (1=Very much interested through 3=Hardly interested at all)	-0.01	0.13	0.95	0.15	0.21	0.47
Q.44---Gender (1=Male and 2=Female)	-0.14	0.14	0.33	0.28	0.23	0.22
Q.45---Race (1=White, 2=African American/Black, etc)	0.05	0.06	0.40	-0.11	0.11	0.29
Q.46---Education (1=Less than high school through 5=Post graduate work)	-0.06	0.07	0.43	0.02	0.12	0.85
Q.47---Age (1=18-25 through 6=60 or older)	-0.03	0.05	0.48	-0.12	0.08	0.14
Q.48---Income (1=Less than 20,000 through 6=100,000 or more)	0.01	0.05	0.85	-0.02	0.08	0.76

**Significant at 0.05 level; *Significant at 0.10 level

Table A-18. Regression Results for Panel Respondents - Continued

Independent Variables	Dependent Variable								
	Q.1 Recoded ---Generally favor or oppose the Health Care Reform (1=Favor, 2=No opinion and 3=Oppose) (N=108, R ² =0.18)			Q.2 Recoded ---Favor or oppose universal coverage (1=Favor, 2=No opinion and 3=Oppose) (N=108, R ² =0.24)			Q.3 Recoded ---Favor or oppose a system that has both public and private health insurance (1=Favor, 2=No opinion and 3=Oppose) (N=108, R ² =0.24)		
	β	SE	p	β	SE	p	β	SE	p
Pre-test score in dependent variable	1.00	n.a.	n.a.	1.00	n.a.	n.a.	1.00	n.a.	n.a.
Intercept	-0.01	0.69	0.99	-0.08	0.87	0.93	0.87	0.87	0.32
News Story Stimuli (1=A story in support of the reform, -1= A story against the reform, 0=No health care reform story)	-0.08	0.11	0.50	-0.13	0.14	0.37	-0.06	0.14	0.66
Information Card on Health Care Reform (0=without card 1=with card)	-0.16	0.56	0.78	-0.31	0.7	0.66	-0.23	0.7	0.75
Interaction	-0.09	0.16	0.57	0.13	0.2	0.53	-0.09	0.2	0.66
Information Scale (0-1)	-0.47	0.28	0.09	-0.19	0.34	0.58	-0.13	0.35	0.71
Political Knowledge (0-1)	0.2	0.28	0.46	0.02	0.35	0.95	0.3	0.35	0.38
Media Exposure Scale (-2.06 to 1.88)	-0.05	0.08	0.51	0.12	0.1	0.24	0.05	0.1	0.62
Issue Salience Scale (-1.67 to 3.81)	0	0.09	0.96	0.13	0.11	0.25	0.21	0.11	0.06
Q.30---how closely one follows news about HC (1=Very closely through 4=Does not follow at all)	0.12	0.07	0.07	-0.11	0.09	0.20	-0.17	0.09	0.06
Q.37---Participation in discussion about HC (1=Yes and 0=No)	0.06	0.12	0.64	0.12	0.15	0.43	0.11	0.15	0.46
Q.18 Recoded---news story affects one's own opinion (0 for news control groups, 1 for not at all, to 4 for very much)	0.06	0.18	0.75	-0.05	0.22	0.82	-0.63	0.22	0.01
Q.19 Recoded---news story affects others' opinion (0 for news control groups, 1 for not at all, to 4 for very much)	-0.01	0.11	0.91	-0.04	0.13	0.79	0.08	0.13	0.56
Q.20--- Recoded Information cards informative (0 for information control groups, 1 for not at all, to 4 for very much)	-0.07	0.1	0.48	-0.01	0.12	0.95	-0.04	0.12	0.72
Q.21--- Recoded Information cards relevant (0 for information control groups, 1 for not at all, to 4 for very much)	0.09	0.19	0.65	0.41	0.24	0.09	0.39	0.24	0.11
Q.22---Obama job approval (1=Strongly approve through	-0.03	0.21	0.90	-0.24	0.27	0.37	-0.34	0.27	0.21

5=Strongly disapprove)									
Q.23- Recoded---Party ID (1=Strongly Democrat through 5=Strongly Republican)	0.09	0.07	0.21	0.21	0.09	0.02	0.17	0.09	0.06
Q.24---Ideology (1=Extremely liberal through 7=Extremely conservative)	-0.05	0.06	0.35	-0.11	0.07	0.12	0	0.07	0.95
Q.25---Political interest (1=Very much interested through 3=Hardly interested at all)	-0.16	0.14	0.24	-0.05	0.17	0.77	0.02	0.17	0.93
Q.44---Gender (1=Male and 2=Female)	-0.1	0.15	0.49	-0.01	0.19	0.95	-0.03	0.19	0.87
Q.45---Race (1=White, 2=African American/Black, etc)	0	0.07	1.00	0.04	0.09	0.67	0.1	0.09	0.27
Q.46---Education (1=Less than high school through 5=Post graduate work)	-0.06	0.08	0.47	-0.1	0.1	0.28	-0.18	0.1	0.07
Q.47---Age (1=18-25 through 6=60 or older)	-0.03	0.05	0.58	0.01	0.07	0.93	0.03	0.07	0.64
Q.48---Income (1=Less than 20,000 through 6=100,000 or more)	0.02	0.05	0.64	0.09	0.06	0.17	-0.02	0.06	0.69

**Significant at 0.05 level. *Significant at 0.10 level.

Table A-19. Regression Results for Panel Respondents - Continued

Independent Variables	Dependent Variable								
	Q.4---Whether U.S. should follow to have a single payer system (1=Yes and 2=No) (N=108, R ² =0.23)			Q.5---Require employer to pay a fee if they do not provide insurance (1=Strongly favor through 5=Strongly oppose) (N=108, R ² =0.23)			Q.6---Saving money by cutting back on Medicare cost (1=Strongly favor through 5=Strongly oppose) (N=108, R ² =0.30)		
	β	SE	p	β	SE	p	β	SE	p
Pre-test score in dependent variable	1.00	n.a.	n.a.	1.00	n.a.	n.a.	1.00	n.a.	n.a.
Intercept	0	0.31	1.00	0.02	0.97	0.99	-0.13	1.22	0.92
News Story Stimuli (1=A story in support of the reform, -1= A story against the reform, 0=No health care reform story)	0.07	0.05	0.19	-0.16	0.16	0.33	-0.05	0.2	0.81
Information Card on Health Care Reform (0=without card 1=with card)	0.12	0.25	0.64	-1.57	0.78	0.05	-0.89	0.98	0.37
Interaction	-0.04	0.07	0.56	-0.13	0.22	0.55	-0.16	0.28	0.57
Information Scale (0-1)	-0.07	0.12	0.56	0.26	0.39	0.50	-0.04	0.49	0.94
Political Knowledge (0-1)	0.09	0.12	0.46	-0.05	0.39	0.90	0.42	0.49	0.40
Media Exposure Scale (-2.06 to 1.88)	0.04	0.04	0.24	0.06	0.12	0.61	0.14	0.15	0.34
Issue Salience Scale (-1.67 to 3.81)	0.09	0.04	0.03	-0.08	0.13	0.53	-0.19	0.16	0.24
Q.30---how closely one follows news about HC (1=Very closely through 4=Does not follow at all)	0	0.03	0.95	0.22	0.1	0.02	0.25	0.12	0.04
Q.37---Participation in discussion about HC (1=Yes and 0=No)	-0.03	0.05	0.61	0.09	0.17	0.58	-0.12	0.21	0.55
Q.18 Recoded---news story affects one's own opinion (0 for news control groups, 1 for not at all, to 4 for very much)	-0.07	0.08	0.38	-0.41	0.25	0.10	0.01	0.31	0.98
Q.19 Recoded---news story affects others' opinion (0 for news control groups, 1 for not at all, to 4 for very much)	0.03	0.05	0.52	-0.06	0.15	0.67	0.13	0.19	0.48
Q.20--- Recoded Information cards informative (0 for information control groups, 1 for not at all, to 4 for very much)	0	0.04	1.00	0.01	0.13	0.95	-0.29	0.17	0.09
Q.21--- Recoded Information cards relevant (0 for information control groups, 1 for not at all, to 4 for very much)	-0.1	0.08	0.26	0.21	0.27	0.44	-0.67	0.34	0.05

