21st Century Media Effects:

Choice, Predispositions, and their Impact on Agenda Setting and Priming

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Dedication

This dissertation is dedicated to the memory of Lois Whitely and The Mau Mau cat, neither of whom were able to see it through to completion.

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Chapter 1: Literature Review and Hypotheses

The mass media serve as the primary source of political information for nearly all citizens. Very few have direct access to the workings of government or people and conditions outside of their immediate experiences, but anyone with access to a newspaper, radio, television, or internet connection is capable of being filled in about politics and a wide variety of other "newsworthy" stories. We are currently experiencing a tremendous transformation of the types of media available to the average citizen. The rise of technologies such as cable and satellite television, DVR, and the internet have attributes that alter the media experience, allowing the user a greater variety of choices and control over what content they view, read, and listen to. Whereas in the past, media technologies provided users with limited control over the media experience, and therefore led to a widely shared media experience, the current trend is towards individualized media experience based on niche programming and active selection of content. There has been a massive increase in the amount of **choice** people have over what information they consume. This new level of choice of information is potentially important to our understanding of media effects, such as agenda setting and priming. In the past, we have been able to assume that relatively large numbers of people might be exposed to information about politics because it was a part of the broadcast landscape. Today however, citizens have much more control. The purpose of this dissertation project is to examine the role that increased choice over information has on the exposure to hard news stories rather than other topics that lack political relevance, the role that individual

differences among citizens play in shaping who consumes hard news, and ultimately, the role that this combination of context and individual differences has in shaping public opinion. Does increased choice decrease attention to political topics? Does it do so for everyone, or only some individuals? What are the implications of this choice for public opinion?

A New Context: Audience Control, Cable, and the Internet

Over the last 30 years, the general trend in the media has been away from broadcasting towards "narrowcasting" where citizens are able to choose from a much wider range of information sources than ever before. While there is a much wider array of information available, the scope of any particular channel is much more tailored to the presumed tastes of specific groups (Neuman 1991). In previous eras, particularly with television news, the main choice one made was to watch or not watch (Baum and Kernell 1999) as programming was relatively homogenous in content, tone, and style, across the 3 major networks (Martin and Mutz 2001). Today, one can easily select a wide range of content. Television has changed, from three relatively homogenous channels to cable and satellite systems with hundreds of channels. On the internet, the possibilities for information consumption are essentially unlimited. In addition to the amount and variety of information available, different technologies have different norms of usage (Postman 1985). Postman argues that cultural understandings and presentational attributes of different media instruct users to use them for different purposes. For example, people

watch television or listen to the radio, both passive activities. In contrast, people surf the web or search for information (Dutta-Bergman 2004). These are both more active roles, with searching for specific information representing the highest level of involvement and selectivity. Surfing is much less selective about the type of information, although the act of surfing is still more active than passively watching a television program.

The internet represents the culmination of this move to narrowcasting. The breadth and depth of information available to the average citizen has never been greater. It is now possible to access coverage on a number of issues that do not receive much coverage in the mainstream press (Cleaver 2004) or to go into greater depth on an issue of interest. At the same time, the user has unprecedented control over what information she is exposed to. Internet news users, for example, like that the internet allows them choice and control over their media experience (Fallows 2007). This is consistent with Postman's observation that technologies have recognized norms of usage. High choice media lead to expectations of individualized information use, whether in the form of choosing favorite shows or networks from a large array, or using the internet to either search or surf for information.

It is clear that people have gravitated towards high choice media. Most households have cable or satellite television, a majority has internet access in their homes, and importantly, large numbers are using the internet to access news and other politically relevant information. "In March 2000, 30 million Americans had gotten news about

politics using the internet, and 51 million had gotten news of any kind. By the middle of 2004, these numbers had grown to 63 million and 92 million respectively" (Horrigan et al 2004). . In 2000, 51% of adults surveyed used the internet as a news source (Tewksbury 2003). This represents a dramatic expansion in internet penetration over the last 20 years, and the trend continues through the conversion of old media users and generational replacement by users more inclined towards internet use. Evening news viewership fell from 57 Million viewers to 25 million viewers between 1980 and 2008 (Pew Project for Excellence in Journalism 2009).

There is some debate about whether or not use of the internet and internet news comes as a replacement or a supplement to traditional news outlets. On one hand, early studies indicated that internet users were more likely to be consumers of other media (Davis and Owen 2000). Similarly, Horrigan found that people who viewed news on the internet were also more likely to consume offline news (2004). Althaus and Tewksbury (2002) found that internet news reading was positively correlated with newspaper reading, but not related to watching television news, leading them to speculate that people use the internet and traditional news sources for different things. On the other hand, evidence suggests that time spent on the internet comes at the expense of other activities, particularly watching television (Nie et al 2004). It is too soon to know whether internet news, representing the highest potential for selectivity, will replace traditional news, or continue to be mainly a supplement. For present purposes, however, it is worth noting that even television has grown to include much more potential for selectivity than it did in the past. During the same time that network news viewership has fallen, cable news

consumption has grown dramatically (though the 4 million cable news viewers do not offset the loss of 25 million network news viewers) (Pew Project for Excellence in Journalism 2009).

While generally speaking, increased choice is seen as a positive thing for consumers, it may not be beneficial to democratic citizenship. While there are a number of ways that choice of content could play out, my general expectation is that media effects will become less prevalent under the new media conditions than previously thought given people's increased ability to select content. This is politically relevant because it represents a shift in individual power to shape experience, which may have both positive and negative consequences.

On the positive side, increased choice allows citizens to overcome the failures of mass media. Much of the literature on media effects treats them as a form of manipulation of citizens. A number of critics have argued that citizens are ill served by media coverage of current affairs because it focuses attention on issues that are unimportant to citizens (Fallows 1996). High choice media potentially represent an opportunity for citizens to focus in on what they care about (Tewksbury 2003). Similarly, a number of critics claim that the media has a particular bias. While increased choice does not eliminate bias from any one source, it does allow citizens to take in a broader range of viewpoints.

On the other hand, it is not clear that when people choose content that they want to see, it will be beneficial to democratic politics. Increased choice also increases the burden on

citizens in the process of getting informed. It is in the interest of citizens to delegate the task of information gathering to simplify political decision making (Lippman 1922, Downs 1957). While the availability of more information does not require that each citizen become a news reporter, it could increase the effort in some ways, of obtaining information. While the current media environment offers a multitude of information, there is thought that information overload may push people towards a small subset of the available content. For example, the average cable customer watches about 15 channels, regardless of how many channels their system provides (Levy 2005). This effect may be found on the internet as well. It is possible that citizens cope with excess information by sticking to trusted sources. While individuals may not consume any more media when presented with choice, it is likely that they will not pay attention to the same stories that they would when presented with a broadcast. It is possible that they may not gather news that is beneficial to democratic citizenship. Tewksbury finds, among internet news readers, only a small number actually look at hard news or politics stories (Tewksbury 2003). Further, there is a wealth of available information on the internet with no news or political value that people may be consuming. For example, more Americans use the internet to find out about hobbies than went online to view news about the 2008 election (Griffith and Fox 2007, Smith 2009).

Cass Sunstein is concerned that the internet allows for citizens to totally filter their media content so that they will only be exposed to ideas that reinforce their own beliefs, leading to at least a loss of a common public discourse, and possibly to the balkanization and polarization of opinion. His concerns are largely informational rather than social. Even in

his treatment of online discussions, Sunstein's concern is over limited viewpoints being presented and reinforcement and polarization based on one sided communications (Sunstein 2007). While Sunstein provides evidence that people may find themselves in one sided information environments (such as conservatives gravitating to Fox News or liberals listening to NPR), this does not provide evidence for polarization occurring, only for the existence of conditions thought to foster polarization.

While some argue that media effects are akin to manipulation (or could at least be used to manipulate), they may also have positive consequences. Agenda setting from a relatively homogenous news source may help citizens develop sociotropic political concerns rather than simply basing political decision making on selfish motives (Mutz 1998). Priming may help steer citizens to standards of evaluation that are most appropriate to evaluating political figures. It seems likely that when given more choice over information, citizens may focus only on selfish concerns, limit the viewpoints they are exposed to, or simply disengage from political information altogether. While citizens may be less susceptible to manipulation when given more choice over content, something valuable may be lost with the degradation of the gatekeeper function of the press.

News Media and Public Opinion

Research in political communication has largely been concerned with the impact of particular content on audiences. Past research on the impact of media messages on public opinion has gone through several incarnations. In the earliest, the "hypodermic needle" model, it was believed that media messages could have powerful persuasive impacts on the public that was unable to resist, as though ideas were being injected directly into their brains. When systematic research failed to find evidence for this hypodermic needle effect, the field shifted to the minimal effects paradigm that argued that the media had relatively little impact on citizens' opinions.

Our contemporary understanding of media effects fits somewhere in between these two extremes, showing effects that are politically relevant but more subtle than an irresistible injection of opinion. Contemporary research on media effects on public opinion has focused on three key areas: the public's agenda, the standards by which elected officials are judged, and the construction of the meaning of political issues. First, while the media are not able to tell people what to think (as the hypodermic needle model would suggest) it has been demonstrated that they are quite able to tell people what to think about (Cohen 1964). This agenda setting effect has been demonstrated consistently (McCombs and Shaw 1972, Iyengar and Kinder 1987). Issues that receive increased attention in the media (or in a few studies, from elites) tend to become salient concerns for the public. The media may not shape citizens' preferred solutions to the issue, but they do raise its

salience. This is a critical political effect, as issues that the public is less concerned with often receive less attention from elected officials in the policy process.

Closely related to agenda setting is priming. Priming holds that increased attention by the media (or other elites) to a particular issue results in increased reliance on that issue in evaluating political figures, particularly the president (Iyengar and Kinder 1987, Krosnick and Kinder 1990, Krosnick and Brannon 1993, Miller and Krosnick 2000). For example, if media coverage shifts its focus to include more attention to foreign policy than to the economy, we would expect to see the influence of public perceptions of the president's handling of foreign policy on overall approval increase, while we would expect to see the influence of the public's perception of his handling of the economy decrease. Like agenda setting, this focus does not necessarily influence the public's evaluation of how a president is doing handling that particular issue; it only makes their opinions of his handling more relevant to their overall evaluation. It also does not necessarily change overall presidential approval. This only would occur where individuals have different opinions about the president's performance across the domains (Druckman and Holmes 2005). Priming is also critically important politically; as it shifts the standards the public applies to their leaders and how leaders are held accountable (Druckman and Holmes 2005).

The media effects tradition has been accused of promoting a rather mechanistic and negative picture of the audience (Klapper 1963). While there is little direct research in

political communication on the question of user choice over content, it is not the case that the literature always treats people as passive consumers. Even treating exposure as a given, there is evidence that not all information is used in the same way. While Iyengar and Kinder treated audiences as "victims" of various media effects (Iyengar and Kinder 1987), aspects of their own work and subsequent research has demonstrated that citizens do have an evaluative role in information that they are presented with. For example, they found that certain groups could not be primed on certain issues. Coverage of environmental stories, for example, had no impact on the standards used by Republicans in evaluating the president, while it did have an impact on Democrats (Iyengar and Kinder 1987). Perhaps the best example of this is Zaller's Reception-Acceptance-Sample (RAS) model of media effects on opinion (Zaller 1992[1]) which portrays the interaction of the individual with the information environment. In this model, citizens must first receive a particular message. They then decide whether to accept the message and encode it into memory. Finally, when called upon to form an opinion on a particular issue, they sample their memory of beliefs stochastically, with those messages that are most easily recalled most likely to influence the final opinion (Zaller 1992). While some critics question the role of stochastic sampling in the opinion formation process on normative grounds or due to evidence of more thoughtful processes at work (e.g. Miller and Krosnick 2000, Althaus and Kim 2006), what is of particular interest here is the acceptance stage. This stage indicates that citizens are not entirely passive in their consumption of media, but choose whether or not to encode particular information into their memories. A number of factors influence whether or not a particular message makes it into memory. One element of particular interest is whether or not the new message is consistent with ones prior beliefs.

[1] And closely follows Hovland's 1948 Exposure, Reception, Yielding Model (Zaller 1992)

There are a number of potential effects at the acceptance stage including counterarguing, ignoring some information, or accepting and encoding. Zaller most clearly demonstrates this interaction of media content and the individual in comparisons of one and two sided information flows. When elites only present arguments supporting one side, increased media exposure tends to favor holding opinions consistent with elite opinion, what Zaller refers to as a mainstreaming effect. In contrast, in two sided situations with elite disagreement, increased exposure leads to polarization, as individuals are more likely to accept messages consistent with their prior beliefs (Zaller 1992, Zaller 1994).

The combination of two sided communication models and the various thought processes that might lead individuals to accept or reject a piece of communication indicate that the news audience is not necessarily passive. These studies, however, focus on how events after exposure to information may stifle or enhance media effects on opinion. In a high choice environment, however, we have an additional step to consider, exposure. Self exposure represents an additional step where media effects may be either enhanced, or most likely, attenuated.

Past Work on Information Seeking

While the media effects literature in political science has generally neglected questions of purposeful exposure, there are two theoretical bodies of relevant literature from communications which attempt to provide accounts of more active forms of audience

participation, uses and gratifications theory and selective exposure. In addition, there are other studies which consider audience activities, without really falling into either theoretical camp. While both Uses and Gratifications and Selective Exposure portray audience members as active rather than passive, they differ in the type of choices they describe and their psychological underpinnings. To some extent, both provide some insight into the question of the impact of increased choice and control on citizen's media consumptions, although neither is a perfect fit with the type of content and choices we consider when thinking about agenda setting, and priming. In addition, while these models do help illuminate audience behavior, they generally do so at the expense of considering effects beyond exposure to particular media.

Uses and Gratifications seeks to come to grips with the audience experience itself, rather than treating audience members as passive vessels to be filled with media content (Blumler 1979) . It came about from a frustration by some with traditional media effects research (Klapper 1963). The theory rests on five main assumptions. First, media selection and use is goal directed, purposive, motivated, and relatively active. Second, people take the initiative to fulfill certain desires through media consumption. Third, social and psychological factors mediate communications behavior. Fourth, media compete with other forms of communication for selection, attention, and use. Finally, the audience is typically more influential than the media in the relationship (Rubin 1994). While even the seventies research acknowledged the role of the individual in choosing what content to use, the proliferation of possibilities of information sources makes this notion of considering content selection even more important.

Typically, in Uses and Gratifications Research, media use, whether understood as choice of medium, content, or amount of use, is treated as the dependent variable (Rubin 1994, Katz et al 1973). Generally speaking, the theory focuses on broad types of content. Most of the early research focused on the factors that would lead to the choice of one medium over another, such as what would lead one to choose among television, radio, newspapers, books, or the cinema (Katz et al 1973). In other cases, studies have examined the choice of categories of content within a particular medium. For example, Rubin (1981a) examined factors that would lead an individual to particular genres of television programming, such as news, situation comedies, and dramas. It is rare, however, for uses and gratifications research to focus on choice of individual programs (Rubin 1981b). This is problematic, in light of the types of choices that consumers are called upon to make in the contemporary media environment. They can choose a medium, a source within that medium, but also can choose to attend to more specific types of content, such as myriad television programs, websites, or stories within these programs and websites. Additionally, some studies seek to explain the amount of use of a medium. For example, LaRose and Eastin (2002) examined factors leading to amount of time spent on the internet generally. This research was grounded in a concern that, for some individuals, the internet has the potential to be highly addicting (LaRose and Eastin 2002).

The key explanatory variables are the needs which audience members attempt to satisfy by choosing media content. There are a number of potential audience needs which are

cited by researchers as causes of media choice. These needs and motives can be grouped broadly along several dimensions. The first is how purposeful the choice to view is. In the less purposeful categories are needs and motives such as passing time, and viewing as a ritual (Katz Et al 1973, Rubin 1994). These pass time and ritual uses are not necessarily strongly associated with particular content choices, as any number of programs can fulfill. Most of the other uses are more purposeful in terms of fulfilling specific needs. These include social needs (spending time with friends, providing companionship, providing conversation material), diversionary need (such as a need for stimulation, excitement, or novelty), and cognitive needs (including surveillance and information seeking) (Katz et al 1973, Blulmer 1979). These needs promote different kinds of media behaviors, as the structure and content of different media determine how well they satisfy needs. For example, going to the movies is associated with social needs, as it provides a venue to get together with others, whereas reading a book is not particularly well suited to this need, but is better able to fulfill cognitive needs (Katz et al 1973). Further, within a particular medium, different types of content are able to fulfill different needs, such as the association between arousal and adventure dramas, or relaxation and daytime serials (Rubin 1981a). Importantly, a particular medium or content category may fulfill different needs for different people, or multiple needs for a particular individual (Katz Et al 1973, Rubin 1981a, Rubin 1981b).

Of particular interest for my purposes are the predictors of news consumption. The most obvious and frequently cited predictor of news consumption in uses and gratifications theory is the surveillance need. This need deals with a desire to find out about events in

the world, and certainly news consumption, whether in newspapers, magazines, on television, or on the web, could fulfill surveillance needs. There are other needs, however, which also influence news consumption. For example, Rubin and Perse found that surveillance and news affinity (I like to watch news more than other things), and believability of the media, all positively predicted intentional viewing of television news [2], while watching to pass the time was associated with high levels of viewing, but also with attending to distractions while watching (Ruben and Perse, 1987). Rubin also examined the factors leading people to watch 60 Minutes. He also found that this viewing was jointly determined, by both a desire for excitement and arousal and information seeking (Rubin 1987b).

The concept of Need for Orientation is closely related to the surveillance motive. NO has been used extensively in research on agenda setting. It is composed of two dimensions: personal concern for an issue and subjective knowledge of the issue. Those who are higher in NO are both concerned with an issue, and don't feel they know much about it (Weaver 1973, Matthes 2008). The expectation is that those high in NO (NO) will seek out stories on the issues where they are concerned and not knowledgeable (Weaver 1973)

While uses and gratifications theory makes intuitive sense, and makes an important contribution to communications research by drawing attention to the active role people play in selecting communications, it has faced a number of criticisms as well. First, at a theoretical level, uses and gratifications research is often somewhat muddled. There is a

[2] Although with the exception of surveillance, none of these fit with the typical uses and gratifications motives.

general lack of accounting for the origins of particular need. Second, the mechanisms by which media actually satisfy these needs are not spelled out. Finally, and most importantly, there is no consensus on what needs people actually possess, beyond a basic agreement on broad categories, nor is there agreement on measures of these needs (Swanson 1979). One often gets the feeling while reading uses and gratifications studies that the researchers simply put every conceivable media motivation onto a survey instrument in the hope that something would work out.

A second area of concern is the frequently poor empirical performance of traditional uses and gratifications motives in explaining media behavior, particularly of new media such as the internet (LaRose and Eastin 2004). Similarly, correlations between particular needs and use of particular content genres are often weak. For example, Rubin (1981a) found no significant positive predictors of consumption of television news out of 9 needs examined. In fact, five of the 10 genres examined in the study had no positive needs based predictors of use.

Finally, while uses and gratifications does pose the crucial question "what leads individuals to choose particular media," it leaves unanswered the question of the consequences of that choice. According to Klapper, "If uses and gratifications studies are to achieve their potentialities they must, I believe, proceed further along the road on which many of them have stopped. They must consider not only the observed use, but the *consequences* of that use for the individual user, for social groups, and for society at large" and further "The fact that people use newscasts to obtain the feeling of being

informed involves functional analysis only when it is shown that the people actually are more informed…or that possibly that as a result of feeling informed they do not take steps they otherwise would take to become more deeply informed" (Klapper 1963, 520-521).

A second research paradigm concerned with factors leading people to particular content is selective exposure. Both theories share the assumption of an audience actively seeking content. They differ, however in the types of choices they consider, and their psychological underpinnings. While uses and gratifications theory is typically concerned with choice of medium or genre within a medium, selective exposure is usually concerned with the choice of a particular persuasive message, although it has also been used to explain use of particular partisan sources such as political campaigns or partisan newspapers (Chafee and Miyo 1983, Weibull 1983). Most early selective exposure research was based on Festinger's work on cognitive dissonance. Festinger argued that people experience discomfort when holding conflicting thoughts, and would therefore seek strategies to reduce cognitive dissonance, including counterarguing incongruent information (rebutting conflicting information), discrediting the source of information, and selective exposure to information (Wellins and McGinnis 1977). This selective exposure can take two different forms. In the first, an individual purposely chooses content that is congruent with current attitudes in an attempt to bolster those attitudes and reduce cognitive dissonance. The second is to avoid generating dissonance by avoiding incongruent information (Cotton 1985).

In its original formulation, the selective exposure model was subject to criticisms about weak empirical support and the methodology used to test the hypothesis. Sears and Freedman (1967) argued that studies testing the link between cognitive dissonance and selective exposure rarely found a significant relationship, although some defenders contend that this was due to a poor operationalization of cognitive dissonance. For example, Cotton argues that most studies of selective exposure only used a high/low measure of dissonance, whereas the original theory hypothesized a curvilinear relationship between dissonance and selective exposure, with the greatest effects occurring for those with moderate levels of dissonance (Cotton 1985). Sears and Freedman's other key concern was the methodology. Most of the studies they examined were survey based cross sectional studies, and it was impossible to tell if people's ideology was directing their choice of content, or if their ideology was instead a consequence of content.

Concern for selective exposure underlies a number of contemporary concerns about the polarization of American politics. The danger of Sunstein's "Daily Me" is that we tune out alternative voices, perspectives, and issues (Sunstein 2007). Nicholas Kristoff contends that America is literally being torn apart by this selective information seeking (2009)

There is an additional problem with relying on uses and gratifications or selective exposure for the purpose of this study. Neither really focuses on the choice over the kind of information that is relevant to my study, at least for agenda setting and priming.

Studies of agenda setting and priming focus on information about particular issues such as drugs, the environment, or economic conditions (McCombs and Shaw 1972, Iyengar and Kinder 1987, Miller and Krosnick 2000). For present purposes, I will call this type of information "hard news." Hard news is any information dealing with political issues, current events, or conditions which might reasonably be expected to have an impact on citizens' political thoughts and opinions. This is more specific than the typical focus of uses and gratifications theory, which usually focuses on choice of medium or genre. The typical motivations in uses and gratifications theory are generally speaking, too vague to predict choice of issue. On the other hand, as certain motives, particularly stimulation and surveillance, are at least related to news viewing, they may be worth including as a means of choosing politically relevant information over other information. The selective exposure model, in its original, cognitive dissonance form, is also not entirely congruent with the needs of an agenda setting and priming model. Priming and agenda setting are not concerned with the valence of a story, and they do not presuppose that it has a slant with persuasive potential as selective exposure has. One would not expect this non slanted communication to induce cognitive dissonance, and therefore one would not expect it to guide choices.

Perhaps as a consequence of the problems with early research, more recent studies have downplayed the role of cognitive dissonance in shaping media choices, while still focusing on information choice. While cognitive dissonance may still guide some choices, other factors, such as source credibility and utility of information should also be examined in shaping choice (Cotton 1985). Of particular interest are studies examining

the personal motivation of personal relevance in promoting information seeking. For example, Perloff found that survey respondents who felt that foreign affairs and the economy affected them personally were more likely to seek issue information about campaigns (Perloff 1985). Similarly, Holbrook et al find that individuals who place importance on attitudes about particular political issues are more likely to seek out information relevant to those issues (Holbrook et al 2005). Yoo and Lee (2003) find that relevance moderates the relationship between content and agenda setting in a web based experiment, but their experiment fails to take into account the choice potentials of the web, and bombarded participants with unrealistic amounts of information on a single topic.

Need for Cognition and Need to Evaluate seem to be closely related conceptually to the surveillance motive. Need for Cognition (NC) and Need to Evaluate (NE) are two individual difference measures dealing with cognitive processes. NC measures an individual's attitude towards stimuli or tasks requiring reasoning or problem solving. "Individuals high in NC were proposed to naturally tend to seek, acquire, think about, and reflect back on information to make sense of stimuli, relationships, and events in their world. Individuals low in NC, in contrast, were characterized as more likely to rely on others….cognitive heuristics, or social comparison processes to provide this structure (*making sense of the world*)" (Cacioppo et al. 1996). Evidence suggests that NC is a relatively stable trait, and that, while correlated with other traits and behaviors, it appears to be a unique construct. Of particular political interest, those high in NC are more likely to seek out and scrutinize information when making decisions, perceive social issues to

be personally relevant (Cacioppo et al. 1996), use more media for political information, be more politically active, and be more likely to have emotional reactions to candidates (Bizer et al. 2004).

NE measures a somewhat different individual difference in cognition. The assessment of positive or negative qualities of an object is a natural and frequent result of human cognition. Research in NE has demonstrated that, while everyone forms evaluations, individuals "differ in the extent to which the chronically engage in evaluative responding" (Jarvis and Petty 1996). Those high in NE are internally motivated to spontaneously form evaluations of various objects. NE, while related to other individual difference measures, including NC, NE is both conceptually and empirically distinct. As Bizer et al point out, one can form evaluations with relatively little effort, or engage in considerable thought without reaching an evaluation (Bizer et al. 2004). The two scales have only a moderate positive correlation (r=.35) (Jarvis and Petty 1996). Further, controlling for either variable does not eliminate the effects of the other in predictive equations (Bizer et al. 2004). Individuals high in NE are more likely to have and express attitudes about political issues, evaluate stimuli spontaneously, (Jarvis and Petty 1996), vote, use the media to seek political knowledge, and individuals high in NE and NC provide more reasons for their candidate evaluations (Bizer et al. 2004). Cacioppo et al's meta analysis found that individuals high in NC were more likely to seek information in general due to their interest in thinking. Further, high NCs were particularly likely to seek information on current affairs and complex issues (Cacioppo et al 1996).

Information Context and Choice

There has been some work that has demonstrated that the information context can have important political implications. The lack of choice often led viewers to be exposed to political information that they had not sought out. People watching broadcast media were often exposed to information of little personal relevance, but were frequently able to recall this material later (Zukin and Snyder 1984). A quasi-experimental study of two communities during a newspaper strike found that citizens in Pittsburgh, who were deprived of a local newspaper for the duration of a campaign season, were significantly less knowledgeable about the candidates and issues in their house elections than citizens in Cleveland were (Mondak 1995). These studies demonstrate that in information poor environments, individuals can either passively pick up information that is not particularly relevant to them, or be deprived of information that would be relevant.

As the number of choices increased, people's ability to custom tailor their media consumption has increased as well. Of particular interest is the ability to engage with or ignore stories about politics. For example, there has been a dramatic decline in audience size for media coverage of presidential appearances since the advent of cable television, and this trend is particularly dramatic in homes with cable, and its increased amount of content. Baum and Kernell argue that in low choice environments, the opportunity costs of watching political news are low. Typically, the president was on all three of the major networks, and there were few other channels so there was little to miss on television if you watched the president (Baum and Kernell 1999). Similarly, passive exposure seems

to differ across medium. In a study of a local German election, it was found that exposure to newspaper stories about the election was purposeful, whereas exposure to television reports was simply a byproduct of watching television (Ohr and Schrott 2001).

Other media studies have looked at the behavior of individuals in higher choice environments. David Tewksbury presents somewhat mixed findings in a study of the news habits of net users. First, online newsreaders tended to be more likely to read political news in offline sources than internet users who do not use the net for news, or those without the net. This opens up the possibility that there are individual differences that guide users to political content regardless of the medium. On the other hand, among online news readers, the number looking at political and international stories was quite low (16% and 17% respectively) compared to sports (29%), business (21%) and general US news (30%) (Tewksbury 2003). What is unclear from this analysis, however, is how these figures compare to the story choices of print readers or television viewers. In addition, this study does not explore what drives individuals to a certain topic; it looks only at fairly broad categories of content, and does not address questions of opinion change.

Althaus and Tewksbury conducted a pair of related studies to examine effects of differences between online and paper versions of a newspaper. They assigned students to read either the print or online edition of the New York Times for a week and then looked for differences in knowledge gain (Tewksbury and Althaus 2000) and agenda setting between the conditions (Althaus and Tewksbury 2002). In both cases, online readers

appeared to have read fewer stories about news, politics, and international events than those in the paper group. As a result, online users were less knowledgeable about the content of the stories (Tewksbury and Althaus 2000), and experienced less agenda setting (Althaus and Tewksbury 2002). While very interesting, these studies leave a number of key questions unanswered. First, they do not provide very precise measures of exposure to stories (it includes some recall measures, but there is no way to know exactly what people read, and for how long). Second, they do not, for example, provide evidence for the attenuating mechanism at work in the online context. Althaus and Tewksbury suggest both a lack of source cues, increased number of stories, and greater user control in online conditions as limiting the agenda setting effect, but they have no way to test these hypotheses in their design. Finally, the studies do not address the possibility of interactions between media type and individual differences among users, with the exception of a handful of null findings in the first study. It is unclear if this lack of interaction is due to there not being an effect, or to the study's small sample size.

My expectation is that as choice increases, individual differences should play an even more important role in determining what information individuals are exposed to, and what they do with that information. Mutz and Martin contend "People often seek political reinforcement from their information sources, whether mass or interpersonal, but the extent to which people are exposed to dissimilar views through a given source reflects variations in their motivations to exercise selective exposure and the ease with which it is possible to do so" (Mutz and Martin 2001, pg 107). In a low choice situation, these

individual differences don't really have the opportunity to express themselves, whereas in a high choice environment they should be a driving force behind selection of content.

It appears that, for individuals to make choices about content there must be a media environment that facilitates choice. Weibull (1983) looked at factors that steered Swedish citizens to papers with partisan affiliations congruent with their own party identification. He found that when a local paper that was congruent was available, large numbers of people would make congruent choices. On the other hand, those living in areas without a partisan paper matching their own partisanship were very unlikely to read a partisan paper (Weibull 1983). This suggests that there are multiple motives for attending to information, and that only in environments where the choice does not involve a large opportunity cost (missing out on local news) will predispositions guide choice.

Several studies have looked at the joint impacts of individual predispositions on political knowledge in low and high choice situations. For example, Prior (2003) finds that individuals highly interested in politics (but who like other kinds of programming as well) are more knowledgeable about politics when they have cable television.

Unfortunately, there are measurement challenges in these studies, as the measurement of internet and cable use is relatively weak (do you have the internet in your home?). As such, one has to simply infer what users are actually doing online (something other than reading about politics it would appear), rather than having any direct evidence of their activities.

Other studies have looked at political predispositions such as partisanship and exposure to incongruent information. In experiments coinciding with the 2000 presidential campaign, relatively few internet users utilized campaign websites, almost all who did visit campaign sites only went to the website of the candidate they already supported, and virtually no one changed their vote choice based on information presented by campaign sites (Bimber and Davis 2003). This supports the contention that the internet allows people much more power in shaping their media exposure, and that they use it in largely reinforcing ways. On the other hand, a more recent Pew survey found that internet users were actually more likely to know about a wide variety of pro and con statements about issues and policies, controlling for basic demographics, open-mindedness, party identification, and political interest. They broke down the respondents into four categories based on the number and types of arguments they could recall (Omnivores, selective exposers, tuned outs, and contrarians) and found a high number of omnivores for all issue, although selective exposers were the second highest category (Horrigan et al 2004). While this would seem to undermine the selective exposure hypothesis, there are several issues to consider. First, the issues discussed were the upcoming election, gay marriage, and the war in Iraq, which were very prominent, making it hard for people to avoid them, and the measures only asked people if they had heard particular arguments, setting the response threshold very low. Second, there is relatively little information to explain what factors lead people into the different categories. Finally, the study does not examine effects beyond information holding.

Where I depart from these studies is to isolate the role that choice and control play in driving media consumption and effects, and to further explore the way that these interact with personality. There are a variety of limitations to many of previous studies. Mode comparison studies offer some insight into the role that choice over content has, but cofounds choice with other differences across media. In other cases, there is not a comparison of high and low choice conditions at all, just a demonstration of media effects on opinion in a high choice situation. Finally, many studies lack the specific measurement of content that allows researchers to understand the nuances of media consumption.

Hypotheses

Based on previous research on content choice and media effects, I propose a series of hypotheses. There are three fundamental principles at work. First, I expect that increasing the amount of available content will decrease the likelihood of reading hard news stories. Second, I expect that this phenomenon will not be universal, but instead that individuals with different predispositions will utilize the available information in different ways. Individual differences predicting consumption should have a greater impact in the high choice conditions. Finally, the joint effect of condition and dispositions should manifest itself in not only exposure, but also the common media effects of agenda setting and priming.

H_1: Participants in the high choice conditions will, on average, read fewer of the hard news stories than those in the low choice conditions.

While in both conditions, no participant is obliged to read any particular story, in the high choice condition there is much more opportunity for distraction than in the low choice condition, and that overall hard news consumption will be lower. Past research has demonstrated that in low choice conditions, people tend to watch available information, whether they have any interest in it or not (Zukin and Snyder 1984). In contrast, much of the expectation about higher choice media is that people will be more selective in what they consume (Neuman 1991, Baum and Kernell 1999, Sunstein 2007).

H_2: Individual differences that predict media consumption will be more strongly related to consumption of available hard news stories in the high choice condition than in the low choice condition.