Q.22---Obama job approval (1=Strongly approve through 5=Strongly disapprove)	0.04	0.1	0.65	0.29	0.3	0.34	1.12	0.38	0.00
Q.23- Recoded---Party ID (1=Strongly Democrat through 5=Strongly Republican)	-0.01	0.03	0.86	0.07	0.1	0.50	-0.07	0.12	0.59
Q.24---Ideology (1=Extremely liberal through 7=Extremely conservative)	0.01	0.03	0.71	-0.15	0.08	0.07	-0.08	0.1	0.45
Q.25---Political interest (1=Very much interested through 3=Hardly interested at all)	0.01	0.06	0.86	0.32	0.19	0.10	0.3	0.24	0.22
Q.44---Gender (1=Male and 2=Female)	0.13	0.07	0.06	-0.19	0.21	0.37	0.32	0.26	0.23
Q.45---Race (1=White, 2=African American/Black, etc)	-0.03	0.03	0.34	-0.01	0.1	0.91	-0.16	0.12	0.20
Q.46---Education (1=Less than high school through 5=Post graduate work)	0.02	0.03	0.52	0.07	0.11	0.54	-0.08	0.13	0.54
Q.47---Age (1=18-25 through 6=60 or older)	-0.02	0.02	0.32	-0.02	0.07	0.82	-0.11	0.09	0.23
Q.48---Income (1=Less than 20,000 through 6=100,000 or more)	-0.02	0.02	0.36	-0.03	0.07	0.64	-0.02	0.09	0.79

**Significant at 0.05 level. *Significant at 0.10 level.

Table A-20. Regression Results for Panel Respondents - Continued

Independent Variables	Dependent Variable								
	Q.7---Increase income tax on upper income Americans (1=Strongly favor through 5=Strongly oppose) (N=108, R ² =0.20)			Q.8---Health Care Reform beneficial/harmful to American people (1=Greatly beneficial through 5=Greatly Harmful) (N=108, R ² =0.12)			Q.9---Health Care Reform beneficial/harmful to the economy (1=Greatly beneficial through 5=Greatly Harmful) (N=108, R ² =0.27)		
	β	SE	p	β	SE	p	β	SE	p
Pre-test score in dependent variable	1.00	n.a.	n.a.	1.00	n.a.	n.a.	1.00	n.a.	n.a.
Intercept	-0.45	1.05	0.67	0.63	1.11	0.57	-0.23	0.84	0.78
News Story Stimuli (1=A story in support of the reform, -1= A story against the reform, 0=No health care reform story)	-0.23	0.17	0.20	-0.24	0.18	0.20	-0.33	0.14	0.02
Information Card on Health Care Reform (0=without card 1=with card)	2.49	0.84	0.00	0.25	0.89	0.78	-0.82	0.67	0.23
Interaction	0.22	0.24	0.36	0.13	0.26	0.60	0.12	0.19	0.53
Difference in Information Scale (0-1)	-0.5	0.42	0.23	-0.13	0.44	0.77	0.17	0.33	0.62
Political Knowledge (0-1)	0.49	0.42	0.25	-0.33	0.44	0.45	0.43	0.34	0.21
Media Exposure Scale (-2.06 to 1.88)	0.09	0.13	0.49	-0.03	0.13	0.79	0.06	0.1	0.56
Issue Salience Scale (-1.67 to 3.81)	0.06	0.14	0.65	-0.11	0.14	0.44	-0.23	0.11	0.04
Q.30---how closely one follows news about HC (1=Very closely through 4=Does not follow at all)	-0.11	0.1	0.30	0.11	0.11	0.32	0.24	0.08	0.01
Q.37---Participation in discussion about HC (1=Yes and 0=No)	-0.06	0.18	0.73	-0.06	0.19	0.77	0.14	0.14	0.31
Q.18 Recoded---news story affects one's own opinion (0 for news control groups, 1 for not at all, to 4 for very much)	-0.03	0.27	0.90	-0.07	0.28	0.80	-0.2	0.21	0.36
Q.19 Recoded---news story affects others' opinion (0 for news control groups, 1 for not at all, to 4 for very much)	-0.03	0.16	0.83	0.03	0.17	0.88	0.03	0.13	0.80
Q.20--- Recoded Information cards informative (0 for information control groups, 1 for not at all, to 4 for very much)	0.07	0.14	0.61	-0.04	0.15	0.77	-0.09	0.12	0.44
Q.21--- Recoded Information cards relevant (0 for information control groups, 1 for not at all, to 4 for very much)	-0.55	0.29	0.06	0.02	0.3	0.94	-0.02	0.23	0.95

Q.22---Obama job approval (1=Strongly approve through 5=Strongly disapprove)	-0.18	0.32	0.58	-0.09	0.34	0.78	0.22	0.26	0.38
Q.23- Recoded---Party ID (1=Strongly Democrat through 5=Strongly Republican)	-0.03	0.11	0.75	0.06	0.11	0.59	0.07	0.08	0.42
Q.24---Ideology (1=Extremely liberal through 7=Extremely conservative)	0.12	0.09	0.17	-0.01	0.09	0.91	-0.05	0.07	0.47
Q.25---Political interest (1=Very much interested through 3=Hardly interested at all)	0.16	0.21	0.44	0.02	0.22	0.91	0.21	0.17	0.22
Q.44---Gender (1=Male and 2=Female)	-0.11	0.23	0.64	-0.24	0.24	0.33	-0.31	0.18	0.09
Q.45---Race (1=White, 2=African American/Black, etc)	0	0.1	0.97	0.05	0.11	0.65	0.04	0.08	0.67
Q.46---Education (1=Less than high school through 5=Post graduate work)	0.05	0.12	0.65	-0.12	0.12	0.32	-0.16	0.09	0.08
Q.47---Age (1=18-25 through 6=60 or older)	-0.1	0.08	0.22	-0.02	0.08	0.81	-0.04	0.06	0.52
Q.48---Income (1=Less than 20,000 through 6=100,000 or more)	-0.03	0.08	0.72	-0.01	0.08	0.94	0.02	0.06	0.70

**Significant at 0.05 level. *Significant at 0.10 level.

Table A-21. Regression Results for post-test respondents: Full Model

Independent Variables	Dependent Variable								
	General Favorability (-1.72 to 2.10)			Favorability by Cutting Medicare Cost (-2.57 to 2.12)			Favorability of Health Care Reform (one factor only for all DV questions)		
	β	SE	p	β	SE	p	β	SE	p
Intercept	-1.54**	0.29	<0.0001	-1.83**	0.45	<0.0001	-1.83**	0.28	<0.0001
News Story Stimuli (1=A story in support of the reform, -1= A story against the reform, 0=No health care reform story)	-0.05	0.05	0.29	0.09	0.08	0.27	-0.04	0.05	0.44
Information Cards on health care reform (0=without card 1=with card)	0.49**	0.24	0.04	<0.01	0.37	1.00	0.48**	0.23	0.04
Interaction	0.05	0.07	0.49	-0.13	0.11	0.26	0.03	0.07	0.70
Information Scale (0-1)	0.06	0.13	0.68	-0.11	0.21	0.59	0.04	0.13	0.78
Political Knowledge (0-1)	-0.23*	0.12	0.06	0.52**	0.19	0.01	-0.14	0.12	0.23
Media Exposure Scale (-2.06 to 1.88)	0.01	0.04	0.69	-0.04	0.06	0.49	0.01	0.03	0.82
Issue Salience Scale (-1.67 to 3.81)	0.10**	0.04	<0.0001	-0.07	0.05	0.21	0.09**	0.03	0.01
Q.30---how closely one follows news about HC (1=Very closely through 4=Does not follow at all)	-0.11**	0.05	0.03	0.03	0.08	0.74	-0.10**	0.05	0.03
Q.37---Participation in discussion about HC (1=Yes and 0=No)	-0.01	0.07	0.88	-0.04	0.11	0.71	-0.02	0.07	0.80
Q.18 Recoded---news story affects one's own opinion (0 for news control groups, 1 for not at all, to 4 for very much)	-0.06	0.04	0.17	-0.06	0.06	0.34	-0.07*	0.04	0.09
Q.19 Recoded---news story affects others' opinion (0 for news control groups, 1 for not at all, to 4 for very much)	0.02	0.04	0.55	0.05	0.06	0.42	0.03	0.04	0.39
Q.20--- Recoded Information cards informative (0 for information control groups, 1 for not at all, to 4 for very much)	-0.03	0.09	0.72	-0.30**	0.13	0.03	-0.08	0.08	0.32
Q.21--- Recoded Information cards relevant (0 for information control groups, 1 for not at all, to 4 for very much)	-0.12*	0.07	0.09	0.30**	0.11	0.01	-0.07	0.07	0.32
Q.22---Obama job approval (1=Strongly approve through 5=Strongly disapprove)	0.45**	0.03	<0.0001	0.15**	0.04	<0.0001	0.47**	0.03	<0.0001
Q.23- Recoded---Party ID (1=Strongly Democrat through 5=Strongly Republican)	0.05*	0.03	0.10	0.01	0.05	0.85	0.05*	0.03	0.08
Q.24---Ideology (1=Extremely liberal through 7=Extremely	0.12**	0.03	<0.0001	-0.06	0.04	0.15	0.10**	0.02	<0.0001