As in hypothesis one, low choice conditions present fewer opportunities for one to be selective about what information they consume than high choice conditions would. In contrast, in high choice conditions, we would expect people to select content purposefully rather than randomly. This is consistent both with the uses and gratifications literature (e.g. Blumler 1979, Rubin 1994) which holds that individuals actively choose what information they consume, and with expectations that individuals will use high choice media to tailor content to their interests in ways that were previously unavailable (Sunstein 2007). For individual traits:

H_{2a}: Interest in national politics will be positively related to consumption of hard news stories, and the effect will be stronger in the high choice conditions.

Interest in politics is a consistent predictor of media consumption, even when controlling for other factors (e.g. Bizer et. al 2004).

H_{2b}: NE will be positively related to consumption of hard news stories, and the effect will be stronger in the high choice conditions.

Bizer et. al found a strongly significant positive impact of NE on consumption of political media, arguing that high NEs are more likely to hold political attitudes and therefore would be more attracted to finding information about politics (Bizer et al 2004).

H_{2c}: NC will be positively related to consumption of hard news stories, and the effect will be stronger in the high choice conditions.

Cacioppo et al's meta analysis found that individuals high in NC were more likely to seek information in general due to their interest in thinking. Further, high NCs were particularly likely to seek information on current affairs and complex issues (Caioppo et al 1996).

H_{2d}: NO will be positively related to consumption of hard news stories, and the effect will be stronger in the high choice conditions.

NO is a joint measure of low knowledge but high personal concern with an issue. Individuals high in NO are more likely to seek out information about that issue (Weaver 1973, Matthes 2008).

H_{2e}: Political Knowledge will be positively related to consumption of hard news stories, and the effect will be stronger in the high choice conditions.

Traditionally, political knowledge is treated as a consequence of exposure to political media, with a modest correlation between television news viewing and political knowledge and a higher correlation between print media use and political knowledge (Delli Carpini and Keeter 1997). Other studies, however, suggest a more complex relationship between knowledge and political media use, with the two being more interdependent. According to this research, political media use begets political knowledge, but political knowledge also begets subsequent media use (Tan 1980). I expect that those who are high in political knowledge to continue to seek out political information here.

H_{2f}: Ideology will be related to consumption of hard news stories with conservatives being less likely to read stories about global warming. This effect will be stronger in the high choice conditions.

The selective exposure literature finds that individuals will seek out information consistent with their previous views to avoid cognitive dissonance (e.g. Chafee and Miyo 1983, Weibull 1983). Global warming is a strongly ideologically charged issue, with conservatives typically denying that it is an issue at all. I expect that conservatives will avoid reading further information about global warming when presented.

H_{2g}: Media Use will be positively related to consumption of hard news stories, and the effect will be stronger in the high choice conditions.

Those who are high consumers of media outside of the lab setting will also be high consumers in the lab setting.

H_{2h}: News Media Use will be positively related to consumption of hard news stories, and the effect will be stronger in the high choice conditions.

Those who seek out news media outside the lab will continue to do so in the lab.

H_3: In high choice conditions, there will be a reduced agenda setting effect compared to the low choice conditions. The highest concern for the stimulus issue will be in the low choice condition, followed by the high choice condition, followed by the control condition.

The common expectation of the Agenda Setting literature is that the effect is predicated on exposure. Therefore, if exposure is reduced by greater choice (H_1), it follows that an additional consequence would be the reduction of the agenda setting effect as well. Althaus and Tewksbury (2001) found that there was a decreased agenda setting effect when comparing readers of online and print editions of the same paper, although they did not explain this finding in terms of amount of content available.

H_4: Individual differences that predict increased media consumption will have a positive impact on agenda setting, and this effect will be greater in the high choice condition than the low choice condition.

This hypothesis is a consequence of $H2_{a-h}$ and H_3. I expect that individual differences will drive media consumption of hard news, that this effect will be of greater magnitude in the high choice conditions than in the low, and that hard news consumption leads to agenda setting. As noted in individual cases below however, there is the possibility that some of these variables may have a more complicated relationship with agenda setting. It is my expectation, however, that the effect they have on hard news consumption will trump other effects below.

H_{4a} Interest in national politics will be positively related to concern with the stimulus issue, and this effect will be greater in the high choice conditions than the low choice conditions.

H_{4b} NE will be positively related to concern with the stimulus issue, and this effect will be greater in the high choice conditions than the low choice conditions.

H_{4c} NC will be positively related to concern with the stimulus issue, and this effect will be greater in the high choice conditions than the low choice conditions.

In addition to the potential effects on consumption of the stimulus stories, Cacioppo et al find that high NC individuals are more susceptible to the influence of information that has been made accessible (Cacioppo et al 1996).

H_{4d} NO will be positively related to concern with the stimulus issue, and this effect will be greater in the high choice conditions than the low choice conditions.

NO is has consistently been found to be related to agenda setting, with higher scoring individuals showing greater agenda setting effects (Weaver 1973, Matthes 2008).

H_{4e} Political Knowledge will be positively related to concern with the stimulus issue, and this effect will be greater in the high choice conditions than the low choice conditions.

Iyengar and Kinder (1987) find that "Victims of Agenda Setting" tend to be lower in education and political involvement. In their study, however, there was no choice as to whether to be exposed to the stimulus stories or not. I expect the exposure effect to trump any other effect, particularly in the high choice conditions.

H_{4f} Conservatives will be less concerned with Global Warming, and this effect will be greater in the high choice conditions than the low choice conditions.

Consistent with the selective exposure video, and Iyengar and Kinder's 1986 results which found that Republicans were not susceptible to having their agenda's set by environmental stories, I expect that conservatives will be less likely to experience agenda setting for global warming, and that the high choice condition will further help them avoid global warming stories and therefore agenda setting.

H_{4g} Media Use will be positively related to concern with the stimulus issue, and this effect will be greater in the high choice conditions than the low choice conditions.

H_{4h} Political Media Use will be positively related to concern with the stimulus issue, and this effect will be greater in the high choice conditions than the low choice conditions.

H_5: In high choice conditions, there will be a reduced priming effect compared to the low choice conditions. In the low choice conditions, there will be a positive relationship between approval of the president's handling of the stimulus issue and his overall approval. In the high choice conditions this relationship will be reduced, and the relationship will be weakest in the control condition.

Like agenda setting, the priming effect is driven by exposure. Increased information about an issue leads to citizens placing greater weight on the president's performance on that issue when determining their overall evaluation of his job performance. Since I expect less exposure to stimulus stories in the high choice conditions, I also expect an overall decrease in the priming effect in these conditions.

H_6 Individual differences that predict increased media consumption will have a positive impact on priming, and this effect will be greater in the high choice condition than the low choice condition.

As in H_4, I expect that individual differences will drive media consumption of hard news, that this effect will be of greater magnitude in the high choice conditions than in the low, and that hard news consumption leads to increased weight being placed on the issues contained in that news when evaluating the overall performance of the president. As in the case of H_4, there are some disputes in the literature as to the relationship between some of these variables (especially political knowledge) and the priming effect, and these will be noted in the specific instances below. That is not to say that the greatest priming effect will occur in the high choice conditions, but that the relationship between the

priming effect and the individual difference will be the highest in the high choice condition.

H_{6a} Interest in national politics will positively moderate priming effect for the issue presented by the stimulus stories, and this moderation will be greater in the high choice conditions than in the low choice conditions.

H_{6b} NE will positively moderate the priming effect for the issue presented by the stimulus stories, and this moderation in the high choice conditions than in the low choice conditions.

In addition to the expected increase in exposure, high NEs are more likely to use issues in forming evaluations of political figures (Bizer et al 2004).

H_{6c} NC will positively moderate the priming effect for the issue presented by the stimulus stories, and this moderation will be greater in the high choice conditions than in the low choice conditions.

In addition to the potential effects on consumption of the stimulus stories, Cacioppo et al find that high NC individuals are more susceptible to the influence of information that has been made accessible (Cacioppo et al 1996).

H_{6d} NO will positively moderate the priming effect for the issue presented by the stimulus stories, and this moderation will be greater in the high choice conditions than in the low choice conditions.

The expectation is actually split here. On the one hand, I expect NO to drive greater consumption of information, and increase the priming effect. On the other hand Matthes (2008) finds NO not related to second level agenda setting (making certain attributes of the object salient). Matthes reasons that his non finding is due to different valences of information encountered by his survey respondents. That is not applicable in the present study as all of the stimulus stories indicate that the issue really is a problem.

H_{6e} Political Knowledge will positively moderate the priming effect for the issue presented by the stimulus stories, and this moderation will be greater in the high choice conditions than in the low choice conditions.

Both Krosnick and Brannon (1993) and Miller and Krosnick (2000) find those higher in political knowledge are more susceptible to priming effects, although in the later case, this is only true of those who are more trusting of the media.

H_{6f} Conservatives will experience less of a priming effect for the global warming issue presented by the stimulus stories, and this should be particularly true in the high choice conditions compared to the low choice conditions.

Iyengar and Kinder found that Republicans could not be primed with environmental stories (1986). I expect that to be especially true in the high choice conditions where they can avoid even reading the stories about global warming.

H_{6g} Media Use will positively moderate the priming effect for the issue presented by the stimulus stories, and this moderation will be greater in the high choice conditions than in the low choice conditions.

H_{6h} Political Media Use will positively moderate the priming effect for the issue presented by the stimulus stories, and this moderation will be greater in the high choice conditions than in the low choice conditions.

Chapter 2: Methodology

Measuring Agenda Setting, And Priming

Past research on these media effects has primarily been conducted using either surveys or experiments, and each method has its own advantages. Early studies of agenda setting used surveys to ascertain what issues the public was concerned with, as well as what their media sources were, then attempted to correlate their agendas with the agendas of the media outlets they had used (McCombs and Shaw 1972). Similarly, at the macro level, Cohen looked at presidential rhetoric in the state of the union, and compared the balance of issues in the answer to the most important problem question before and after the address (Cohen 1997). The challenge with these studies is that it is difficult to assess the media environment, and particularly individual level exposure to information within that environment. McCombs and Shaw solved this problem by focusing on a small number of citizens in a single area. Cohen gets around the problem by looking only at a single instance of presidential rhetoric each year, and by looking at aggregate numbers, sidesteps the issue of assessing actual individual level exposure. An additional difficulty with these studies is that they sidestep the issue of selective exposure to information. Implicit in the measurement technique (although never explicitly mentioned) is that exposure is a purely probabilistic process based on frequency of stories. That is, essentially, that the probability of encountering a story is the same as its frequency within the universe of stories during the study period. A few studies have gone further by considering the frame of the story or the placement within a medium and the effect of this on agenda setting, but it is unclear if any effects of these factors are the result of changes

in the probability of exposure or in the effect of the information once people have seen the story.

Experimentally, the most common paradigm is to divide subjects into two groups and expose the control group to a set of content, and the experimental group to those same content plus stories on an issue of interest. There is evidence of agenda setting if the experimental group rates the issue with extra attention as being more serious, either on open or closed ended measures (Iyengar and Kinder 1987). The key advantage to the experimental paradigm is that the researcher knows exactly what content each individual was exposed to. Unfortunately, this also greatly limits the role of the individual in choosing content, thereby decreasing the external validity of findings (Schudson 1987). Some researchers have tried to address this by making the experimental environment as natural as possible, allowing people to talk to each other, look at magazines, etc. during the course of the experiment (Iyengar and Kinder 1987) but this does not rule out the possibility that outside of the laboratory they could change the channel rather than watching the news.

Priming is typically studied in much the same way as agenda setting. In experiments the set up is identical to the set up for agenda setting studies, although measures of other variables need to be collected as well. The dependent variable is overall presidential approval, and the key independent variables are approval on issue specific presidential performance. We see evidence of priming if there is a significant difference in the regression coefficients for the stimulus issue across conditions. Priming may also be assessed in a survey setting, although typically researchers have looked for a specific

event to set up a quasi experiment. Krosnick and Kinder used the Iran Contra scandal as their stimulus, Krosnick and Brannon used the first Gulf War, and Druckman and Holmes used the 2002 State of the Union Address (Krosnick and Kinder 1990, Krosnick and Brannon 1993, Druckman and Holmes 2005). Again, regression coefficients are compared between groups at time 1 and time 2, and a significant change in regression coefficients for the target issue demonstrates a priming effect.

This past research has focused almost exclusively on print and television as media sources of information and passive audiences with a shared media experience. Technological innovations such as cable television and the internet, however, call into question this assumption of audience passivity. The above paradigms for studying media and public opinion, both surveys and experiments, have primarily treated exposure to information solely as an independent variable. Some researchers have gone so far as to claim that they are seeking to control for factors that would lead an individual towards a particular news source. For example, Iyengar and Kinder argue that experiments are desirable for studying the impact of media on public opinion, because the design rules out possible spurious relationships, such as personal characteristics determining both media habits and opinions (Iyengar and Kinder 1987).

During the broadcast era, it may not have been as serious of a problem to ignore the question of factors that guide individuals towards a particular news source. When there were limited programming choices on television, for example, audience choice over programming was a less interesting question. While citizens could choose which

programs to watch, their choices were limited, and the opportunity costs of choosing a program were lower, as choosing did not rule out very many alternate shows (Baum and Kernell 1999). As a result, there were large amounts of passive exposure to politically relevant content (Zukin and Snyder 1984) given new opportunities for choice and control; however, we must begin to examine the potential role that these play in shaping media effects on opinion.

A New Method

Previous methods for studying priming and agenda setting are inadequate for examining their effects in the new media environment. Survey based studies lack adequate measures of exposure to content to cope with high choice environments due to the complexity of the information environment and the assumption that exposure to information on any particular subject is proportional to its presence in the environment. Beyond that, the bias towards macro level data in the survey based studies makes it impossible to study individual level effects. Experimental studies, on the other hand, while allowing the collection of individual level data and detailed knowledge of what the audience is exposed to, force exposure on participants who may or may not actually be exposed to that information outside the lab.

To remedy these limitations of past studies for studying the effects of complexity and user choice, I employ a new computerized experimental methodology. This methodology has several advantages over past methods. First, it allows individual choice over content.

Second, it provides direct measures of what information participants choose to read. Third, it allows for the manipulations of an experiment that provide strong internal validity.

My study involves three parts, conducted at two separate times: a pre survey, a web surfing exercise, and a post survey. Participants were recruited by flyers and newspaper ads to take the web based first survey.

The first survey assesses baseline levels of the dependent variables (issue concern, presidential approval, domain specific approval), and also measures key psychological variables (NE, NC, NO), political variables (political interest, partisanship, ideology), media consumption, and demographic controls. At the end of the first survey, participants were given the opportunity to sign up for a lab session which contained the experimental manipulation and a follow up survey. The contents of this survey are provided in appendix 1.

The lab sessions were run in the Social and Behavioral Sciences Lab at the University of Minnesota between July 30th and October 10th 2007. On August 1st, the I35 W bridge, located less than one mile from the lab collapsed. Initially, I was concerned that this would potentially interfere with responses to the agenda items, given the salience of the event, and physical proximity to the campus. Fortunately, analysis of both the pre-test and post test open ended most important issue revealed that few people cited infrastructure or the bridge as an important issue for the country.

Participants were told that they were evaluating a prototype website for a local news organization. Participants logged into the internet and were directed to one of four web homepages leading to different "universes" based on my experimental manipulations. They used their "universe" for 15 minutes, and then took the follow up survey. All of the stories in the "universes" were actual news stories. They were trimmed to 650 words each to remove story length as a confounding variable.

The four conditions of the study are arranged in a 2x2 design. The first manipulation is the presence or absence of stories about two issues. In two conditions, two stories about global warming were made available to participants. In the other, two stories about the coming economic downturn were presented. If we see agenda setting and priming, participants in the economic condition should find the economy a more important national issue, and be more likely to use it to evaluate the president in economic terms than those in the global warming condition. In the global warming condition, we would expect participants to find the environment a more important national issue, and be more likely to evaluate the president in environmental terms than those in the economic downturn condition. These issues were chosen because they are issues of national prominence but not such high salience issues (such as terrorism or the Iraq war) that we would expect to see little change in opinion based on a relatively limited exposure (Gallup 2007).

The second manipulation was the amount of available content. All conditions had two stories about the target issue surrounded by a number of non political filler stories. In the low content conditions, there were 6 additional stories. Pre-testing indicated that the average participant would be able to read all or nearly all of the stories in the allotted 15 minutes of website use (and would have to read nearly all of them to fill the time). In the high choice condition, there were 12 non political filler stories, so the high choice condition contained more information than most participants would be able to read in 15 minutes. The non political stories were matched by topic. There was one technology story in the low content condition, 2 in the high, one travel storey in the low, two in the high, and so on. This second manipulation allows exploration of the research questions about the increased ability (and need) to choose content in rich media environments. This design results in four conditions: Global Warming, low choice; Global Warming, high choice; Economy low choice; and Economy high choice. The web universes were completely discrete, and determined by the homepage each participant started on. At the end of each story was a link back to the universe's homepage. This was the only means of navigation through the web experiment, so participants could not exit the universe and do something else. Appendix 3 provides the content available to participants. First, are the four variants of the home page, followed by the stories that these pages link to.

While participants used the web universe, all of their activity was tracked automatically. This provides an accurate record of which stories were read, for how long, and in what order, which is much more specific than exposure data in previous studies. In addition, a central computer allowed for observation of what participants had on their screens in real

time. The address bar and buttons were removed from Firefox so that participants were unable to navigate outside of the experiment. Of 369 initial participants, only two were observed leaving the pages of the experiment, and their observations were dropped.

After 15 minutes, participants' browsers were automatically directed to the follow up survey. This included time two measures of the dependent variables, questions about story recall, and questions about the site in general. The post survey can be found in appendix 2. Upon completion of the survey, participants were debriefed and paid 10 dollars for their time.

Description of the sample

Participants were recruited on the University of Minnesota Twin Cities campus. Flyers were placed in various locations on campus, and newspaper ads were taken out in *The Minnesota Daily,* the student newspaper. The only requirements for participation were that participants be at least 18 years old, and that they have a valid X500 login. X500 is the University's central authentication system, and was used to provide access to both phases of the experiment and merge the data from the three separate components. These criteria allowed for all university students as well as employees and faculty. Table 1 presents descriptive statistics about the sample[3]. In general, the sample is reflective of the university population, but deviates in substantial ways from the national population, as university based samples often do. Multivariate statistics are used for most analyses in the rest of the project in an attempt to control for these discrepancies. While participation

[3] This table reflects only those who completed both the pre and post test. An additional 402 logged in to the pre-test. Of these, 102 made it to the demographic questions. They do not differ substantially on any of these descriptive measures from those who completed both sections

was open to all members of the university community, the age skews towards the young. Participants ranged in age from 18-56, but 82% fell between the ages of 18 and 25.[4] Participants were not asked if they were students or staff, but based on education levels, the vast majority appear to be current students[5]. Females were slightly more likely to participate than males.

Table 1: Sample Description

Median Age	21
Gender	
Female	57%
Male	43%
Race	
White	75%
African American	2.8%
Asian	17%
Latino	1%
Decline/Other	6%
Education	
HS Grad	11%
Some College	59%
College Grad or More	30%
Ideology	
Liberal	70%
Moderate	17%
Conservative	13%
Party Identification	
Democrat or Leaner	63%
Independent	20%
Republican or Leaner	17%
N	367

Politically, the sample is very different from the general American population. Both the ideology and partisanship figures presented in Table 1 collapse 7 response categories

[4] In the analyses, the raw age is used as a control variable, and generally has no significant impacts. Various other age splits were tried in pretesting (median split, college age vs. everyone else, etc.) with no impact on these results.

[5] Education is not a perfect proxy for staff/student status. For example employees could have any level of education, and a few of the college graduates were graduate students. Early tests indicated no impact of education in the analysis, and it was not employed as a control.

down to three. Strong party identifiers, weak party identifiers, and independents who lean towards a party are included with the partisans, while pure independents are reported separately. The coding for ideology is similar. Strong partisans, partisans, and weak partisans are lumped together, while pure independents are reported separately. The sample is much more liberal and Democratic than the country as a whole. This is not entirely surprising given Minnesota's reputation as a liberal state, as well as the generally liberal ideology of both college students and those who work at universities. Ideology is employed in all multivariate analyses as a control (and in some cases, an IV with a hypothesized relationship to the DV). [6]

The biases in the sample present several potential challenges for analysis, some controllable, some not. In general, the randomization and experimental manipulation help assuage some of the concerns. The key condition manipulations were truly random. Further, for most of the demographic variables that are out of sync with a random national sample, there is still variance present. While the sample skews young, there was at least some representation of a wider swath of the public (though no participants were of retirement age). While the sample skews liberal and Democratic, there were some moderates and conservatives/Republicans for comparison.

There are, several areas of concern with the sample that must be considered, however, as they are not easily controlled. These concern areas where limited variance may be an issue, and unmeasured items (with little variance) that may make the sample differ from

[6] Ideology and partisanship were highly correlated in pre test analyses, so partisanship was dropped from the main analyses.

the public in ways that cannot be dealt with. First, the relative homogeneity of the sample likely depresses variance on some key variables, making it more difficult to obtain findings. NC and NE, for example, both correlate with education, so in a relatively educated sample, we would expect somewhat truncated variance. Second, while some participants were motivated by the monetary compensation, the recruitment flyers indicated that this was a study of political opinions, which may skew the sample towards those who are more politically interested, engaged, and opinionated. This is consistent with the relatively small numbers of both independents and moderates who participated. Again, this may suppress variance on some key measures. Finally, all of the participants are likely much more internet savvy than the public as a whole. Several measures of internet usage were collected, but in general, all participants were well accustomed to using the internet as an information source, which may not be true of all Americans. This last point, however, is not that large of a problem, as the general trend is towards adoption of new technologies. While there are citizens currently who lack access and skill with internet technology, this number is dwindling.

Description of the Dependent Variables

For the content selection analyses, the key variable is how many stimulus stories participants read. There are several different variables employed in the analyses. The first is just a simple count. This is used in the first basic analyses, as well as the DV ordered probit models. The other variable, employed in the standard probit analyses is the "read any measure." For this measure, if the respondent read 1 or two stories, it is coded 1, if they didn't read any, it is coded zero.

For the agenda setting analysis, the dependent variable is concern with the stimulus issue (either global warming or the economy depending on condition). The first question on both the pre and post surveys is "what do you think is the greatest issue facing the country today." Participants were allowed up to three responses. Two variables were created for each issue to reflect different possible response patterns to these open ended items. The "first mention" measures are scored "1" if the respondent mentioned an environmental issue[7] or an economic issue[8] as their first open ended response, on the assumption that the first response is their top priority. The second, "any mention" measure is scored "1" if the respondent mentioned their condition's target issue in ANY of their three responses. The first mention measure sets the highest bar for issue concern by taking only the issue that the participant deems more important than any other. The any mention measure is more lenient. For the agenda setting analysis, only the time two question was used. There were no significant differences in time one concerns across conditions.

The other dependent measure for agenda setting is a closed ended response. Participants were asked "How important do you think each of the following issues is for the country?" on a 4 point scale (recoded so that 1=very important and 4= not important). Issues

[7] While the majority of respondents scored as 1 explicitly said "global warming," mentions of the environment in general, air pollution, pollution, etc. were included as they are closely related to the concept. Environmental issues that do not relate to global warming (water pollution, recycling, etc) would not have been coded as 1, but there were no respondents mentioning any of these.

[8] The most frequent mention counted as 1 was "the economy," but specific issues such as the housing market, unemployment, inflation, etc. that are elements of the economy were also included. Two marginally economic issues that were not scored as 1 for this measure were "class inequality" and "government spending" as these appeared to be more ideologically driven, were not the subject of either of the economic articles, and were primarily given at time 1.

included the economy, global warming, and the environment as measures of the key DVs. In addition, participants were asked to rate terrorism, education, and illegal immigration to conceal the focus of the experiment from participants. Results for the environment and global warming were substantively similar, so only the global warming measures are reported.

For the priming analyses, there are several important variables. The main dependent variable is overall Presidential approval: "How strongly do you approve or disapprove of how George W. Bush is handling his job as President?" Participants rated the president on a 6 point scale which was recoded so that higher scores represented greater approval.

Description of the Independent Variables

Condition is the key independent variable in all subsequent analyses. It is a result of the random assignment of participants to web surfing universes. 87 participants were assigned to condition one, global warming, low content. 99 were assigned to condition two, global warming, high content. 88 were assigned to condition 3, economy, low content. 93 were assigned to condition 4, economy high content. 6 dummy variables were created from these condition assignments to test the various hypotheses. For the Global Warming variable, they are low choice vs. control[9], high choice vs. control, and low choice vs. high choice. Each is coded 0-1, respectively. For the economy conditions there are the same basic variables: low choice vs. control[10], high choice vs. control, and low choice vs. high choice. Each is coded 0-1, respectively.

[9] Participants in both economy conditions serve as the control group.
[10] Participants in both global warming conditions serve as the control group.

Political interest- "In General, how interested are you in National Politics?" High scores represent greater interest

The shortened NC Scale (Cacioppo, Petty, & Kao 1984, Cacioppo et al 1996) measures attitudes towards thinking, and is composed of 18 items answered on 5 point Likert scales (high scores are higher NC). α=.83

The NE Scale (Jarvis & Petty 1996) measures a participant's tendency to be opinionated, and is composed of 16 items answered on 5 point Likert scales High scores= higher NE α=.86

NO- NO scores are computed for both global warming and the economy. They are the sum of two questions- "how concerned are you personally with (global warming/the economy)?" And "how much do you know about (global warming/the economy). Scores range from two to ten, with higher scores representing high personal concern, and low knowledge of the issues. For NO global warming α=.68 and for NO economy α=.62.

Ideology- "Which point on this scale best describes your political views?" The measure ranges from strong liberal to strong conservative, with high scores being conservative. These measures are adapted from the American National Election study, though given as a single question rather than a branching question.

The political knowledge scale is adapted from Federico, Hunt, and Ergun (2009). It is based on the scales developed by Delli Carpini and Keeter, but contains items that have been shown to offer both greater reliability and variance in college samples consists of 8 open ended questions (Identify Dick Cheney, Gordon Brown, Nancy Pelosi, John Roberts, party in control of US House, party in control of US Senate, branch responsible for appointing federal Judges, term of a US senator). Participants scored one point for a correct answer, zero for incorrect or blank answers. Scores ranged from 0-8. The mean was 4.7, and α=.78.

Media Use- Average response on a 5 point scale of frequency of 13 types of media (Television, National Television News, Local Television News, News Magazines, Newspaper, The Internet, Internet News Sites, Chatrooms/Newsgroups/Bulletin Boards, Political Chatrooms/Newsgroups/Bulletin Boards/Etc, Download or stream video or music on your computer, Blogs, Radio, News or Talk Radio) Mean 2.39 α=.68.

News Media Use response on a 5 point scale of frequency of 7 types of media with news or political content (National Television News, Local Television News, News Magazines, Newspaper, Internet News Sites, Political Chatrooms/Newsgroups/ Bulletin Boards, News or Talk Radio). Mean 2.09, α=.62.

Table 2: Correlation Matrix for Key Independent Variables

Political Interest	1.0***								
NE	.48***	1.0***							
NC	.33***	.32***	1.0***						
NO Global Warming	.021	.07	.07	1.0***					
NO Economy	.003	.08	-.09*	.26***	1.0***				
Political Knowledge	.60***	.32***	.22***	-.08	-.07	1.0***			
Media Use	.33***	.13***	.13**	.004	.11	.33***	1.0***		
News Media Use	.41***	.17***	.15***	.03	.03	.39***	.86***	1.0***	
Ideology	-.1*	-.16***	-.11*	-.25***	.12**	-.04	.02	.03	1.0***
	Political Interest	NE	NC	NO Global Warm	NO Economy	Political Kmowl.	Media Use	News Media Use	Ideology

#=p<.1, *=p<.05, **=p<.01, ***=p<.001

Table 2 provides the correlations among the various independent variables used in the subsequent analyses. There are a fair number of significant correlations among the various IVs, ranging from moderate to substantial. The strongest correlation, between Media Use and News Media Use is a result of the fact that News Media use is a subset of the media use scale. Political interest is moderately related to most of the other IVs, particularly NE and Political knowledge. While some of these correlations are fairly strong, they do not seem to affect the analysis substantively. This will be discussed further in chapter 3.

Chapter 3 Content Selection- Personalities and Context

A serious concern with the proliferation of content choice is the possibility that it leads to a reduction in attentiveness to stories about hard news. Whereas in the past, it was often difficult to avoid information on public affairs and politics, today it is quite easy. This chapter explores the effect that increased choice has on the consumption of hard news, and the role that individual differences play in that consumption. In general, as the amount of information competing for a respondent's attention increases, I expect that the likelihood they will read the target stories decreases. This drop off in consumption should not be random, but rather, in the high choice conditions, consumption of target stories should be predictable by individual differences.

H_1: Participants in the high choice conditions will, on average, read fewer of the hard news stories than those in the low choice conditions.

H_2: Individual differences that predict media consumption will be more strongly related to consumption of available hard news stories in the high choice condition than in the low choice condition.

For these hypotheses, the key dependent variable is how many of the hard news stories participants read. In each condition, participants had the opportunity to read two stories about a politically relevant topic (global warming or the state of the economy) but in all conditions, they could choose to read zero, one, or two of these stories. Tables one and two present a test of the first hypothesis- that increased content choice leads to decreased

attention paid to politically relevant stories. In the low choice conditions, participants were presented with six filler stories, in the high choice, twelve.

Table 3- Content Condition and Story Choice: Global Warming

Number of Global Warming Stories Read	0	1	2	Total
Low Choice	4 4.6%	21 24.1%	62 71.3%	87 100%
High Choice	27 27.3%	36 36.4%	36 36.4%	99 100%

χ^2 =27.2 ***γ=.-.622***

Table 4- Content Condition and Story Choice: The Economy

Number of Economy Stories Read	0	1	2	Total
Low Choice	3 3.4%	17 19.3%	68 77.3%	88 100%
High Choice	15 16.1%	31 33.3%	47 50.5%	93 25.3%

χ^2 =15.8 *** γ=.-.532***

Tables 3 and 4 provide very strong evidence for hypothesis 1. For both global warming and the economy, increasing the amount of other content available to participants dramatically reduces exposure to the target stimulus stories. For both issues, in the low choice condition, almost no one ignores all of the stimulus stories. In the high choice conditions, however, over one quarter of participants do not read either of the global warming stories, and 16% do not read either of the economic stories. We also see a substantial drop in the number of people reading both stories. In the low choice conditions for each issue, approximately three quarters of participants read both stories. In Contrast, in the high choice case, only about one third of participants read both global

warming stories, and only about half read both economy articles. These differences are strongly statistically significant, as shown by the chi squared statistics and strong gammas (all are significant at the .000 level). Clearly, context matters tremendously in determining how much news individuals consume.

Tables 5 and 6 turn provide the analyses for hypothesis 2 and its sub hypotheses, that individual differences should play a bigger role in predicting news consumption in the high choice conditions than in the low choice conditions. Two regressions[11] were run for each target issue. In each the dependant variable was the number of target issue stories read. Each model included 8 individual difference measures, one for each of the H_2 sub hypotheses, as well as controls for gender and age. The first model in each table is run only on participants in the low choice condition; the second is run on only participants in the high choice condition For H_2 to be true, we would expect two things from the analysis. First, the R^2 for the high choice participants should be higher, indicating that more variance is explained by the inclusion the individual difference measures in the high choice condition than in the low. Second, for each sub hypothesis, the associated individual difference measure should have a positive significant coefficient.[12]

[11] The analyses were also run as ordered probits, with the same results. The OLS regressions are reported for ease of interpretation.

[12] While many of the IVs are correlated with one another to some degree, this does not appear to influence the present analysis seriously. Separate models (not reported here) were run for each of the IVs, including the same controls as in the models here. The results were substantively the same.

The results for global warming provide very limited support for H_2. First, there is a modest improvement in model fit for the high choice condition. Something in the model does help better explain story consumption in the high choice condition than in the low.

Table 5 News Consumption and Individual Differences: Global Warming

	Global Warming Low	Global Warming High	T for difference
Political Interest	.005	-.18#	1.62#
NE	-.013	.005	2.00**
NC	-.01	.033#	.62
NO	.21**	.13#	-1.03
Political Knowledge	.013	.04	.57
Media Use	-.16	-.26	-.34
News Media Use	.084	.377	1.07
Ideology	-.068	.012	1.41
Gender	-.26	.059	1.89*
Age	.01	-.002	-.72
Constant	2.02	-1.78*	-3.87**
N	81	91	
Adj R^2	.09	.13	
Average Vif	1.98	2.16	

#=p<.1, *=p<.05, **=p<.01, ***=p<.001

Turning attention to the individual difference variables, we see that only three variables predict consumption at all, and that only one of those behaves according to the hypothesis. NC is insignificant in the low choice condition, and a significant predictor in the high choice condition, though the difference in performance across models is not statistically significant. The higher one is in NC, the more stories he or she reads in the high choice condition. NO is a significant predictor of consumption, but does not behave

consistently with the hypothesis. It predicts consumption in both conditions, but actually performs slightly worse in the high choice condition (smaller coefficient, less significant). Political Interest behaves differently than predicted. In the high choice condition only, it is a significant predictor of consumption, BUT those higher in interest are actually less likely to read global warming stories.