conservative)										
Q.25---Political interest (1=Very much interested through 3=Hardly interested at all)	-0.09*	0.06	0.10	0.12	0.09	0.19	-0.07	0.05	0.18	
Q.44---Gender (1=Male and 2=Female)	<0.01	0.06	0.98	0.30**	0.1	<0.0001	0.05	0.06	0.38	
Q.45---Race (1=White, 2=African American/Black, etc)	0.02	0.02	0.41	0.03	0.04	0.36	0.03	0.02	0.27	
Q.46---Education (1=Less than high school through 5=Post graduate work)	0.01	0.03	0.87	-0.03	0.05	0.54	<0.01	0.03	1.00	
Q.47---Age (1=18-25 through 6=60 or older)	-0.03	0.02	0.20	0.17**	0.03	<0.0001	<0.01	0.02	0.90	
Q.48---Income (1=Less than 20,000 through 6=100,000 or more)	0.04*	0.02	0.06	-0.02	0.03	0.61	0.04*	0.02	0.07	

**Significant at 0.05 level; *Significant at 0.10 level

Table A-22. Regression Results for post-test respondents: Full Model - Continued

Independent Variables	Dependent Variable								
	Q.1 Recoded --- Generally favor or oppose the Health Care Reform (1=Favor, 2=No opinion and 3=Oppose)			Q.2 Recoded ---Favor or oppose universal coverage (1=Favor, 2=No opinion and 3=Oppose)			Q.3 Recoded ---Favor or oppose a system that has both public and private health insurance (1=Favor, 2=No opinion and 3=Oppose)		
	β	SE	p	β	SE	p	β	SE	p
Intercept	0.94**	0.30	<0.0001	0.82**	0.36	0.02	1.71**	0.37	<0.0001
News Story Stimuli (1=A story in support of the reform, -1= A story against the reform, 0=No health care reform story)	-0.02	0.05	0.64	-0.11*	0.06	0.07	-0.06	0.07	0.32
Information Cards on Health Care Reform (0=without card 1=with card)	0.13	0.25	0.60	0.35	0.30	0.24	0.61**	0.31	0.05
Interaction	0.04	0.07	0.62	0.15*	0.09	0.09	0.02	0.09	0.79
Information Scale (0-1)	-0.26*	0.14	0.06	-0.10	0.16	0.53	0.21	0.17	0.21
Political Knowledge (0-1)	0.04	0.13	0.75	-0.19	0.15	0.22	-0.43**	0.16	0.01
Media Exposure Scale (-2.06 to 1.88)	<0.01	0.04	1.00	0.02	0.04	0.58	0.01	0.05	0.82
Issue Salience Scale (-1.67 to 3.81)	0.15**	0.04	<0.0001	0.14**	0.04	<0.0001	-0.01	0.05	0.88
Q.30---how closely one follows news about HC (1=Very closely through 4=Does not follow at all)	-0.16**	0.05	<0.0001	-0.10*	0.06	0.10	-0.01	0.06	0.82
Q.37---Participation in discussion about HC (1=Yes and 0=No)	0.08	0.07	0.29	-0.06	0.09	0.53	-0.04	0.09	0.66
Q.18 Recoded---news story affects one's own opinion (0 for news control groups, 1 for not at all, to 4 for very much)	<0.01	0.04	0.91	-0.02	0.05	0.67	-0.03	0.05	0.59
Q.19 Recoded---news story affects others' opinion (0 for news control groups, 1 for not at all, to 4 for very much)	-0.01	0.04	0.89	0.01	0.05	0.90	<0.01	0.05	0.97
Q.20--- Recoded Information cards informative (0 for information control groups, 1 for not at all, to 4 for very much)	-0.01	0.09	0.92	-0.05	0.11	0.61	-0.04	0.11	0.72
Q.21--- Recoded Information cards relevant (0 for information control groups, 1 for not at all, to 4 for very much)	<0.01	0.07	0.96	-0.06	0.09	0.52	-0.18*	0.09	0.06
Q.22---Obama job approval (1=Strongly approve through 5=Strongly disapprove)	0.40**	0.03	<0.0001	0.24**	0.04	<0.0001	0.14**	0.04	<0.0001
Q.23- Recoded---Party ID (1=Strongly Democrat through	0.06**	0.03	0.07	0.03	0.04	0.46	0.04	0.04	0.26

5=Strongly Republican)									
Q.24---Ideology (1=Extremely liberal through 7=Extremely conservative)	0.03	0.03	0.27	0.05	0.03	0.15	0.07**	0.03	0.05
Q.25---Political interest (1=Very much interested through 3=Hardly interested at all)	-0.03	0.06	0.66	-0.03	0.07	0.68	-0.13*	0.07	0.08
Q.44---Gender (1=Male and 2=Female)	0.02	0.06	0.70	-0.03	0.08	0.66	-0.10	0.08	0.21
Q.45---Race (1=White, 2=African American/Black, etc)	<0.01	0.03	0.87	0.06*	0.03	0.06	<0.01	0.03	0.89
Q.46---Education (1=Less than high school through 5=Post graduate work)	-0.08**	0.03	0.02	0.03	0.04	0.50	0.02	0.04	0.70
Q.47---Age (1=18-25 through 6=60 or older)	-0.02	0.02	0.49	0.01	0.03	0.71	-0.05*	0.03	0.09
Q.48---Income (1=Less than 20,000 through 6=100,000 or more)	0.05**	0.02	0.02	0.07**	0.03	0.02	-0.01	0.03	0.70

**Significant at 0.05 level; *Significant at 0.10 level

Table A-23. Regression Results for Post-test Respondents: Full Model - Continued

Independent Variables	Dependent Variable								
	Q.4---Whether U.S. should follow to have a single payer system (1=Yes and 2=No)			Q.5---Require employer to pay a fee if they do not provide insurance (1=Strongly favor through 5=Strongly oppose) (N=108, R ² =0.23)			Q.6---Saving money by cutting back on Medicare cost (1=Strongly favor through 5=Strongly oppose)		
	β	SE	p	β	SE	p	β	SE	p
Intercept	1.02**	0.17	<0.0001	1.30**	0.5	0.01	1.30**	0.56	0.02
News Story Stimuli (1=A story in support of the reform, -1= A story against the reform, 0=No health care reform story)	0.05	0.03	0.11	-0.04	0.09	0.67	0.05	0.10	0.61
Information Cards on Health Care Reform (0=without card 1=with card)	0.08	0.14	0.56	0.26	0.41	0.53	0.35	0.47	0.45
Interaction	0.02	0.04	0.72	-0.09	0.12	0.47	-0.11	0.14	0.44
Information Scale (0-1)	0.15*	0.08	0.06	0.15	0.23	0.50	-0.11	0.26	0.66
Political Knowledge (0-1)	-0.09	0.07	0.20	-0.06	0.21	0.78	0.42*	0.24	0.07
Media Exposure Scale (-2.06 to 1.88)	0.01	0.02	0.67	-0.02	0.06	0.76	-0.04	0.07	0.56
Issue Salience Scale (-1.67 to 3.81)	0.03	0.02	0.22	0.02	0.06	0.79	-0.07	0.07	0.29
Q.30---how closely one follows news about HC (1=Very closely through 4=Does not follow at all)	-0.05*	0.03	0.07	-0.04	0.08	0.62	0.02	0.10	0.85
Q.37---Participation in discussion about HC (1=Yes and 0=No)	0.02	0.04	0.65	-0.2	0.12	0.11	-0.09	0.14	0.54
Q.18 Recoded---news story affects one's own opinion (0 for news control groups, 1 for not at all, to 4 for very much)	-0.01	0.02	0.70	-0.13*	0.07	0.07	-0.08	0.08	0.34
Q.19 Recoded---news story affects others' opinion (0 for news control groups, 1 for not at all, to 4 for very much)	-0.01	0.02	0.77	0.08	0.07	0.26	0.06	0.08	0.47
Q.20--- Recoded Information cards informative (0 for information control groups, 1 for not at all, to 4 for very much)	0.06	0.05	0.27	<0.01	0.15	0.99	-0.44**	0.17	0.01
Q.21--- Recoded Information cards relevant (0 for information control groups, 1 for not at all, to 4 for very much)	-0.09**	0.04	0.03	-0.08	0.13	0.51	0.33**	0.14	0.02
Q.22---Obama job approval (1=Strongly approve through 5=Strongly disapprove)	0.13**	0.02	<0.0001	0.38	0.05	<0.0001	0.20**	0.06	<0.0001