NE[13], media use, political media use, and ideology are not significant predictors of consumption.

Table 6 News Consumption and Individual Differences: The Economy

	Economy Low	Economy High	T for difference
Political Interest	.09	-.083	-1.9**
NE	-.009	.02*	3.5***
NC	.002	-.004	-.18
NO	.06	-.12#	-3.08**
Political Knowledge	.03	.042	.2
Media Use	.043	.17	.5
News Media Use	-.27	-.043	.93
Ideology	.044	.036	-.14
Gender	.19	-.028	-1.4
Age	.012#	.019	.177
Constant	1.26*	.67	-.70
N	78	86	
Adj R^2	.03	.05	
VIF	2.03	2.27	

#=p<.1, *=p<.05, **=p<.01, ***=p<.001

[13] There is a statistically significant difference in the coefficients on NE in the low and high choice conditions, but the effect in both is insignificant.

Table 6's results are similar to those in Table 5. First, there is the modest R^2 improvement in the high choice model compared to the low, again, indicating a slightly better model fit in the high choice conditions.

Once again, the individual differences do not fare particularly well, with only one result consistent with the hypothesis. NE goes from being non significant to significant and positive, again indicating that in the high choice condition those higher in NE read more hard news stories than those who are lower in NE. NO on the other hand, goes from being non significant to significant, but signed in the wrong direction in the high choice conditions. For Political Interest, the difference between coefficients is significant, but the coefficients themselves are not significant in either model.

Conclusion

The preceding analyses present mixed findings for my hypotheses concerning the effects of increased content choice. Hypothesis one, is strongly supported. For both Global Warming and Economic stories, increasing the number of other stories available to participants radically decreases consumption of those target stories. In the low choice conditions for both issues, approximately three quarters of participants read both target stories, and very few did not read any target stories. In contrast, in the high choice conditions, consumption of the target stories was dramatically reduced. What is especially striking here is that the change in condition is relatively small. Only six filler stories were added, and none of them were particularly gripping, yet this was enough to

distract a large percentage of respondents from issues of national importance either partially or entirely.

Hypothesis two, unfortunately, has very limited support. Of the eight variables considered, only one for each issue behaves as expected, NC for global warming, NE for the economy, and NO, actually behaved counter to the hypothesis, at least in the economy condition. It makes sense that NE and NC would be predicative of consumption, as this is consistent with past research. The discrepancy in behavior of the two across different issue domains is interesting, however. Global warming and the economy were chosen as stimulus issues because they were both of moderate concern to the public, but they do have some differences. One of the key ones is newness of the information. While neither issue is "new" the economy articles highlight an emerging problem. Up until this point, while there were some signs of weakness, the economy had been going reasonably well. Information that the country was headed for a recession represents a large shift on the issue. By contrast, the global warming stories do not point to a new direction in global warming, but rather point out some additional consequences of the problem. The consequences of this appear even in the basic condition comparisons. People were more easily distracted from the global warming stories than the economic ones. Looking at the motivations of high NEs and high NCs, this pattern of consumption makes sense. High NCs "naturally tend to seek, acquire, think about, and reflect back on information to make sense of stimuli, relationships, and events in their world" (Petty and Cacioppo 1996). As such, reflection on smaller refinements to an issue may still be appealing to high NCs, even though there is little expectation that it would change the

direction of their attitude on the issue. In Contrast, the motivation for information seeking by NEs is framed in terms of seeking information to hold opinions about (Bizer et al 2004). As such, it is possible that they are more sensitive to information that represents a change from the status quo, as it would have more impact on their opinions than information that merely reinforces what they already believe. This is an area that could use further investigation, as to date, the NE and NC literature has not really explored the nuances of information consumed by those high in the traits.

The lack of findings for NO is the most vexing result here, particularly its inconsistency from issue to issue. In the global warming context, NO is significant and positive in both the low and high choice conditions, although the effect is slightly smaller in the high choice condition. While this runs counter to the hypothesis, it is a promising sign for citizenship, as it would indicate that people who are high in NO are relatively insensitive to context. Those who are concerned about global warming but don't feel they know much about it appear to be able to seek out information regardless of context. On the other hand, for the economic conditions, not only does NO perform opposite of my expectations, its performance also runs counter to helping inform citizens. For the economy, NO does not drive consumption in the low choice condition and is actually negatively related to consumption in the high choice, indicating that high NOs are actually avoiding information which we would expect them to want.

As for the lack of support for the H_2 among the other variables, there are several possible explanations. The first is a possible model misspecification. It is possible that none of the

variables included are strong predictors of interest in either issues, but that other individual differences may be predictive of consumption, and behave consistently with H_2. Of the IVs with null results (Political interest, political knowledge, ideology, media use, news media use), only media use is not political (news media is partially tied to consumption of political news). The stimulus stories used in the experiment, however, are not explicitly political. They do not mention political figures, or frame the debates in partisan terms. This may result in a mismatch between the IVs and the issues. It is possible that the IVs would be more predictive if the issues were framed in more partisan terms. Alternately, non political measures that were more specific to the issues might also be predictive.

An additional problem may be the lack of variance on both the IVs and DVs. The IVs are hampered by the relative homogeneity of the sample. While there were non-students included, most participants were students, and all are relatively educated. As such, many IVs skew fairly high on the scales, even though there is some variance. Median splits of the IVs did not gain any predictive power because the median was so high. The other key IV, condition, also presents only a limited range of possible behaviors. It is possible that with a greater amount of distraction available (or more interesting alternate stories) that there may be more differentiation. As for the DVs, there is also a limited range of available behavior since the web surfing activity was short and only happened once. It is possible that over time, consumption habits may differ if we were to follow participants over a longer period of web use.

Chapter 4 Agenda Setting

Agenda setting is one of the most consistently recognized media effects on public opinion. The classic agenda setting hypothesis is that the increased coverage of an issue will lead to increased public concern with the issue as a problem for the country. Broadly, my research question is, what effect, if any, does increasing the amount of information available to participants have on the agenda setting effect, and does this increase affect individuals differently. The two groups of hypotheses mirror those for story choice.

H_3: In high choice conditions, there will be a reduced agenda setting effect compared to the low choice conditions. The highest concern for the stimulus issue will be in the low choice condition, followed by the high choice condition, followed by the control condition.

H_4: Individual differences that predict increased media consumption will have a positive impact on agenda setting, and this effect will be greater in the high choice condition than the low choice condition.

My initial expectation for hypothesis 4 was that individual differences would moderate the effect of condition on story selection, and that in turn would drive differences in the agenda setting effect. As the analyses in chapter 3 demonstrate, however, there is only limited evidence of this effect, which calls H_4 into question.

This study uses three measures of citizens' concern with national issues. The first question on the survey at both time one and time two was an open ended question asking what issue the respondent thought was the most important facing the nation. Participants were permitted up to three answers. This leads to two possible agenda measures. First, one can consider only the first response. One would expect that the first answer given would be of primary importance to the individual, and indicates how important this issue

is, even relative to other issues a respondent might be concerned about. Second, I examine whether they mention the issue in any of their three responses. This measure allows that individuals may have increased concern for the stimulus issue, even if it they are not so concerned that it bumps off all other issues and rises to the level of single most important.

Additionally, a series of closed ended questions asking about the importance of issues for the country was included as the second batch of items questions. They were placed after the open ended question so as not to taint responses to the open ended question. The three key measures here are the importance placed on the economy, global warming, and the environment (see Appendix 1 for exact wording). Responses were given on a five point scale, and have been recoded with higher values indicating more concern for ease of interpretation. Concern with Global warming and the environment were included because both are reasonable areas of concern to be raised by a story about global warming. Substantively, the results in the agenda setting analyses were identical, so I only report the results with global warming as a dependent variable. This closed ended measure allows for the potential detection of increased concern with an issue even if that issue fails to rise to the level of most important by spontaneous mention.

Tables 7 and 8 present analysis to accomplish several tasks. First, it is necessary to establish that the materials presented are actually capable of producing an agenda setting effect. H_3 is, at its core, about factors that would attenuate the agenda setting effect, so there must be an effect there to attenuate. The second task is to show that condition

matters for the magnitude or even presence of the effect. Table 7 presents the analysis of closed ended measures across conditions. Higher scores indicate greater national concern with the issue. Table entries are the mean national issue concern of participants in that condition. The analysis consists of a series of independent samples t-tests to check for statistically significant differences in the means between the low and high choice conditions. The control group for each condition is made up of the conditions that did not receive target stories on topic (for global warming groups, the control groups are those that received the economy stories and vice versa). Three analyses were run. First, does the low choice treatment group differ significantly from the control group in issue concern? Second, does the high choice treatment group differ significantly from the control group in issue concern? Finally, do the low and high choice treatment groups differ significantly from one another? The low choice vs. control comparison is the classic agenda setting paradigm. The low choice vs. high choice comparison is a direct test of H_3. If H_3 is correct, we would expect to see a significantly greater concern for the stimulus issue in the low choice condition than in the control group, possibly greater concern in the high choice condition compared to the control, and significantly greater concern in the low choice condition compared to the high choice condition.

Table 7: The Basic AS Effect- Condition and National Issue Concern

	Control	Low Choice	High Choice
Global Warming	3.94	4.43***a	4.11
Economy	4.22	4.29	4.29

a. GW low significantly greater than GW hi ($p<.02$)

The results of table 7 demonstrate several things. First, for global warming, the basic agenda setting effect is replicated. Those in the GW low choice condition are significantly more concerned with global warming as a national issue than those in the control condition. ($p<.000$). Further, there is a significant difference in concern for global warming between the high and low choice conditions. The high choice condition is statistically indistinguishable from the control group. This offers strong confirmation of H_3 for the global warming experiment.

There are not statistically significant differences by condition for the economy conditions. All three conditions are statistically indistinguishable from one another. It is likely that this is due to a ceiling effect. The maximum score on the concern measure is a five, and for all three conditions, the mean score is over four. There simply is not that much room to increase concern. In addition, as shown in the previous chapter, there was less impact of condition on content selection for the economic issue than for global warming, so the current result is consistent.

Table 8 presents tests of H_3 using the open ended measures. The analysis parallels the analysis in table 11, but uses the first mention and any mention dependent variables, with a chi squared test on bivariate crosstabs rather than a t-test.

Table 8: The Basic Effect- Condition and Open Ended Economic Concern

	Control	Low Choice	High Choice
% Mention environment first	6.8%	24.4%^{AC}	21.9%^{BC}
% Mention environment at all	13.3%	39.2%^{DF}	36.8%^{EF}
% Mention econ first	2.7%	16.1%^{GI}	13.3%^{HI}
% Mention econ at all	16.3%	43.2%^{JL}	56.5%^{KL}

A Low vs. Control χ^2= 16.4*** **B** High vs. Control χ^2=13.3*** **C** Low vs. Hi χ^2=.65(ns)
D Low vs. Control χ^2=10.7*** **E** High vs. Control χ^2=18.3*** **F** Low vs. Hi χ^2=.141(ns)
G Low vs. Control χ^2=15.9*** **H** High vs. Control χ^2=11.1** **I** χ^2=.64(n.s)
J Low vs. Control χ^2=20.1*** **K** High vs. Control χ2=19.3*** **L** Low vs. High χ^2=.404 (ns)

The results of this for the global warming conditions are slightly different than the analysis of the closed ended items. By both the first mention and any mention method BOTH the low and high choice conditions are significantly different from the control group, and not significantly different from one another (though the relationship is in the correct direction). For the economy conditions, the analysis of open ended questions indicates that an agenda setting effect has in fact taken place, although again, there is no statistically significant difference between the low and high choice conditions. In the case of the "any mention" measure, the difference between the low and high choice conditions is not significant, and, further, the pattern is inconsistent with H_3, as the high choice condition actually shows greater concern with the economy than the low choice condition does.

The next analyses examine the H_4 series of hypotheses, that individual differences will be moderated by condition in shaping agenda setting effects. Unlike chapter three, each individual difference variable is run as a separate set of models due to the correlation the introduction of interaction terms necessary to test the agenda setting hypothesis. These

interaction terms are highly correlated with the IV and condition[14]. For each individual difference variable of interest, there are 18 relevant models (2 issues x 3 different condition comparisons x 3 dependent variable measures). Each hypothesis is tested in both the global warming and economy conditions. Within these conditions, models are run for three different measures of agenda setting (differences in closed ended response, first mention, and any mention). Finally, within each of these measures, there are three relevant model specifications based on condition. For each set of three models, the first model (1, 4, 7 in each table) compares the low choice condition with the control, the second model (2, 5, 8) compares the high choice condition with the control, and the third model (3, 6, 9) compares the low choice with the high choice conditions. While this is a large number of models to consider, they are necessary for a full test of H_4, and because all of the models are structured the same way, one can make relatively easy comparisons. In each model, the key test of H_4 is the interaction between the condition dummy variable and the individual difference under examination.

For each model, the first variable is the condition comparison. The first model in each batch compares the low choice vs. control conditions. The control is coded 0, low choice with stimulus is coded 1.A significant positive finding here demonstrates the agenda setting effect, as it indicates that people in the low choice conditions are more concerned with the stimulus issue than those in the high choice condition. The second model in each batch compares the high choice condition to the control. Again, it is coded with zero for the control, and high choice with stimulus issue present is coded 1. A positive coefficient here indicates an agenda setting effect for the high choice condition compared to the

[14] Typically bivariate correlations were between .8 and .9.

control. Finally, the first variable of the first model in each batch compares the low choice to the high choice conditions, with low coded zero and high coded one. Looking across all three models, the expectation from H_3 would be that the Low/Control comparison would be strongly positive, the High/Control comparison should be positive but of a lower magnitude than the Low control, and finally, that the Low/High comparison should be negative and significant, indicating a greater agenda setting effect in the low choice condition than in the high.

The key variables to look at across the models are the individual difference x condition interactions, as these is the direct test of each H_4 hypothesis. The first part of H_4 is that the various individual differences measures will be predictive of agenda setting. The individual difference x low vs. control and high vs. control tell show whether or not the individual difference is a moderator of the agenda setting effect. If significant, these interactions show that people who are in the stimulus conditions and are high in the trait have a greater concern for the stimulus issue than those in the control condition. In both of these models, the main effect of the individual difference variable is not relevant for agenda setting, as a significant finding only indicates that across the board, people high in that trait are more concerned with the issue.

The second and most important expectation of H_4 is that individual differences that moderate agenda setting will have more of an impact in the high choice condition than in the low choice condition. This is tested in the third model in each batch (3, 6, 9) by the individual difference x low choice vs. high choice interaction terms. If H_4 is true, then the

interaction term should be positive and significant, showing that the individual difference has its greatest effect in the high choice condition. All models are run with controls for age, ideology (conservatives scored higher) and gender (M=0, F=1).

Table 9 presents the basic agenda setting regression and probit models, without any of the individual differences or interactions included. First, this provides an additional test of H_3, that increased choice diminishes the agenda setting effect. Second, it provides a baseline model to compare to the models testing the H_4 hypotheses.

In table 9, we see stronger results for H_3, than we do in tables 7 and 8 for the global warming context, though only the open closed responses show statistically significant results for H_3.

Table 9: Basic Agenda Setting Model, Global Warming

Model	1 Closed Ended	2 Closed Ended	3 Closed Ended	4 Probit First Mention	5 Probit First Mention	6 Probit First Mention	7 Probit any Mention	8 Probit any Mention	9 Probit any Mention
Low Choice vs. Control	.49***			.82***			.84***		
High Choice vs. Control		.16			.69***			.79***	
Low choice vs. high			-.35**			-.15			-.044
Ideology	-.20***	-.21***	-.15***	-.075	-.022	.005	-.07	.024	.023
Gender	-.15	.021	-.096	-.27	-.17	-.24	-.23	.32#	.013
Age	.007	.01	.017	-.013	.005	.014	.008	.002	-.001
Constant	4.72***	4.46***	4.92***	-.78#	-1.20**	-.41	-.62	-1.70***	-.37
Adj R^2/ Pseudo R^2	.14	.12	.10	.09	.06	.01	.09	.08	.00
N	262	272	182	261	272	181	235	244	165

#=p<.1, *=p<.05, **=p<.01, ***=p<.001

The first three models look at the closed ended measure of global warming concern using OLS regression. The results here conform exactly to the hypothesis. In model 1, we see the classic agenda setting effect. The low vs. control variable is positive and highly significant, showing that those in the low choice stimulus condition are significantly more concerned with global warming than those in the control condition, who had no exposure to the global warming stories. In model 2, the comparison is between the high choice and control conditions. Here, the dummy variable high choice vs. control is not statistically significant (and even if it were, the coefficient is 1/3 the size of in the low vs. control condition). There is no evidence of agenda setting effect here. Finally, model three shows that the difference between these two conditions is statistically significant.