Q.23- Recoded---Party ID (1=Strongly Democrat through 5=Strongly Republican)	0.02	0.02	0.20	0.12**	0.05	0.02	0.03	0.06	0.58
Q.24---Ideology (1=Extremely liberal through 7=Extremely conservative)	0.04**	0.02	0.01	0.08*	0.04	0.06	-0.07	0.05	0.16
Q.25---Political interest (1=Very much interested through 3=Hardly interested at all)	-0.03	0.03	0.30	-0.11	0.1	0.27	0.10	0.11	0.37
Q.44---Gender (1=Male and 2=Female)	0.03	0.04	0.38	-0.05	0.11	0.62	0.32**	0.12	0.01
Q.45---Race (1=White, 2=African American/Black, etc)	<0.01	0.01	0.84	0.01	0.04	0.90	0.06	0.05	0.20
Q.46---Education (1=Less than high school through 5=Post graduate work)	-0.01	0.02	0.78	0.06	0.06	0.29	-0.04	0.07	0.57
Q.47---Age (1=18-25 through 6=60 or older)	0.01	0.01	0.54	0.03	0.04	0.44	0.22**	0.04	<0.0001
Q.48---Income (1=Less than 20,000 through 6=100,000 or more)	0.01	0.01	0.29	-0.01	0.04	0.74	-0.01	0.04	0.73

**Significant at 0.05 level. *Significant at 0.10 level.

Table A-24. Regression Results for Post-test Respondents: Full Model - Continued

Independent Variables	Dependent Variable								
	Q.7---Increase income tax on upper income Americans (1=Strongly favor through 5=Strongly oppose)			Q.8---Health Care Reform beneficial/harmful to American people (1=Greatly beneficial through 5=Greatly Harmful)			Q.9---Health Care Reform beneficial/harmful to the economy (1=Greatly beneficial through 5=Greatly Harmful)		
	β	SE	p	β	SE	p	β	SE	p
Intercept	0.85	0.52	0.11	0.2	0.41	0.63	0.05	0.40	0.91
News Story Stimuli (1=A story in support of the reform, -1= A story against the reform, 0=No health care reform story)	0.05	0.09	0.56	-0.12	0.07	0.11	-0.06	0.07	0.39
Information Cards on Health Care Reform (0=without card 1=with card)	0.85**	0.43	0.05	0.54	0.34	0.11	0.43	0.33	0.19
Interaction	-0.15	0.13	0.25	0.13	0.10	0.21	0.00	0.10	0.98
Information Scale (0-1)	0.59**	0.24	0.01	-0.38**	0.19	0.04	-0.07	0.18	0.69
Political Knowledge (0-1)	-0.38*	0.22	0.08	-0.08	0.17	0.65	0.15	0.17	0.37
Media Exposure Scale (-2.06 to 1.88)	0.04	0.06	0.56	-0.02	0.05	0.71	0.01	0.05	0.90
Issue Salience Scale (-1.67 to 3.81)	-0.07	0.06	0.25	0.12**	0.05	0.01	0.13**	0.05	0.01
Q.30---how closely one follows news about HC (1=Very closely through 4=Does not follow at all)	<0.01	0.09	0.98	-0.14**	0.07	0.04	-0.09	0.07	0.18
Q.37---Participation in discussion about HC (1=Yes and 0=No)	0.01	0.13	0.97	-0.04	0.1	0.73	0.07	0.1	0.45
Q.18 Recoded---news story affects one's own opinion (0 for news control groups, 1 for not at all, to 4 for very much)	-0.16**	0.07	0.03	-0.05	0.06	0.40	-0.08	0.06	0.15
Q.19 Recoded---news story affects others' opinion (0 for news control groups, 1 for not at all, to 4 for very much)	0.1	0.07	0.18	0.04	0.06	0.50	0.04	0.05	0.43
Q.20--- Recoded Information cards informative (0 for information control groups, 1 for not at all, to 4 for very much)	-0.19	0.15	0.22	-0.16	0.12	0.19	-0.14	0.12	0.23
Q.21--- Recoded Information cards relevant (0 for information control groups, 1 for not at all, to 4 for very much)	-0.11	0.13	0.39	0.02	0.1	0.88	0.03	0.1	0.76
Q.22---Obama job approval (1=Strongly approve through 5=Strongly disapprove)	0.33**	0.05	<0.0001	0.74**	0.04	<0.0001	0.68**	0.04	<0.0001

Q.23- Recoded---Party ID (1=Strongly Democrat through 5=Strongly Republican)	<0.01	0.06	0.99	0.02	0.04	0.67	0.01	0.04	0.89
Q.24---Ideology (1=Extremely liberal through 7=Extremely conservative)	0.23**	0.05	<0.0001	0.15**	0.04	<0.0001	0.12	0.04	<0.0001
Q.25---Political interest (1=Very much interested through 3=Hardly interested at all)	-0.13	0.1	0.21	-0.07	0.08	0.39	<0.01	0.08	0.99
Q.44---Gender (1=Male and 2=Female)	-0.03	0.11	0.81	0.17**	0.09	0.05	0.20**	0.08	0.02
Q.45---Race (1=White, 2=African American/Black, etc)	0.02	0.04	0.68	-0.01	0.03	0.72	0.07**	0.03	0.05
Q.46---Education (1=Less than high school through 5=Post graduate work)	0.02	0.06	0.79	0.03	0.05	0.48	-0.02	0.05	0.68
Q.47---Age (1=18-25 through 6=60 or older)	-0.10**	0.04	0.02	0.01	0.03	0.78	0.02	0.03	0.45
Q.48---Income (1=Less than 20,000 through 6=100,000 or more)	0.10**	0.04	0.01	<0.01	0.03	0.97	0.02	0.03	0.42

**Significant at 0.05 level. *Significant at 0.10 level.

Study 3: Alternative Energy (Wave 2)

Table A-25. Regression Results for panel respondents

Independent Variables	Dependent Variable					
	Support for Alternative Energy (-1.40 to 3.41) (N=97, R ² =0.30)			Support for Incentives for Traditional Energy (-2.16 to 2.32) (N=97, R ² =0.34)		
	β	SE	p	β	SE	p
Pre-test score independent variable	1.00	n.a.	n.a.	1.00	n.a.	n.a.
Intercept	-0.24	0.77	0.75	-0.73	1.06	0.49
News Story Stimuli (1=Supporting alternative energy, -1= Disadvantages of alternative energy, 0=No Story about alternative energy)	0.04	0.14	0.77	0.22	0.19	0.25
Information Card on North Korea Stimuli (0=without card 1=with card)	1.25	0.6	0.04	-0.1	0.82	0.91
Interaction	-0.12	0.19	0.52	-0.13	0.26	0.63
Information Scale (0-1)	0.21	0.39	0.59	-0.33	0.53	0.54
Political Knowledge (0-1)	-0.66	0.33	0.05	0.78	0.46	0.09
Media Exposure Scale (-1.87 to 2.00)	0.1	0.13	0.45	-0.12	0.17	0.50
Issue Salience Scale (-1.55 to 3.67)	0	0.11	0.98	0.05	0.15	0.75
Q.27---how closely one follows news about EN (1=Very closely through 4=Does not follow at all)	0.04	0.12	0.73	-0.08	0.16	0.65
Q.34---Participation in discussion about EN (1=Yes and 0=No)	0.12	0.19	0.53	-0.51	0.27	0.06
Q.16 Recoded---news story affects one's own opinion (0 for news control groups, 1 for not at all, to 4 for very much)	-0.09	0.14	0.52	-0.19	0.19	0.32
Q.17 Recoded---news story affects others' opinion (0 for news control groups, 1 for not at all, to 4 for very much)	-0.03	0.13	0.82	0.17	0.18	0.35
Q.18--- Recoded Information cards informative (0 for information control groups, 1 for not at all, to 4 for very much)	-0.11	0.19	0.54	-0.09	0.25	0.72
Q.19--- Recoded Information cards relevant (0 for information control groups, 1 for not at all, to 4 for very much)	-0.28	0.16	0.08	0.15	0.21	0.48
Q.20- Recoded---Party ID (1=Strongly Democrat through 5=Strongly Republican)	-0.07	0.1	0.50	0.12	0.14	0.38
Q.21---Ideology (1=Extremely liberal through 7=Extremely	-0.09	0.07	0.22	0.15	0.1	0.12

conservative)						
Q.22---Political interest (1=Very much interested through 3=Hardly interested at all)	0.06	0.04	0.18	0.01	0.06	0.91
Q.41—Gender (1=Male and 2=Female)	0.29	0.18	0.11	0.2	0.25	0.41
Q.42—Race (1=White, 2=African American/Black, etc)	-0.04	0.08	0.65	0.16	0.11	0.16
Q.43---Education (1=Less than high school through 5=Post graduate work)	0.04	0.11	0.67	-0.23	0.14	0.12
Q.44---Age (1=18-25 through 6=60 or older)	0.02	0.06	0.77	0.11	0.09	0.23
Q.45---Income (1=Less than 20,000 through 6=100,000 or more)	0.1	0.06	0.14	0.01	0.09	0.93

**Significant at 0.05 level. *Significant at 0.10 level.

Table A-26. Regression Results for panel respondents - Continued

Independent Variables	Dependent Variable											
	Q.1---Traditional energy will run out soon or will sustain long (1=Run out soon, 2=Sustain long) (N=97, R ² =0.31)			Q.2---Alternative energy a better source (1=Yes, 2=Same as traditional energy and 3=No) (N=97, R ² =0.23)			Q.3---Government increase/decrease incentive to develop alternative energy research (1=Increase, 2=No change and 3=Decrease) (N=97, R ² =0.33)			Q.4---Government increase/decrease incentive to develop traditional energy research (1=Decrease, 2=No change and 3=Increase) (N=97, R ² =0.20)		
	β	SE	p	β	SE	p	β	SE	p	β	SE	p
Pre-test score independent variable	1.00	n.a.	n.a.	1.00	n.a.	n.a.	1.00	n.a.	n.a.	1.00	n.a.	n.a.
Intercept	0.54	0.36	0.13	-0.55	0.72	0.45	-0.71	0.52	0.17	0.29	0.71	0.68
News Story Stimuli (1=Supporting alternative energy, -1=Disadvantages of alternative energy, 0=No Story about alternative energy)	0.07	0.07	0.28	-0.05	0.13	0.71	-0.02	0.09	0.85	0.2	0.13	0.12
Information Card on North Korea Stimuli (0=without card 1=with card)	0.21	0.28	0.45	0.2	0.56	0.72	1.07	0.4	0.01	0.19	0.55	0.73
Interaction	-0.07	0.09	0.41	-0.08	0.18	0.67	0.04	0.13	0.75	-0.2	0.18	0.25
Information Scale (0-1)	0.36	0.18	0.05	-0.68	0.36	0.07	-0.06	0.26	0.81	0.04	0.36	0.92
Political Knowledge (0-1)	0.05	0.15	0.76	-0.36	0.31	0.25	0.03	0.23	0.89	0.07	0.31	0.81
Media Exposure Scale (-1.87 to 2.00)	0.14	0.06	0.02	-0.06	0.12	0.64	-0.08	0.08	0.37	-0.11	0.12	0.36
Issue Salience Scale (-1.55 to 3.67)	0.08	0.05	0.12	0.07	0.1	0.51	-0.04	0.08	0.64	0.02	0.1	0.83
Q.27---how closely one follows news about EN (1=Very closely through 4=Does not follow at all)	-0.01	0.06	0.79	-0.08	0.11	0.45	-0.1	0.08	0.23	-0.08	0.11	0.49
Q.34---Participation in discussion about EN (1=Yes and 0=No)	-0.1	0.09	0.27	-0.28	0.18	0.13	0.37	0.13	0.01	-0.3	0.18	0.10
Q.16 Recoded---news story affects one's own opinion (0 for news control groups, 1 for not at all, to 4 for very much)	-0.02	0.07	0.72	-0.19	0.13	0.15	-0.07	0.09	0.49	-0.22	0.13	0.10

Q.17 Recoded---news story affects others' opinion (0 for news control groups, 1 for not at all, to 4 for very much)	0.01	0.06	0.83	0.11	0.12	0.36	0.05	0.09	0.59	0.15	0.12	0.22
Q.18--- Recoded Information cards informative (0 for information control groups, 1 for not at all, to 4 for very much)	0.03	0.09	0.77	-0.04	0.17	0.81	-0.21	0.12	0.10	-0.09	0.17	0.59
Q.19--- Recoded Information cards relevant (0 for information control groups, 1 for not at all, to 4 for very much)	-0.06	0.07	0.41	-0.06	0.15	0.68	-0.21	0.11	0.05	0.07	0.14	0.63
Q.20- Recoded---Party ID (1=Strongly Democrat through 5=Strongly Republican)	0.04	0.05	0.41	0.17	0.1	0.09	-0.12	0.07	0.09	-0.04	0.09	0.70
Q.21---Ideology (1=Extremely liberal through 7=Extremely conservative)	-0.12	0.03	0.00	-0.04	0.07	0.52	0.08	0.05	0.09	0.08	0.07	0.22
Q.22---Political interest (1=Very much interested through 3=Hardly interested at all)	-0.02	0.02	0.26	0.04	0.04	0.39	0.07	0.03	0.02	0.02	0.04	0.64
Q.41---Gender (1=Male and 2=Female)	0.07	0.08	0.41	0.15	0.17	0.38	0.26	0.12	0.04	0.1	0.17	0.55
Q.42---Race (1=White, 2=African American/Black, etc)	0.06	0.04	0.10	0.06	0.08	0.46	-0.09	0.05	0.12	0.02	0.07	0.76
Q.43---Education (1=Less than high school through 5=Post graduate work)	-0.03	0.05	0.58	0.1	0.1	0.31	0.02	0.07	0.75	-0.07	0.1	0.45
Q.44---Age (1=18-25 through 6=60 or older)	0.01	0.03	0.62	0.04	0.06	0.49	-0.08	0.04	0.08	0	0.06	0.94
Q.45---Income (1=Less than 20,000 through 6=100,000 or more)	-0.03	0.03	0.28	0.07	0.06	0.22	0.04	0.04	0.31	0.04	0.06	0.52

**Significant at 0.05 level. *Significant at 0.10 level.

Table A-27. Regression Results Continued for Panel Respondents -Continued

Independent Variables	Dependent Variable								
	Q.5---Alternative energy beneficial/harmful to environment (1=Beneficial 2=Neither and 3=Harmful) (N=97, R ² =0.39)			Q.6---Alternative energy beneficial/harmful to economy (1=Beneficial 2=Neither and 3=Harmful) (N=97, R ² =0.34)			Q.7---Increase gas tax to support alternative energy research (1=Definitely support through 4=Definitely not support) (N=97, R ² =0.21)		
	β	SE	p	β	SE	p	β	SE	p
Pre-test score independent variable	1.00	n.a.	n.a.	1.00	n.a.	n.a.	1.00	n.a.	n.a.
Intercept	-0.56	0.48	0.25	-0.87	0.51	0.09	-0.07	0.89	0.94
News Story Stimuli (1=Supporting alternative energy, -1=Disadvantages of alternative energy, 0=No Story about alternative energy)	0.13	0.09	0.14	0.13	0.09	0.18	-0.02	0.16	0.89
Information Card on North Korea Stimuli (0=without card 1=with card)	0.29	0.38	0.44	0.32	0.39	0.42	0.76	0.69	0.27
Interaction	-0.06	0.12	0.59	-0.09	0.13	0.50	-0.12	0.22	0.60
Information Scale (0-1)	-0.45	0.24	0.07	0.25	0.26	0.34	0.78	0.45	0.09
Political Knowledge (0-1)	-0.21	0.21	0.32	-0.01	0.22	0.95	0.1	0.39	0.80
Media Exposure Scale (-1.87 to 2.00)	-0.06	0.08	0.45	0.18	0.08	0.03	0.05	0.15	0.74
Issue Salienc Scale (-1.55 to 3.67)	0.04	0.07	0.55	-0.06	0.07	0.38	-0.11	0.13	0.39
Q.27---how closely one follows news about EN (1=Very closely through 4=Does not follow at all)	0.13	0.08	0.08	0.04	0.08	0.61	0.09	0.14	0.49
Q.34---Participation in discussion about EN (1=Yes and 0=No)	-0.2	0.12	0.11	0.07	0.13	0.60	-0.35	0.22	0.13
Q.16 Recoded---news story affects one's own opinion (0 for news control groups, 1 for not at all, to 4 for very much)	-0.13	0.09	0.13	0	0.09	0.97	-0.05	0.16	0.76
Q.17 Recoded---news story affects others' opinion (0 for news control groups, 1 for not at all, to 4 for very much)	0.09	0.08	0.28	-0.02	0.09	0.84	-0.17	0.15	0.27