The low vs. high choice dummy (coded 0-1 respectively) is negative and significant, which demonstrates less concern, and therefore less agenda setting in the high choice condition.

Models 4-6 replicate the analysis in models 1-3, but use the open ended first mention measure as the dependent variable, and, because this is a dichotomous variable, probit analysis. The results here follow a similar pattern, though they are less strong support than the first three models. Here, models 4 and 5 both show a significant agenda setting effect. Consistent with H_4, the magnitude of the effect is smaller in the high choice vs. control condition than in the low choice vs. control condition. Inconsistent with the hypothesis, however, is model 6 which compares first mentions of the environment across the two exposure conditions. Here the coefficient for the low vs. high dummy variable is insignificant, but the sign is in the expected direction.

The results for models 7-9 show the test of this hypothesis with the any mention dependent variable (did the respondent mention the environment in any of their three responses to the open ended agenda question). The results here are identical to models 4-6, agenda setting in both of the exposure conditions, a smaller coefficient in the high choice vs. control condition than in the low choice vs. control condition (though the magnitude here is smaller), and an insignificant difference in issue concern between the two exposure conditions in model 9.

Table 10 performs this same analyses, but for the economy conditions. The results here are weaker than for the global warming conditions. While the pattern of coefficients is slightly suggestive of a decreased agenda setting effect in the high choice conditions, the magnitude of differences in issue concern across conditions is small, and fails to reach statistical significance.

Table 10 Basic Agenda Setting Model, Economy

Model	1 Closed Ended	2 Closed Ended	3 Closed Ended	4 Probit First Mention	5 Probit First Mention	6 Probit First Mention	7 Probit any Mention	8 Probit any Mention	9 Probit any Mention
Low Choice vs. Control	.074			.89***			.80***		
High Choice vs. Control		.074			.81**			.78***	
Low choice vs. high			-.006			-.098			-.045
Ideology	.06*	.06*	.035	.14#	.095	.099	.075	.069	.17**
Gender	-.059	-.07	-.051	.15	-.09	-.065	.097	-.03	.072
Age	.003	.014#	-.001	.013	-.011	.001	-.002	.016	-.005
Constant	4.11***	4.04***	4.27***	-2.71***	-2.1***	-1.23*	-1.34***	-1.2***	-.74
Adj R^2/ Pseudo R^2	.01	.02	-.01	.13	.10	.01	.07	.07	.03
N	268	273	177	267	271	176	238	249	157

#=p<.1, *=p<.05, **=p<.01, ***=p<.001

Models 1-3 present the closed ended results. There is no evidence of an agenda setting effect in either the low choice or high choice conditions. The coefficients on the dummy variables in model 1 and 2, which test the AS hypothesis, are statistically insignificant, and model 3's interaction, which compares concern in the two exposure conditions is also insignificant.

Models 4-9 are suggestive, but inconclusive for H_3. Tests for both of the open ended DVs show the same pattern. A significant agenda setting effect in the low choice condition compared to the control condition (models 4, 7), a significant agenda setting effect for the high choice condition (model 5,8) with a slightly smaller magnitude than the effect in the low choice condition, but no significant differences in the high and low choice conditions (6,9) for issue concern. The pattern in these models is suggestive of H_3 but the results are not statistically significant. In this experiment, there is not solid evidence that increased choice diminishes agenda setting effect for the economic conditions, but for the first mention item, the pattern is correct.

Tables 11-12 present the results for H_{4a}, that those higher in political interest will experience a greater agenda setting effect, especially in the high choice condition, first in the global warming context, then in the economic context. Table 11 provides some support for H_{4a}. Models 1-3 use the closed ended global warming measure as the DV. Compared to table 7, the first result is surprising. In the multivariate analysis, the low choice and high choice conditions actually have less issue concern than the controls. The interaction in model 3, however, is significant and also negative, indicating that this effect is more pronounced in the high choice condition. Interest in politics has a significant direct effect on agenda setting. Importantly for H_{4a} the interaction in model 3 is significant and positive, showing a stronger relationship between interest and issue concern in the high choice condition compared to the low. The interactions in models 1 and 2 are also positive. This indicates that, while there is a significant relationship between political interest and agenda setting on global warming for all participants, it is

stronger for those who had the opportunity to read articles about global warming, again, consistent with H_{4a}

Models 4-6 test the same hypotheses, but with the first mention measure as the DV. The results have some similarities to those in models 1-3. Neither the low or high choice conditions show an agenda setting effect relative to the control condition, but there is significantly greater concern about global warming in the low choice condition compared to the high choice condition. Once again, however, consistent with H_{4a}, the relevant interactions are significant. The interactions in models 4 and 5 demonstrate political interest as a moderator of agenda setting. The interaction between interest and the low/high dummy variable is significant, indicating a more positive effect between political interest and environmental concern in the high choice condition.

Finally, models 7-9 Test Hypothesis H_{4a} with the any mention measure as a DV. Once again, the results are consistent with H_{4a}. The condition x interest interaction is not significant in the low vs. control condition, but is significant and positive in the high vs. control condition. The interaction in model 9 shows that there is a significantly stronger positive relationship between issue concern and political interest in the high choice condition than in the low.

Table 11 Agenda Setting: Global Warming and Interest in Politics

Model	1 Closed ended	2 Closed ended	3 Closed ended	4 Probit First Mention	5 Probit First Mention	6 Probit First Mention	7 Probit Any Mention	8 Probit Any Mention	9 Probit Any Mention
Low vs. Control	-.87*			-.47			.55		
High vs. Control		-1.06**			-.98			-.82	
Low vs. High			-.19***			-1.91**			-1.82
Political Interest	.11*	.12**	-.051	-2.17*	-.21*	-.36***	-.18#	-.14	-.33**
Interest x Low vs. Cont.	.34***			.308#			-.08		
Interest x High vs. Cont		.33***			.43**			.43**	
Interest x Low vs. High			.42***			.46**			.48**
Ideology	-.18***	-.18***	-.093**	-.077	.03	.04	-.08	.077	.08
Gender	-.11	-.08	-.08	-.42#	-.26	-.28	-.32	.26	-.001
Age	.006	.003	.007	-.005	.003	.012	.01	-.001	-.006
Constant	4.21***	3.88***	4.95***	.133	-.52	.68	.111	-1.28**	.57
Adj R^2/ Pseudo R^2	.19	.17	.19	.12	.12	.10	.10	.12	.09
N	261	272	182	260	272	181	234	244	165

#=p<.1, *=p<.05, **=p<.01, ***=p<.001

Table 12 Agenda Setting: The Economy and Interest in Politics

Model	1 Closed Ended	2 Closed Ended	3 Closed Ended	4 Probit First Mention	5 Probit First Mention	6 Probit First Mention	7 Probit any Mention	8 Probit any Mention	9 Probit any Mention
Low vs. Control	-.005			.90			.51		
High vs. Control		.058			.74			.66	
Low vs. high			-2.79***			1.06			-.86
Political Interest	.11**	.14***	.066	-.11	-.19	-.33**	-.047	-.004	-05
Interest x Low vs. Cont	0.28			.004			.14		
Interest x High vs. Cont		.011			.027			.065	
Interest x Low vs. High			.65***			.19			.18
Ideology	.071**	.072**	.026	.15#	.10	.08	.066	.07	.16*
Gender	-.02	-.015	-.077	.08	-.18	-.34	.08	.02	.02
Age	.000	.01	-.001	.016	-.009	.01	-.003	.02	-.003
Constant	3.71***	3.50***	4.12***	-2.29	-1.32	.25	-1.1*	-1.25**	.48
Adj R^2/ Pseudo R^2	.03	.06	.22	.13	.12	.07	.08	.07	.04
N	268	273	177	267	271	176	238	249	157

#=p<.1, *=p<.05, **=p<.01, ***=p<.001

Table 11 examines agenda setting and political interest in the economic contest. The first three models use the closed ended DV. By this measure, there is no statistically significant evidence of an agenda setting effect for either the low or high choice conditions compared to the control. Model 3 does show, however, that there is significantly greater economic concern in the low choice condition than in the high choice condition. H_{4a} receives some support in these models, but it is weaker than in the

global warming condition. While neither the low vs. control or high vs. control interaction with political interest is significant, there is a significant positive interaction between interest and the low vs. high dummy variable, indicating a stronger relationship in the high choice condition between concern for the economy and political interest than in the low choice condition.

The other six models, representing the two open ended measures, fare poorly. There are very few significant results. The one significant finding is in model 6 which provides a bit of counter evidence to the other findings around H_{4a}. The main effect of political knowledge on likelihood of mentioning the economy as the first agenda item is negative and significant.

Tables 13 and 14 present the tests of H_{4b}, that those higher in NE will be more susceptible to agenda setting, with the most pronounced effect in the high choice condition.

Table 13 Agenda Setting: Global Warming and NE

Model	1 Closed Ended	2 Closed Ended	3 Closed Ended	4 Probit First Mention	5 Probit First Mention	6 Probit First Mention	7 Probit any Mention	8 Probit any Mention	9 Probit any Mention
Low Choice vs. Control	1.15#			.16			.16		
High Choice vs. Control		.97			-.85			2.15*	
Low choice vs. high			-.26			.11			1.73#
NE	.02***	.026***	.013	-.004	-.01	.02	-.004	.006	.006
NE x Low vs. Control	-.012			.013			.012		
NE x High vs. Control		-.015			.03			-.025	
NE x Low vs. High			.012			-.006			-.033#
Ideology	-.17***	-.19***	-.15***	-.06	-.037	.008	-.067	.021	.01
Gender	-.019	.11	-.09	-.019	-.21	-.19	-.19	.33#	.02
Age	.006	.008	.014	.007	.001	.008	.007	-.000	-.01
Constant	3.04***	2.85***	4.18***	-.45	-.31	-.15	-.45	-2.03***	-.98
Adj R^2/ Pseudo R^2	.18	.16	.11	.09	.07	.02	.09	.08	.02
N	256	265	177	229	265	176	229	237	160

#=p<.1, *=p<.05, **=p<.01, ***=p<.001

In the global warming context we see little support for H_{2b}. Models one and two show a significant positive main effect of NE on environmental concern. The interaction, however, is insignificant in both models, as is the interaction in model three. The open ended responses fare little better. For the first mention models, none of the interaction terms are significant. For the any mention models, the only significant result is a

significant negative relationship interaction between NE and the low vs. high dummy, indicating a more negative relationship between NE and issue concern in the high choice condition. This is contrary to the hypothesized relationship.

Table 14 Agenda Setting: Economy and NE

Model	1 Closed Ended	2 Closed Ended	3 Closed Ended	4 Probit First Mention	5 Probit First Mention	6 Probit First Mention	7 Probit any Mention	8 Probit any Mention	9 Probit any Mention
Low Choice vs. Control	.48			2.63#			3.02**		
High Choice vs. Control		-.02			2.56#			.81	
Low choice vs. high			-.58			-.15			-2.37*
NE	.009#	.009*	.001	.012	.009	-.02	.008	.009	-.03#
NE x Low vs. Control	-.007			-.03			-.04*		
NE x High vs. Control		.002			-.03			-.000	
NE x Low vs. High			.01			.001			.042*
Ideology	.065*	.076**	.036	.16*	.08	.107	.06	.077	.16*
Gender	-.044	-.024	.007	.038	-.24	-.19	.07	.026	.117
Age	.004	.017*	-.002	.019	-.015	.005	-.002	.018	-.008
Constant	3.57***	3.39***	4.11***	-3.39**	-2.36**	.074	-1.75*	-1.89*	.82
Adj R^2/ Pseudo R^2	.01	.04	.03	.17	.13	.04	.09	.08	.05
N	260	267	173	259	265	172	230	243	153

#=p<.1, *=p<.05, **=p<.01, ***=p<.001

Table 14 presents the tests of H_{2b} in the economic context. The results for both the closed ended and first mention measures provide no significant findings in support of the hypothesis. The any mention model provides very limited support of the hypothesis that NE will evaluate agenda setting and be more influential in the high choice condition. In model 7, the interaction between low vs. control and NE is significant and negative, counter to the hypothesis. On the other hand, in model 9, the low vs. high x NE interaction is positive and significant. The difficulty is that, the main effect of knowledge in the model is negative and significant. The resulting interpretation of the total effect is that in the low choice condition it is negative, and in the high choice condition it is indistinguishable from zero.

Table 15 Agenda Setting: NC and Global Warming

Model	1 Closed Ended	2 Closed Ended	3 Closed Ended	4 Probit First Mention	5 Probit First Mention	6 Probit First Mention	7 Probit any Mention	8 Probit any Mention	9 Probit any Mention
Low Choice vs. Control	.94			1.09		-1.42	1.38		
High Choice vs. Control		.66			-.11			1.65	
Low choice vs. high			-.34						.09
NC	.016*	.017*	.009	-.008	-.006	-.014	-.003	.006	-.007
NC x Low vs. Control	-.008			-.003			-.008		
NC x High vs. Control		-.008			.014			-.01	
NC x Low vs. High			.000			.02			-.003
Ideology	-.19***	-.20***	-.14***	-.10	-.027	-.001	-.08	.018	.007
Gender	-.08	.087	-.059	-.25	-.13	-.25	-.20	.37	-.01
Age	.003	.007	.015	-.03	-.003	.014	.003	-.003	.000
Constant	3.64***	3.31***	4.31***	-.17	-.85	.51	-.36	-2.08**	.20
Adj R^2/ Pseudo R^2	.18	.13	.09	.11	.08	.01	.09	.09	.003
N	255	265	178	254	265	177	228	238	162

#=p<.1, *=p<.05, **=p<.01, ***=p<.001

Table 15 presents the Global Warming test of the H_{2c}, which expects to find a relationship between NC and the agenda setting effect, with the strongest relationship occurring in the high choice conditions. Unfortunately, across 9 models, none of the interactions that would be indicative of this Hypothesis are significant.

Table 16 Agenda Setting: NC and the Economy

Model	1 Closed Ended	2 Closed Ended	3 Closed Ended	4 Probit First Mention	5 Probit First Mention	6 Probit First Mention	7 Probit any Mention	8 Probit any Mention	9 Probit any Mention
Low Choice vs. Control	.73			.532			3.55**		
High Choice vs. Control		-.21			1.54			1.23	
Low choice vs. high			-.87			.98			-2.56#
NC	-.002	-.003	-.01#	-.024	-.025	-.018	3.55**	.005	-.04*
NC x Low vs. Control	-.01			.007			-.047*		
NC x High vs. control		.005			-.012			-.007	
NC x Low vs. High			.014			-.019			.043#
Ideology	.064*	.07**	.04	.11	.04	-.019	.073	.071	.177**
Gender	-.06	-.08	-.07	.002	-.31	.056	.084	.-.07	-.001
Age	.004	.015*	.002	.014	-.01	.001	.001	.02	.002
Constant	4.21***	4.17***	5.06***	-1.00	-.09	.14	-1.77*	-1.51#	1.65
Adj R^2/ Pseudo R^2	.01	.02	.01	.14	.16	.05	.09	.08	.06
N	262	266	172	261	264	171	233	243	152

#=p<.1, *=p<.05, **=p<.01, ***=p<.001

H_{2c} does not perform much better in the economic context. In the first 6 models, none of the relevant interactions are significant. In model 7, the interaction is significant, but in the opposite direction from expectations. Much like the NE/Economy results in table 13, the model 9 interaction between NE and low vs. high is significant and in the correct

direction, but once again, it appears that the actual relationship is a negative one in the low choice condition, and no connection between NE and Agenda setting in the high choice conditions.