Q.18--- Recoded Information cards informative (0 for information control groups, 1 for not at all, to 4 for very much)	-0.07	0.12	0.54	0.08	0.12	0.50	-0.13	0.21	0.55
Q.19--- Recoded Information cards relevant (0 for information control groups, 1 for not at all, to 4 for very much)	0	0.1	0.99	-0.13	0.1	0.21	0	0.18	0.99
Q.20- Recoded---Party ID (1=Strongly Democrat through 5=Strongly Republican)	-0.09	0.06	0.15	0.03	0.07	0.70	0.12	0.12	0.30
Q.21---Ideology (1=Extremely liberal through 7=Extremely conservative)	0.07	0.04	0.10	-0.01	0.05	0.84	-0.11	0.08	0.20
Q.22---Political interest (1=Very much interested through 3=Hardly interested at all)	0.04	0.03	0.19	-0.01	0.03	0.82	-0.01	0.05	0.86
Q.41—Gender (1=Male and 2=Female)	0.08	0.11	0.48	0.29	0.12	0.02	0.04	0.21	0.84
Q.42—Race (1=White, 2=African American/Black, etc)	0.09	0.05	0.08	0.03	0.05	0.57	-0.02	0.09	0.87
Q.43---Education (1=Less than high school through 5=Post graduate work)	-0.07	0.07	0.27	-0.11	0.07	0.12	0.04	0.12	0.75
Q.44---Age (1=18-25 through 6=60 or older)	0.12	0.04	0.00	0.08	0.04	0.07	0	0.07	0.99
Q.45---Income (1=Less than 20,000 through 6=100,000 or more)	0.02	0.04	0.70	0.04	0.04	0.40	0.13	0.07	0.09

**Significant at 0.05 level. *Significant at 0.10 level.

Table A-28. Regression Results for post-test respondents

Independent Variables	Dependent Variable					
	Support for Alternative Energy (-1.40 to 3.41)			Support for Incentives for Traditional Energy (-2.16 to 2.32)		
	β	SE	p	β	SE	p
Intercept	0.33	0.37	0.37	-0.59	0.44	0.19
News Story Stimuli (1=Supporting alternative energy, -1= Disadvantages of alternative energy, 0=No Story about alternative energy)	0.15**	0.07	0.03	-0.07	0.08	0.42
Information Cards on alternative energy research (0=without card 1=with card)	0.69**	0.28	0.01	0.09	0.33	0.77
Interaction	-0.04	0.1	0.69	0.15	0.12	0.19
Information Scale (0-1)	-0.62**	0.18	<0.0001	-0.17	0.21	0.43
Political Knowledge (0-1)	-0.23	0.17	0.19	0.07	0.2	0.73
Media Exposure Scale (-1.87 to 2.00)	0.03	0.05	0.57	-0.03	0.06	0.58
Issue Saliency Scale (-1.55 to 3.67)	0.44**	0.05	<0.0001	0.20**	0.05	<0.0001
Q.27---how closely one follows news about EN (1=Very closely through 4=Does not follow at all)	<0.01	0.06	0.98	0.05	0.08	0.47
Q.34---Participation in discussion about EN (1=Yes and 0=No)	-0.07	0.1	0.49	0.06	0.11	0.59
Q.16 Recoded---news story affects one's own opinion (0 for news control groups, 1 for not at all, to 4 for very much)	-0.15**	0.06	0.02	<0.01	0.08	0.99
Q.17 Recoded---news story affects others' opinion (0 for news control groups, 1 for not at all, to 4 for very much)	0.15**	0.06	0.01	-0.01	0.07	0.93
Q.18--- Recoded Information cards informative (0 for information control groups, 1 for not at all, to 4 for very much)	-0.22**	0.08	0.01	-0.10	0.1	0.31
Q.19--- Recoded Information cards relevant (0 for information control groups, 1 for not at all, to 4 for very much)	<0.01	0.07	1.00	0.03	0.09	0.70
Q.20- Recoded---Party ID (1=Strongly Democrat through 5=Strongly Republican)	-0.08*	0.05	0.10	0.01	0.06	0.87
Q.21---Ideology (1=Extremely liberal through 7=Extremely conservative)	0.20**	0.04	<0.0001	0.09*	0.05	0.06
Q.22---Political interest (1=Very much interested through 3=Hardly interested at all)	-0.17**	0.07	0.01	-0.07	0.08	0.43

Q.41—Gender (1=Male and 2=Female)	-0.11	0.08	0.19	-0.06	0.1	0.57
Q.42—Race (1=White, 2=African American/Black, etc)	0.06*	0.03	0.07	0.06	0.04	0.14
Q.43---Education (1=Less than high school through 5=Post graduate work)	0.03	0.04	0.43	-0.12**	0.05	0.02
Q.44---Age (1=18-25 through 6=60 or older)	<0.01	0.03	0.96	0.11**	0.03	<0.0001
Q.45---Income (1=Less than 20,000 through 6=100,000 or more)	<0.01	0.03	0.98	0.05	0.03	0.13

**Significant at 0.05 level. *Significant at 0.10 level.

Table A-29. Regression Results for post-test respondents - Continued

Independent Variables	Dependent Variable											
	Q.1---Traditional energy will run out soon or will sustain long (1=Run out soon, 2=Sustain long)			Q.2---Alternative energy a better source (1=Yes, 2=Same as traditional energy and 3=No)			Q.3---Government increase/decrease incentive to develop alternative energy research (1=Increase, 2=No change and 3=Decrease)			Q.4---Government increase/decrease incentive to develop traditional energy research (1=Decrease, 2=No change and 3=Increase)		
	β	SE	p	β	SE	p	β	SE	p	β	SE	p
Intercept	1.11**	0.2	<0.0001	1.51**	0.3	<0.0001	1.56**	0.26	<0.0001	1.91**	0.32	<0.0001
News Story Stimuli (1=Supporting alternative energy, -1=Disadvantages of alternative energy, 0=No Story about alternative energy)	0.01	0.04	0.73	0.03	0.06	0.60	0.09*	0.05	0.06	-0.02	0.06	0.78
Information Cards on alternative energy research (0=without card 1=with card)	0.19	0.15	0.20	0.10	0.23	0.67	0.10	0.19	0.61	-0.05	0.24	0.82
Interaction	0.02	0.05	0.68	0.12	0.08	0.14	-0.08	0.07	0.22	0.04	0.08	0.65
Information Scale (0-1)	-0.04	0.09	0.64	-0.27*	0.15	0.07	-0.41**	0.12	<0.0001	-0.19	0.15	0.21
Political Knowledge (0-1)	0.20**	0.09	0.02	-0.22	0.14	0.12	-0.09	0.12	0.47	-0.25*	0.15	0.09
Media Exposure Scale (-1.87 to 2.00)	<0.01	0.03	0.93	-0.02	0.04	0.67	0.05	0.03	0.17	-0.01	0.04	0.86
Issue Salience Scale (-1.55 to 3.67)	0.10**	0.02	<0.0001	0.27**	0.04	<0.0001	0.22**	0.03	<0.0001	0.12**	0.04	<0.0001
Q.27---how closely one follows news about EN (1=Very closely through 4=Does not follow at all)	0.01	0.03	0.72	0.04	0.05	0.48	<0.01	0.04	0.98	0.04	0.05	0.45
Q.34---Participation in discussion about EN (1=Yes and 0=No)	0.03	0.05	0.58	-0.01	0.08	0.88	0.01	0.07	0.92	0.01	0.08	0.88
Q.16 Recoded---news story affects one's own opinion (0 for news control groups, 1 for not at all, to 4 for very much)	-0.03	0.03	0.35	-0.03	0.05	0.58	-0.12**	0.04	0.01	0.04	0.06	0.49
Q.17 Recoded---news story affects others' opinion (0 for news control	0.05	0.03	0.16	0.03	0.05	0.60	0.11**	0.04	0.01	-0.05	0.05	0.38

groups, 1 for not at all, to 4 for very much)												
Q.18--- Recoded Information cards informative (0 for information control groups, 1 for not at all, to 4 for very much)	-0.09**	0.04	0.04	-0.11	0.07	0.12	-0.11*	0.06	0.06	-0.02	0.07	0.80
Q.19--- Recoded Information cards relevant (0 for information control groups, 1 for not at all, to 4 for very much)	-0.01	0.04	0.88	0.06	0.06	0.31	0.07	0.05	0.15	0.03	0.06	0.59
Q.20- Recoded---Party ID (1=Strongly Democrat through 5=Strongly Republican)	-0.03	0.03	0.35	0.04	0.04	0.33	-0.07**	0.04	0.04	0.01	0.04	0.90
Q.21---Ideology (1=Extremely liberal through 7=Extremely conservative)	0.07**	0.02	<0.0001	0.03	0.03	0.38	0.13**	0.03	<0.0001	0.04	0.04	0.32
Q.22---Political interest (1=Very much interested through 3=Hardly interested at all)	-0.04	0.04	0.35	0.19**	0.06	<0.0001	-0.05	0.05	0.35	-0.04	0.06	0.56
Q.41---Gender (1=Male and 2=Female)	-0.06	0.04	0.17	-0.09	0.07	0.16	-0.04	0.06	0.47	<0.01	0.07	0.98
Q.42---Race (1=White, 2=African American/Black, etc)	0.05**	0.02	0.01	0.06**	0.03	0.04	0.02	0.02	0.30	<0.01	0.03	0.86
Q.43---Education (1=Less than high school through 5=Post graduate work)	-0.04	0.02	0.12	0.08	0.04	0.03	0.01	0.03	0.83	-0.09**	0.04	0.02
Q.44---Age (1=18-25 through 6=60 or older)	0.05**	0.01	<0.0001	0.06**	0.02	0.01	-0.01	0.02	0.70	0.04	0.02	0.11
Q.45---Income (1=Less than 20,000 through 6=100,000 or more)	0.01	0.01	0.38	<0.01	0.02	0.93	<0.01	0.02	0.97	0.05**	0.02	0.05

**Significant at 0.05 level; *Significant at 0.10 level

Table A-30. Regression Results for post-test respondents - Continued

Independent Variables	Dependent Variable								
	Q.5---Alternative energy beneficial/harmful to environment (1=Beneficial 2=Neither and 3=Harmful)			Q.6---Alternative energy beneficial/harmful to economy (1=Beneficial 2=Neither and 3=Harmful)			Q.7---Increase gas tax to support alternative energy research (1=Definitely support through 4=Definitely not support)		
	β	SE	p	β	SE	p	β	SE	p
Intercept	1.80**	0.19	<0.0001	1.57**	0.25	<0.001	1.94**	0.41	<0.0001
News Story Stimuli (1=Supporting alternative energy, -1=Disadvantages of alternative energy, 0=No Story about alternative energy)	0.08**	0.04	0.03	0.10**	0.05	0.03	-0.06	0.08	0.46
Information Cards on alternative energy research (0=without card 1=with card)	0.63**	0.14	<0.0001	0.05	0.19	0.81	0.79**	0.31	0.01
Interaction	-0.01	0.05	0.80	-0.09	0.07	0.17	0.21*	0.11	0.06
Information Scale (0-1)	-0.41**	0.09	<0.0001	-0.13	0.12	0.28	-0.02	0.2	0.93
Political Knowledge (0-1)	-0.31**	0.09	<0.0001	-0.13	0.12	0.28	0.31	0.19	0.11
Media Exposure Scale (-1.87 to 2.00)	0.03	0.03	0.33	<0.01	0.03	1.00	-0.06	0.06	0.25
Issue Salience Scale (-1.55 to 3.67)	0.17**	0.02	<0.0001	0.24**	0.03	<0.001	0.18**	0.05	<0.0001
Q.27---how closely one follows news about EN (1=Very closely through 4=Does not follow at all)	-0.01	0.03	0.73	0.03	0.04	0.47	-0.02	0.07	0.75
Q.34---Participation in discussion about EN (1=Yes and 0=No)	-0.01	0.05	0.84	-0.10	0.07	0.13	-0.01	0.11	0.92
Q.16 Recoded---news story affects one's own opinion (0 for news control groups, 1 for not at all, to 4 for very much)	-0.03	0.03	0.45	-0.03	0.04	0.48	-0.25**	0.07	<0.0001
Q.17 Recoded---news story affects others' opinion (0 for news control groups, 1 for not at all, to 4 for very much)	0.02	0.03	0.47	0.05	0.04	0.19	0.19**	0.07	0.01
Q.18--- Recoded Information cards informative	-0.13**	0.04	<0.0001	-0.04	0.06	0.47	-0.20**	0.09	0.04

(0 for information control groups, 1 for not at all, to 4 for very much)									
Q.19--- Recoded Information cards relevant (0 for information control groups, 1 for not at all, to 4 for very much)	-0.07*	0.04	0.08	0.02	0.05	0.63	-0.04	0.08	0.60
Q.20- Recoded---Party ID (1=Strongly Democrat through 5=Strongly Republican)	-0.07**	0.03	0.01	-0.01	0.03	0.81	0.05	0.06	0.42
Q.21---Ideology (1=Extremely liberal through 7=Extremely conservative)	0.05**	0.02	0.01	0.10**	0.03	<0.0001	0.18**	0.05	<0.0001
Q.22---Political interest (1=Very much interested through 3=Hardly interested at all)	-0.07*	0.04	0.07	-0.12**	0.05	0.01	0.04	0.08	0.61
Q.41---Gender (1=Male and 2=Female)	-0.06	0.04	0.18	-0.03	0.06	0.57	0.03	0.09	0.76
Q.42---Race (1=White, 2=African American/Black, etc)	0.02	0.02	0.23	0.02	0.02	0.31	0.02	0.04	0.50
Q.43---Education (1=Less than high school through 5=Post graduate work)	0.03	0.02	0.24	-0.03	0.03	0.25	-0.07	0.05	0.13
Q.44---Age (1=18-25 through 6=60 or older)	<0.01	0.01	0.83	-0.01	0.02	0.54	-0.01	0.03	0.67
Q.45---Income (1=Less than 20,000 through 6=100,000 or more)	0.01	0.01	0.54	0.02	0.02	0.25	-0.04	0.03	0.24

**Significant at 0.05 level; *Significant at 0.10 level

Table A-31. Summary Table for Results from the Three Experiments

Independent Variables	Experiment	Univariate	Multivariate	Panel
News	North Korean Nuclear Threat	*Feeling thermo: Confirms H.1 and H.2 *Nuclear threat scale: Confirms H.1, contradicts H.2 *Q7: Confirms H.1, contradicts H.2	No significant effect	Feeling thermo: Confirms H.1 and H.1 Q6: Confirms H.1 and H.1
	Health Care Reform	No significant effect *Alternative energy scale: Contradicts H.1 and H.1	Q2: Confirms H.1 and H.1 Alternative energy scale, Q3, Q5 and Q6: Contradict H.1 and H.1	No significant effect
	Alternative energy	*Q5 & Q6: Contradict H.1 and H.1		
Information	North Korean Nuclear Threat	Specific information scale only	No significant effect	No significant effect Q5: More information, more likely to favor employer paying a fee Q7: More information, less likely to favor increasing tax for pay for the reform
	Health Care Reform	Specific information scale only	General favorability scale, Q3 and Q7: More information, less likely to favor the reform Alternative energy scale, Q5 and Q7: More information, Less likely to favor alternative energy	Alternative energy scale and Q3: More information, less support
	Alternative energy	Specific information scale only		
Interaction	North Korean Nuclear Threat	No significant effect Trend: Q4, 5 and nuclear threat scale: Contradict H.2 and H.2	Q4 and Q8: Contradict H.2, H.2	No significant effect
	Health Care Reform	No significant effect Trend: General favorability scale, Q1-3, Q7-9: Confirm H.2 and H.2	Q2: Confirms H.2 and H.2	No significant effect
	Alternative energy	No significant effect Trend: Alternative energy support scale, Q3, 5, 6: Contradict H.2 and H.2 Q7: Confirm H.2 and H.2	Q7: Contradicts H.2 and H.2	No significant effect