Table 17 Agenda Setting: NO and Global Warming

Model	1 Closed Ended	2 Closed Ended	3 Closed Ended	4 Probit First Mention	5 Probit First Mention	6 Probit First Mention	7 Probit any Mention	8 Probit any Mention	9 Probit any Mention
Low Choice vs. Control	-.25			.39			1.42*		
High Choice vs. Control		-.82#			-.63			-.83	
Low choice vs. high			-1.80***			-1.35			-1.75***
NO	.39***	.35***	.28***	.26**	.25**	.333**	.25**	.26**	.33***
NO x Low vs. Control	.11#			.062			-.068		
NO x High vs. Control		.15**			.19#			.25**	
NO x Low vs. High			.21***			.122			.25*
Ideology	-.14***	-.13***	-.04	-.04	.05	.099	-.048	.12#	.17*
Gender	-.27**	-.13***	-.15	-.38	-.26	-.33	-.29	.25	-.02
Age	.008	.003	.003	-.016	-.006	.001	.009	-.006	-.015
Constant	2.47***	2.39***	3.16***	-2.27***	-2.65***	-2.37**	-2.09**	-3.33***	-2.15***
Adj R^2/ Pseudo R^2	.37	.33	.35	.13	.13	.09	.12	.16	.14
N	258	268	180	257	268	179	233	242	240

#=p<.1, *=p<.05, **=p<.01, ***=p<.001

Table 17 tests $H2_d$, the predicted relationship between NO, agenda setting, and condition. The results here offer strong support for the hypothesis. Models 1-3 perform exactly as

expected. The interaction terms in models 1 and 2 show that NO moderates the agenda setting effect, with high NOs showing a greater agenda setting effect than low NOs. Model 3 confirms the second part of the hypothesis, that the effect will be greatest in the high choice condition. The positive and significant coefficient indicates that NO is especially important in determining the agenda setting effect in the high choice condition. In models 4-6, the first mention tests, the evidence is weaker but suggested. We do not see the expected significant interaction in model 4, but the model 5 interaction is significant. In model 6, the interaction term just misses traditional levels of statistical significance ($p<.16$), but the pattern across the three models is consistent with the logic of the hypothesis, as NO has a non significant interaction in the low choice condition, but a positive significant interaction in the high choice condition. Models 7-9 provide additional support for the relationship between NO and agenda setting, as well as the importance of condition. Once again, NO moderates the agenda setting effect, but only in the high choice condition, and the difference in performance between the high and low choice conditions is statistically significant.

Table 18 Agenda Setting: NO and the Economy

Model	1 Closed Ended	2 Closed Ended	3 Closed Ended	4 Probit First Mention	5 Probit First Mention	6 Probit First Mention	7 Probit Any Mention	8 Probit Any Mention	9 Probit Any Mention
Low Choice vs. Control	-.11			.091			-.27		
High Choice vs. Control		.65#			.025			.82	
Low choice vs. high			.79#			-.09			1.13
NO	.19***	.19***	.23***	.10	.11	.25	.16#	.15	.32*
NO x Low vs. Control	.03			.14			.18		
NO x High vs. Control		-.11			.13			-.006	
NO x Low vs. High			-.14#			-.014			-.20
Ideology	.04	.04	.016	.12	.08	.074	-.059	.055	.14*
Gender	-.07	-.076	-.002	.20	-.027	.017	.10	-.044	.058
Age	.001	.009	.001	.011	-.014	-.001	-.002	.015	-.002
Constant	3.12***	3.11***	3.06***	-3.27***	-2.66***	-2.66**	-2.21***	-2.02***	-2.48*
Adj R^2/ Pseudo R^2	.14	.10	.08	.15	.12	.06	.11	.09	.06
N	264	271	173	263	269	172	235	248	155

#=p<.1, *=p<.05, **=p<.01, ***=p<.001

Table 18 examines H_{2d} in the economic context. Despite the strong results for NO in the Global Warming conditions, NO appears to be a poor predictor of agenda setting in the economic conditions. In the first three models, the only significant interaction term is the NO x low vs. high, and the sign is negative, rather than positive, indicating that as NO

increases has less of an impact in the high choice condition than in the low, which runs contrary both to expectations and the results in the global warming conditions. For the open ended models, none of the interactions are significant.

Table 19 Agenda Setting: Political Knowledge and Global Warming

Model	1 Closed Ended	2 Closed Ended	3 Closed Ended	4 Probit First Mention	5 Probit First Mention	6 Probit First Mention	7 Probit any Mention	8 Probit any Mention	9 Probit any Mention
Low Choice vs. Control	.84**			1.7***			1.66***		
High Choice vs. Control		.55*			1.16***			1.61***	
Low choice vs. high			-.34			-.55			-.27
Knowledge	.04	.05#	-.031	-.05	-.04	-.25***	-.02	.04	-.18**
Knowledge x Low vs. Control	-.074			-.21*			-.18*		
Knowledge x High vs. Control		-.079			-.11			-.16#	
Knowledge x Low vs. High			-.002			.097			.057
Ideology	-.19***	-.21***	-.15***	-.11	-.017	.003*	-.09	.03	.016
Gender	-.096	.086	-.11	-.42#	-.25	-.37#	-.29	.37	-.094
Age	.005	.009	.018#	-.01	.01	.023	.01	.003	.005
Constant	4.42***	4.07	5.07***	-.23	-.94	.83	-.40	-2.06***	.61
Adj R^2/ Pseudo R^2	.14	.12	.10	.16	.10	.11	.12	.10	.06
N	260	270	182	259	270	181	234	243	165

#=p<.1, *=p<.05, **=p<.01, ***=p<.001

Table 19 tests Hypothesis H_{2e}, that political knowledge will increase the agenda setting effect, especially in the high choice conditions. In models 1-3, the closed ended test, there

is no significant interaction between political and condition. In models 4-6 and 7-9, we do see a significant results for political knowledge and condition, but in neither the expected place nor direction. In both models 4 and 7, the knowledge x low vs. control interactions are negative and significant, indicating a decreased agenda setting effect for higher knowledge individuals in the low choice conditions. Model 8 also demonstrates this effect in the high choice condition for the any mention measure. Models 6 and 9 do not show a statistically significant difference between the low and high choice conditions for the effect of political knowledge on agenda setting.

Table 20 Agenda Setting: Political Knowledge and the Economy

Model	1 Closed Ended	2 Closed Ended	3 Closed Ended	4 Probit First Mention	5 Probit First Mention	6 Probit First Mention	7 Probit any Mention	8 Probit any Mention	9 Probit any Mention
Low Choice vs. Control	-.002			1.14#			.811#		
High Choice vs. Control		.06			1.18*			.38	
Low choice vs. high			.08			-.066			-.53
Knowledge	.014	.01	.03	.005	.008	-.059	-.048	-.054	-.04
Knowledge x Low vs. Control	.014			-.05			.006		
Knowledge x Hi vs. Control		.003			-.097			.85	
Knowledge x Low vs. High			-.014			-.033			1.01
Ideology	.06*	.064*	.037	.14	.095	.099	.077	.075	.18**
Gender	-.04	-.06	.013	.09	-.13	-.18	.043	-.023	.09
Age	.001	.013#	-.002	.014	-.01	.004	.000	.018	-.005
Constant	4.02	3.99***	4.04	-2.7***	1.98**	-.75	-1.05*	-1.03*	-.57
Adj R^2/ Pseudo R^2	.01	.01	.00	.13	.10	.03	.08	.08	.04
N	267	272	175	266	270	174	237	249	156

The results for political knowledge are not replicated in the economic context, as shown in table 20. There is no significant relationship between the agenda setting effect and political knowledge demonstrated by any of the interaction terms.

Table 21 Agenda Setting: Ideology and Global Warming

Model	1 Closed Ended	2 Closed Ended	3 Closed Ended	4 Probit First Mention	5 Probit First Mention	6 Probit First Mention	7 Probit any Mention	8 Probit any Mention	9 Probit any Mention
Low Choice vs. Control	.19			.68			.95		
High Choice vs. Control		.013*			.37			.33	
Low choice vs. high			-.18			.33			-.56
Ideology x Low vs. Control	.10			.049			-.039		
Ideology x Hi vs. Control		.05			.12			.16	
Ideology x Low vs. High			-.056			.06			.18
Ideology	-.24***	-.23***	-.12*	-.10	-.09	-.028	-.05	-.05	-.08
Gender	-.13	.017	-.08	-.26	-.17	-.25	-.24	.323#	-.022
Age	.007	.01	.017#	-.013	.03	.013	.008	.001	-.002
Constant	4.78***	4.52***	4.80***	-.73***	-1.00***	-.27	-.65	-1.49**	-.02
Adj R^2/ Pseudo R^2	.16	.11	.12	.09	.07	.01	.08	.09	.01
N	262	272	182	261	272	181	235	244	165

#=p<.1, *=p<.05, **=p<.01, ***=p<.001

Table 21 explores H_{2f}'s prediction of an interactive relationship between ideology and condition in shaping agenda setting for global warming. For the closed ended measure, we see a strong main effect of ideology on concern for global warming, with conservatives showing significantly than liberals and moderates. This relationship, however, does not extend to agenda setting or differences in the amount of information available. More conservative respondents are, across the board, less concerned with global warming, but this effect is not contingent on the information made available to them. They do not appear to experience less of an agenda setting effect, regardless of the information context. The closed ended measures show no relationship between ideology and agenda setting, or even overall concern with global warming. There is neither a statistically significant main effect nor an interactive effect present.

Table 22 Agenda Setting: Ideology and the Economy

Model	1 Closed Ended	2 Closed Ended	3 Closed Ended	4 Probit First Mention	5 Probit First Mention	6 Probit First Mention	7 Probit any Mention	8 Probit any Mention	9 Probit any Mention
Low Choice vs. Control	.16			.98#			.39		
High Choice vs. Control		.18			1.01#			.36	
Low choice vs. high			.017			.06			.09
Ideology x Low vs. Control	-.029			-.02			.19		
Ideology x High vs. Control		-.04			-.06			.15	
Ideology x Low vs. High			-.008			-.05			-.05
Ideology	.07*	.075*	.04	.16	.13	.12	.005	.013	.19*
Gender	-.06	-.07	-.05	.15	-.09	-.07	.08	-.04	.07
Age	.002	.01#	.000	.01	-.01	.001	-.001	.016	-.005
Constant	4.08***	4.01***	4.26***	-2.86***	-2.12***	-1.30*	-1.11**	-1.07**	-.80
Adj R^2/ Pseudo R^2	.01	.01	.00	.13	.10	.01	.08	.08	.03
N	268	273	177	267	271	176	238	249	157

#=p<.1, *=p<.05, **=p<.01, ***=p<.001

Table 22 presents the results of the economy tests of H_{2f}. While the direction of the significant findings is different, the pattern of results is similar. For the closed ended questions (models 1-3), there is no relationship between ideology and agenda setting for the economy, as shown by the non significant interaction terms in models 1-3. In the first two models, there is a positive main effect. More conservative participants have a greater

concern with the economy across the board. For the two open ended measures, ideology has no impact on economic concern.

Table 23 presents the results of the test of H_{2g}, that individuals higher in media use in general will experience a greater agenda setting effect, especially when they have more control over what information they consume. In the first six models, there is no relationship between media use and global warming concern, with either the open ended or first mention dependent variables. In high choice condition of the any mention models, however, we do see one significant finding. The interaction between high choice vs. control and media consumption is positive and significant, indicating that high media consumers in the high choice condition are more concerned with global warming than those in the control condition. This is supportive of the hypothesis. Unfortunately, the interaction in these models between low choice and high choice conditions and media use is not statistically significant, so we cannot say with certainty that the effect of media use is stronger in the high choice condition, but it is certainly suggestive, as the low vs. control interaction in model 7 is not significant.

Table 23 Agenda Setting: Media Use and Global Warming

Model	1 Closed Ended	2 Closed Ended	3 Closed Ended	4 Probit First Mention	5 Probit First Mention	6 Probit First Mention	7 Probit any Mention	8 Probit any Mention	9 Probit any Mention
Low Choice vs. Control	1.13**			.24			.17		
High Choice vs. Control		.86#			-.44			-.62	
Low choice vs. high			-.39			-.55			-.80
Media Use	.19	.20	-.15	-.37	-.41	-.099	-.32	-.17	.04
Media Use x Low vs. Control	-.34			.264			.29		
Media Use x Hi vs. Control		-.29			.49			.58#	
Media Use x Low vs. High			.017			.17			.31
Ideology	-.21***	-.21***	-.15***	-.07	-.02	.003	-.07	.016	.02
Gender	-.14	.03	-.13	-.31	-.19	-.24	-.27	.35#	.055
Age	.004	.008	.02#	-.008	.008	.01	.013	.002	-.004
Constant	4.27***	3.97***	5.33***	.10	-.27	-.16	.13	-1.32*	-.51
Adj R^2/ Pseudo R^2	.14	.12	.10	.09	.07	.01	.09	.09	.01
N	262	272	182	261	272	181	235	244	165

#=p<.1, *=p<.05, **=p<.01, ***=p<.001

Table 24 tests H_{2g} in the economic context. Here, across all three dependent variables, there is not a significant relationship between media use and agenda setting. None of the interaction terms between condition and media use are significant. It is worth noting, however, that there may be some connection between media use and concern for the

economy during the timeframe where the experiments ran, as in models one and two, there is a main effect of media use on overall concern for the economy. It is possible that high media consumers already had their concern with the economy piqued outside of the lab.

Table 24 Agenda Setting: Media Use and the Economy

Media Use Economy Model	1 Closed Ended	2 Closed Ended	3 Closed Ended	4 Probit First Mention	5 Probit First Mention	6 Probit First Mention	7 Probit any Mention	8 Probit any Mention	9 Probit any Mention
Low Choice vs. Control	.22			-.07			-.06		
High Choice vs. Control		.003			.35			.28	
Low choice vs. high			-.12			.66			.16
Media Use	.18*	.16#	.15	-.44	-.46	.08	-.24	-.15	.11
Media Use x Low vs. Control	-.06			.42			.36		
Media Use x High vs. Control		.042			.19			.21	
Media Use x Low vs. High			.06			-.33			-.086
Ideology	.059*	.068*	.035	.14#	.09	.09	.07	.07	.16*
Gender	-.033	-.02	-.015	.101	-.19	-.11	.062	-.08	.075
Age	.001	.012	-.003	.014	-.009	.001	-.002	.019	-.006
Constant	3.66***	3.58***	3.88***	-1.63	-.80	-1.30	.-70	-.49	-.98
Adj R^2/ Pseudo R^2	.01	.03	.00	.14	.11	.017	.08	.08	.03
N	268	273	177	267	271	176	238	249	157

#=p<.1, *=p<.05, **=p<.01, ***=p<.001

Finally, tables 25 and 26 present the tests of H_{2h}, that high consumers of news media (National Television News, Local Television News, News Magazines, Newspaper, Internet News Sites, Political Chatrooms/Newsgroups/ Bulletin Boards, News or Talk

Radio) would be more likely to have an agenda setting effect, and that this effect would be greatest in the high choice condition.

Table 25: Agenda Setting News Media Use and Global Warming

Model	1 Closed Ended	2 Closed Ended	3 Closed Ended	4 Probit First Mention	5 Probit First Mention	6 Probit First Mention	7 Probit any Mention	8 Probit any Mention	9 Probit any Mention
Low Choice vs. Control	1.21**			1.13			1.25#		
High Choice vs. Control		.47			.26			-.18	
Low choice vs. high			-.71			-.73			-.157*
News Media Use	.173	.19	-.18	-.225	-.27	-.37	-.284	-.12	-.41#
News Media Use x Low vs. Control	-.35#			-.14			-.19		
Political Media Use x High vs. Control		-.15			.21			.45	
Political Media Use x Low vs. High			.17			.28			.73*
Ideology	-.21***	-.22***	-.15***	-.078	-.01	.001	-.07	.014	.005
Gender	-.122	.058	-.11	-.31	-.22	-.25	-.30	.33#	.021
Age	.003	.006	.017#	-.006	.009	.017	.017	.001	-.003
Constant	4.37***	4.05***	5.32***	-.30	-.63	.38	-.003	-.144***	.52
Adj R^2/ Pseudo R^2	.15	.12	.09	.10	.07	.02	.11	.09	.02
N	262	272	182	261	272	181	235	244	165

#=p<.1, *=p<.05, **=p<.01, ***=p<.001

There are two significant results for news media use in the above models. The first runs counter to the hypothesis. In model 1, the interaction between news media use and the low vs. control variable is negative, meaning that those who were higher consumers of news media were actually less concerned with global warming when exposed to global warming stories, than those who were in the control condition. This is a surprising result. While it might be reasonable to expect high media consumers would not be susceptible to having their agenda set by a small exposure such as in this experiment since the exposure is relatively small compared to their previous news media consumption, one would not expect what is essentially a reverse agenda setting effect, as occurs here.

The closed ended first response models present no significant results, not only for the interaction terms, but for any variables. There is limited supportive evidence in model 9, however, which compares the low choice and high choice stimulus conditions. The interaction between news media use and the condition dummy is positive and significant, showing that, compared to the low choice condition, in the high choice condition, there is stronger and positive relationship between news media consumption and concern with global warming (the main effect, is negative and weakly significant, the interaction is positive, and more strongly significant).