Acquired information	North Korean Nuclear Threat	Feeling thermo, Q7 and 8: More information, more feelings of threat Trend only: Q5 and Q6: More information, more likely to feel the reform will be beneficial to American people; less likely to favor single payer system	Feeling thermo, Q8: More information, more likely to feel North Korea is less friendly and less likely to feel that peace talk can be the solution
	Health Care Reform	Alternative energy scale, Q2, 3 and 8: more information, more support	Trend only: Q5 and 6: More information, more likely to oppose that employer paying a fee and more likely to favor cutting Medicare cost
	Alternative energy		No effect
Political Knowledge	North Korean Nuclear Threat	Nuclear threat scale, Q3, 5, 6, 7: More political knowledge, more feelings of threat Trend only: Q3, 6 and 7, more knowledge, more likely to favor increasing tax and an insurance system with both public and private options, and less likely to favor cutting Medicare cost	Q8: More knowledge, more likely to think peace talk is a solution
	Health Care Reform	Q1, 4 and 5: More knowledge, less support for alternative energy	Q6: More knowledge, more likely to oppose cutting Medicare cost
	Alternative energy		Alternative energy scale: More knowledge, more support for alternative energy
Issue Salience	North Korean Nuclear Threat	All except Q8: More salient, more feelings of threat	No significant effect
	Health Care Reform	General favorability scale, Q1, 2, 8, and 9: More	Cut Medicare scale, Q3, Q4, Q9: More salient, less favorability of

			salient, less favorable of the scale	cutting Medicare scale, More favorable to public and private options, and single payer system, more likely to think the reform is harmful for the economy.
		Alternative energy	All Qs and scales: More salient, less support for alternative energy and more support for traditional energy	Q1: More salient, more likely to think traditional energy will sustain long Q4: More exposure leads to more feelings of threat Q6: More discussion leads to more likely to think that North Korea's real intention is to get financial aid
General Media Exposure	North Korean Nuclear Threat		No significant effect General favorability scale, Q2, 4 and 8: More reported following of the reform news, less support of the reform	Q3: More participation in discussion, more likely to favor public and private insurance options Q1 and 6: More exposure, more likely to think traditional energy will run out soon and alternative energy is beneficial to economy Q5: More follow-up of news, more likely to think alternative energy is beneficial to environment Q3 and Q4: More discussion, more support for traditional energy
		Health Care Reform		
		Alternative energy	No significant effect	
Evaluation of Information Cards	North Korean Nuclear Threat		No significant effect	Informative: No significant effect Q3: Relevant leads to feeling North Korea more friendly
		Health Care Reform	General favorability scale, Q3: Information relevant, more likely to favor the	Q2, 6, 7: More informative, more likely to favor increasing tax, less likely to favor cutting Medicare, less

	Alternative energy	reform Alternative energy scale, Q1, 3, 5 and 7: information cards informative, more likely to support alternative energy Q5: information cards relevant, more likely to think that alternative energy is beneficial to the environment	likely to favor universal coverage Informative: No significant effect Alternative energy scale, Q3: Relevant leads to more support for incentives for alternative energy
		Q5 and 8: News affects one's own opinion: More likely to think North Korea issue can be resolved by peace talks and more likely to agree that it is a danger to the world	
Evaluation of News Story	North Korean Nuclear Threat	Q5 and 8: News affects others' opinions: Less likely to think North Korea issue can be resolved by peace talks and less likely to agree that it is a danger to the world Q7: News affects one's own opinion: More likely to favor increasing tax to finance the reform News affects others' opinions: No significant effects	Q8: News affects one's own opinion: more likely to think that this issue can be resolved by peace talks Q8: News affects other's opinions: Less likely to think that this issue can be resolved by peace talks
	Health Care Reform		News affects one's own opinion: No significant effect Q6: News affects others' opinions: More likely to favor the reform
	Alternative energy	Alternative energy scale:	Q2, 4, and 5: News affects one's own

			news affects one's own opinion: More likely to support alternative energy Alternative energy scale, Q3 and 7: Less likely to support alternative energy	opinion: More likely to think alternative energy is beneficial to the economy, is a better source of energy and more likely to decrease incentives for traditional energy News affects others' opinions: No significant effect
Party ID	North Korean Nuclear Threat		No significant effect General favorability scale, Q1 and 5: Democrats are more likely to favor the reform	No significant effect
	Health Care Reform		Alternative energy support scale, Q4, 5: Republicans are more likely to support alternative energy	Q2: Democrats are more likely to support universal coverage
	Alternative energy			Q3 and 5: Republicans are more likely to support alternative energy
Political Ideology	North Korean Nuclear Threat		Nuclear threat scale, Q4, 5, 7, 8: Conservatives are more likely to feel North Korea is a threat General favorability scale, Q3-5 and Q7-9: Liberals are more likely to favor the reform	Q3: Conservatives are more likely to feel that North Korea is friendly
	Health Care Reform			No significant effect Q3: Liberals are more likely to support increasing incentives for alternative energy
	Alternative energy		Alternative energy support scale, Q1, 3, 5, 6, and 7: Liberals are more likely to support alternative energy	Q1: Conservatives are more likely to think traditional energy will run out soon
Political Interest	North Korean Nuclear Threat		Nuclear threat scale, Q3-6: Less interest leads to more feelings of threat	No significant effect

	Health Care Reform	General favorability scale, Q3: More interest leads to more opposing the reform	Q5: More interest leads to more favorability of employer paying a fee
	Alternative energy	Alternative energy support scale, Q2, 5, and 6: More interest leads to less favorability of alternative energy	Q3: More interest leads to more support for incentives to develop alternative energy
Concern of Terrorist Attacks	North Korean Nuclear Threat	Nuclear threat scale, Q4,5, 6: More worried about terrorist attacks, more likely to feel North Korea poses a threat	Nuclear threat scale, Q4: More worried about terrorist attacks, more likely to feel North Korea poses a threat
Presidential Approval	Health Care Reform	All Qs and scales: More approval of the President, more likely to support the reform	Q1, 3, 5, 6, 9 and scales: More approval of the President, more likely to support the reform
Race	North Korean Nuclear Threat	No significant effect	No significant effect
	Health Care Reform	Q9: Whites are more likely to think the reform is beneficial to the economy	No significant effect
	Alternative energy	Alternative energy scale, Q1 and 2: Whites are more likely to support alternative energy	Q5: Whites are more likely to think that alternative energy is more beneficial to the environment
Gender	North Korean Nuclear Threat	Q6: Females are more likely to think the intention of North Korea is to pose nuclear threat	No significant effect
	Health Care Reform	No significant effect	Q4: Females are more likely to oppose single payer system
	Alternative energy	No significant effect	Q6: Males are more likely to think

			alternative energy is beneficial to economy
Age	North Korean Nuclear Threat	Q3: Older participants think that North Korea is less friendly Q3, 6, 7 and cutting Medicare cost scale: Older participants are more likely to favor increasing tax and having public and private options. They are also less likely to support cutting Medicare cost.	No significant effect
	Health Care Reform		No significant effect Q3 and 5: Older respondents are more likely to support for incentives for alternative energy. Younger respondents are more likely to think alternative energy is beneficial to the environment.
	Alternative energy	Traditional energy scale, Q1, Q2: Older respondents are more likely to support traditional energy	
Education	North Korean Nuclear Threat	Nuclear threat scale, Q4, 5, 8: Higher education leads to less feeling of threat from North Korea	Q6: Higher education leads to think that the real intention is to get financial aid Q3, 9: Higher education leads to more favorability of having both public and private options of health insurance; more likely to think the reform is beneficial to economy
	Health Care Reform	Q1: Higher education, less favorability of the reform Alternative energy scale, Q4: Higher education, less support for alternative energy	
	Alternative energy		No significant effect
Income	North Korean Nuclear Threat	Q8: Higher income leads to less likely to think peace talks are a solution	Q6: Higher income leads to think North Korea is posing a real threat than to get financial aid

Health Care Reform

Alternative energy

General favorability scale,
Q1, 2 and 7: Higher
income, less favorable of
the reform
Q4: Higher income leads
to more support for
increasing incentives for
alternative energy

No significant effect

Q7: Higher income leads to less
likely to support increasing tax

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