Table 26 Agenda Setting: News Media Use and the Economy

Model	1 Closed Ended	2 Closed Ended	3 Closed Ended	4 Probit First Mention	5 Probit First Mention	6 Probit First Mention	7 Probit any Mention	8 Probit any Mention	9 Probit any Mention
Low Choice vs. Control	.19			.10			-..02		
High Choice vs. Control		.16			.12			-.06	
Low choice vs. high			.069			.14			-.28
News Media Use	.17*	.15#	.16	-.52	-.46	.006	-.31	-.36#	.062
News Media Use x low vs. cont	-.054			.41			.39		
News Media Use x High vs. Control		-.031			.35			.41	
News Media Use x Low vs. High			-.021			-.12			.13
Ideology	.054*	.066*	.03	.16*	.10	.09	.08	.082	.17**
Gender	-.036	-.039	-.009	.11	-.15	-.095	.08	-.04	.12
Age	-.001	.01	-.006	.02	-.007	.002	.000	.02	-.007
Constant	3.76***	3.70***	3.91***	-1.72#	-.105	-1.17	-.69	-.56	-.94
Adj R^2/ Pseudo R^2	.02	.02	.00	.14	.11	.01	.08	.09	.04
N	268	273	177	267	271	176	238	249	157

#=p<.1, *=p<.05, **=p<.01, ***=p<.001

Table 26 tests H_{2h} in the context of the economic stories. There is very little of interest happening in this model. None of the interactions are significant. There are occasional

main effects of news media use on overall concern with the economy, but they are not consistent across models, in terms of significance or direction.

Conclusion

The results here offer some support for the hypotheses dealing with agenda setting. The general expectations are that increased choice decreases the agenda setting effect, and that in high choice conditions, individual differences that should relate to agenda setting should have a greater effect than in low choice conditions. First, consistent with Althaus and Tewksbury's findings, there is limited evidence of an attenuation of the agenda setting effect in the high choice conditions compared to the low choice conditions. The regression results for the closed ended global warming tests show the clearest evidence of this attenuated agenda setting effect. Across the three models run, we see exactly the pattern we would expect. The opportunity to read stories about global warming increases concern with the issue, the effect is smaller in the high choice condition than in the low choice condition, and this reduction is statistically significant. The open ended global warming responses show the correct pattern, but the differences between conditions is not statistically significant.

There is little evidence for Hypothesis 3 in the economic conditions. For the closed ended questions, there is no significant evidence agenda setting effect at all. This is likely due to a ceiling effect. During the design of this project, the economy was a matter of public concern with gloomy forecasts of where we were headed (which incidentally proved correct), but by the time the project got into the field a few months later, public concern

had increased. The closed ended measure lacks the sensitivity to find changes in concern under these circumstances, as most people were already concerned. The open ended measures do show an agenda setting effect. The stimulus conditions do increase people's voluntary mentions of the issue, both as a first response, and over all three responses. By this measure, both conditions have an agenda setting effect, but there is little difference between low and high choice.

Hypothesis 4's expectation that the amount of available content would moderate the effect of individual differences on agenda setting also finds mixed support here. For both the global warming and economic conditions, political interest does show the expected effect. There is greater agenda setting among the more politically interested, and the effect is more pronounced in the high choice condition. Unfortunately, political interest is the only individual difference measure where we find consistent effects across both the global warming and economic conditions. The results for political interest are strong, however. Those who are more interested in politics are more likely to experience agenda setting effects, and this is especially true in the high choice condition where individuals have more control over the media experience. Need to evaluate shows some results, but they are opposite the hypothesis for the global warming conditions, and consistent with it in the economy conditions. Need for Cognition shows some significant results consistent with the hypothesis, but only in the economic condition. NO has mixed results. In the global warming conditions, it interacts significantly with condition, and has more effect in the high choice conditions. In the economic conditions, on the other hand, where there are significant NO findings, they are negative, and run counter to the hypothesis. There

are no consistent findings for ideology or political knowledge for either condition. For the global warming condition, both media use, and news media use (outside the lab) are consistent with the hypothesis, while in both cases, they are not significant for the economic conditions.

While not every individual difference shows significant results, and they are not always consistent across condition, it is clear that, for some traits, hypothesis 4 is correct. In the high choice conditions, we see them exerting a greater impact on agenda setting than in the low choice conditions. It is possible that some of the non significant findings may be analytical artifacts. The interaction terms, which are crucial to H_4 are highly correlated with both condition and the individual difference measures. It is possible that with a larger sample, some of these results may rise to traditional levels of statistical significance. It is also possible that only some traits are sensitive to information context.

Chapter 5 Priming

The final analyses will examine the effect of information context on priming. Research in political communication has consistently found that increased media attention to a particular issue raises the weight that citizens place on a president's handling of that issue in forming their overall evaluation of his job performance (e.g. Iyengar and Kinder 1986, Miller and Krosnick 2000). The hypotheses here are similar to those in the agenda setting case, as they are similar phenomena. Both are based on quantity of coverage, but they focus on different outcomes (policy concern, leadership standards of evaluation).

H_5: In high choice conditions, there will be a reduced priming effect compared to the low choice conditions. In the low choice conditions, there will be a positive relationship between approval of the president's handling of the stimulus issue and his overall approval. In the high choice conditions this relationship will be reduced, and the relationship will be weakest in the control condition.

Again, the expectation is that an increase in the amount of content available to choose from will lead to greater selectivity over stories in the high choice condition, and therefore reduced reliance on the content of those stories

H_6 Individual differences that predict increased media consumption will have a positive impact on priming, and this effect will be greater in the high choice condition than the low choice condition.

As in H_4, I initially expected that individual differences will drive media consumption of hard news, that this effect will be of greater magnitude in the high choice conditions than in the low, and that hard news consumption leads to increased weight being placed on the issues contained in that news when evaluating the overall performance of the president. The difficulty, once again, is that, particularly for the global warming conditions, there is

not much evidence that individual differences are moderating the effect of condition on hard news consumption. As in the case of H_4, there are some disputes in the literature as to the relationship between some of these variables (especially political knowledge) and the priming effect, and these will be noted in the specific instances below. I still expect, however, that the net effect will be that they will interact positively with the high choice condition in determining the weight placed on issue specific presidential approval.

H_{6a} Interest in national politics will be positively related to the priming effect for the issue presented by the stimulus stories, and this effect will be greater in the high choice conditions than in the low choice conditions.

H_{6b} NE will be positively related to the priming effect for the issue presented by the stimulus stories, and this effect will be greater in the high choice conditions than in the low choice conditions.

H_{6c} NC will be positively related to the priming effect for the issue presented by the stimulus stories, and this effect will be greater in the high choice conditions than in the low choice conditions.

H_{6d} NO will be positively related to the priming effect for the issue presented by the stimulus stories, and this effect will be greater in the high choice conditions than in the low choice conditions.

The expectation is actually split here. On the one hand, I expect NO to drive greater consumption of information, and increase the priming effect. On the other hand Matthes (2008) finds NO not related to second level agenda setting (making certain attributes of the object salient). Matthes reasons that his non finding is due to different valences of information encountered by his survey respondents. That is not applicable in the present study as all of the stimulus stories indicate that the issue really is a problem.

H_{6e} Political Knowledge will be positively related to the priming effect for the issue presented by the stimulus stories, and this effect will be greater in the high choice conditions than in the low choice conditions.

Both Krosnick and Brannon (1993) and Miller and Krosnick (2000) find those higher in political knowledge are more susceptible to priming effects, although in the later case, this is only true of those who are more trusting of the media.

H_{6f} Conservatives will experience less of a priming effect for the issue presented by the stimulus stories, and this effect will be greater in the high choice conditions than in the low choice conditions.

H_{6g} Media Use will be positively related to the priming effect for the issue presented by the stimulus stories, and this effect will be greater in the high choice conditions than in the low choice conditions.

H_{6h} Political Media Use will be positively related to the priming effect for the issue presented by the stimulus stories, and this effect will be greater in the high choice conditions than in the low choice conditions.

The priming analysis here is based on responses to the post survey, after the web surfing portion of the experiment. Priming theory holds that issues that receive more attention will be weighted more heavily in evaluation of the president (or other political figure). The dependent variable is overall job approval, here placed on a 6 point scale with higher numbers indicating greater approval of George Bush as president. The key independent variables are domain specific approval (here approval of Bush's performance on the Economy and Global Warming) and most importantly, the interaction between condition and domain specific approval. As in the agenda setting analyses, there are three dummy variables for condition (low vs. control where control is 0, low choice is 1; high vs. control where 0 is control, 1 is high choice; and low vs. high, where 0 is low choice, 1 is high). The key variable in a priming analysis is the interaction between condition and domain specific issue approval. Past experimental work in priming has relied on the interaction between the low choice vs. control condition and the domain specific issue approval. If priming is occurring, this interaction should be positive and significant. That is, people who receive stimulus materials about issue X should be weighting issue X higher in their overall evaluation of the president. This study expands priming research

by making the two additional comparisons. If the high vs. control x issue approval is significant, there is also priming in the high choice condition. Finally, if H_5 is true, we should see a negative interaction between the low vs. high dummy and issue approval, which provides the test of H_5. This negative interaction shows that there is indeed a greater priming effect in the low choice condition than in the high choice condition.

Table 27 presents the global warming test of H_5 and is generally supportive of the hypothesis.

Table 27 Priming Global Warming: The Effect of Condition

Model	1 Low Vs Control	2 High Vs Control	3 Low Vs High
Low Choice vs. Control	-.163		
High Choice vs. Control		.052	
Low choice vs. high			.17
Approve of Global Warming Handling	.613***	.689***	.738***
Condition x GW Handling	.088	-.133	-.21#
Ideology	.386***	.279	.301
Gender	.067	-.037	-.085
Age	-.01	-.007	-.014
Constant	-.246	.056	.037
Adj R^2	.62	.58	.54
N	258	266	179

#=p<.1, *=p<.05, **=p<.01, ***=p<.001

The priming models are similar to those testing agenda setting. For H_5, the key variable of interest is the low vs. high x global warming handling variable. Consistent with the hypothesis, a lower weight is placed on global warming in the high choice condition than in the low choice condition, and this finding is significant. There are, however, some problems here. First, there is no actual priming effect in either condition. In model 1, the

interaction term is positive, but small and non significant. There is no evidence that people who had the chance to read the global warming story actually weight global warming any higher than those who had no such chance. In the second model, the interaction is also insignificant. There does not seem to be a priming effect here either. In fact, the sign is in the wrong direction. While it is clear from model 3 that there is a difference in the weight across conditions, it is unclear that a real priming effect is happening here.

Table 28 tests H_5 in the economic context. The results here are even less promising than those for global warming.

Table 28 Priming the Economy: The Effect of Condition

Model	1 Low Vs Control	2 High Vs Control	3 Low Vs High
Low Choice vs. Control	.121		
High Choice vs. Control		-.103	
Low choice vs. high			-.144
Approve of Economy Handling	.667***	.686***	.603***
Condition x Econ Handling	-.034	.153*	.157#
Ideology	.242***	.198***	.319***
Gender	.139	.109	.244
Age	.006	.000	.01
Constant	-.65*	-.49*	-.872*
Adj R^2	.613	.69	.70

#=p<.1, *=p<.05, **=p<.01, ***=p<.001

In model 1, there is no evidence of a priming effect. In model 2, there is significant evidence of a priming effect in the high choice stimulus condition, compared to the

control. Finally, in model 3, the interaction between low vs. high and handling of the economy is positive and significant, confirming that people in the high choice condition actually weight economic handling more highly in the high choice condition.

The series of H_6 hypotheses build on the model used to test H_5.The dependent variable is still President Bush's time posttest approval, and the basic priming effect is still represented by the issue approval x condition measure. There are 4 additional variables, however. First, there will be the main effect term for the individual difference variables. These are coded so that higher scores represent higher values of the trait. Second, there is the trait by condition interaction term. Third, there is a trait by issue approval interaction term. Finally, there is a three way interaction of trait x condition x issue approval interaction. The first three variables are not theoretically important, but are required for correct model specification. The three way interaction is the crucial test of each of the H_6 hypotheses. If H_6 is correct, that traits which predict priming will have more impact in the high choice condition: for the low choice vs. control condition, the results may or may not be significant, for the high choice condition, the results should be positive and significant, and for the low choice vs. high choice conditions, the interaction should be positive and significant. In the low choice condition, as expected for both the story selection and the agenda setting hypotheses, individual differences are not expected to have much of an effect on priming because participants have little latitude in choosing what articles they read (though it is possible that something happens in the processing of the information that is moderated by the individual difference). In the high choice condition, on the other hand, the hypothesis holds that individual differences should

moderate the priming effect, as they are guiding exposure to the stories. For each table's model 2, the three way interaction should be positive and significant. Lastly, given that the moderation of the priming effect by the individual difference trait is expected to be higher, the three way interaction in model 3 should be significant and positive, indicating a joint moderation of the relationship between issue approval and general approval by the trait and condition. Do to the large number of interaction terms, the tables are shortened slightly. For each model below, the interactions with condition are listed on single lines. All of the interactions in model the ones are for the low choice vs. control dummy, all in the model twos are interactions with the high choice vs. control dummy, and all in model threes are for the low choice vs. high choice dummy.

Tables 29 and 30 examine the relationship between political interest, condition, and priming in the global warming and economic conditions respectively.

Table 29 Priming Global Warming: Political Interest

Model	1 Low Vs Control	2 High Vs Control	3 Low Vs High
Low Choice vs. Control	.604		
High Choice vs. Control		.591	
Low choice vs. high			-.182
National Political Interest	.039	-.064	-.229
Approve of Global Warming Handling	.583***	.524***	.397
Condition x GW Handling	-.161	.172	.132
Condition x National Interest	-.224	.022	.254
National Interest x GW Handling	.016	.052	.107
Condition x GW Handling X National Interest	.076	-.111**	-.163
Ideology	.373***	.287***	.314***
Gender	.101	-.048	-.119
Age	-.011	-.006	-.011
Constant	-.420	.256	.808
Adj R^2	.61	.59	.55
N	258	266	179

#=p<.1, *=p<.05, **=p<.01, ***=p<.001

Table 29 presents the findings for H_{6a}, that political interest will moderate priming, especially in the high choice condition. The results are not consistent with the hypothesis. The three way interaction in model 1 is not significant, though the hypothesis is agnostic on this point. Model 2, however, has a negative and significant three way interaction, which runs counter to the hypothesis. In model 3, the interaction is again negative, though it is not significant. This leads to a challenge of interpretation, since a negative three way interaction could mean that either 1 or all three of its components are negative. Looking elsewhere in the models, what seems most plausible is that political interest is actually negatively related to priming (the main effect of political interest on presidential approval is negative, though not significant). If this is the case, then there is weak evidence here that the high choice condition moderates this effect (the three way interaction is significant in model 2 but not model 1, but this difference is shown not to

be significant in model 3). In addition, across all three models, the interest x condition interaction is insignificant, which indicates that the addition of the extra interaction terms is clouding the basic priming effect which existed in the basic model.

Table 30 tests H_{6a} in the economic context. The results are not supportive of H_{5a}.

Table 30 Priming the Economy: Political Interest

Model	1 Low Vs Control	2 High Vs Control	3 Low Vs High
Low Choice vs. Control	-.082		
High Choice vs. Control		.341	
Low choice vs. high			-.632
Approve of Economy Handling	1.04***	.991***	1.01***
Political Interest	.275*	.211#	.304*
Condition x Econ Handling	-.01	.038	.086
Condition x Political Interest	.047	-.224	.139
Political Interest x Econ Handling	-.123**	-.103**	-.115**
Condition x Econ Handling X Political Interest	.011	.039	.007
Ideology	.274***	.224***	.304*
Gender	.118	.064	.276*
Age	.007	.003	.009
Constant	-1.59**	-1.17*	-.211**
Adj R^2	.63	.69	.71
N	263	269	173

#=p<.1, *=p<.05, **=p<.01, ***=p<.001

The results here provide no support for H_{6a}. Across the board, the three way interaction is not significant. In addition, there is no demonstration of a priming effect in this condition as the condition x economy handling interactions are not significant. One odd finding, across all three conditions (though it is not related to any of the hypotheses) is that in all three conditions, the political interest x economy handling variable is negative and

significant, indicating that those higher in political interest actually place less weight on the economy in determining their overall approval of the president.

Table 31 tests H_{6b}, that NE will moderate the priming effect, especially in the high choice conditions.

Table 31 Priming Global Warming: NE

Model	1 Low Vs Control	2 High Vs Control	3 Low Vs High	4 Low Only	5 High Only
Low Choice vs. Control	.154				
High Choice vs. Control		-.914			
Low choice vs. high			-1.15		
Approve of Global Warming Handling	.201	.166	.041	.018	1.05**
NE	-.01	-.016	-.024	-.019	.02
Condition x GW Handling	-.022	.869#	.957		
Condition x NE	-.004	.019	.026		
NE x GW Handling	.008	.009	.013	.012	-.009
Condition x GW Handling X NE	.002	-.019*	-.022#		
Ideology	.369***	.277***	.307***	.414***	.209**
Gender	.101	-.016	-.041	.193	-.17
Age	-.01	-.005	-.013	-.4	-.003
Constant	.298	.922	1.37	.62	.334
Adj R^2	.61	.58	.55	.60	.51
N	253	260	174	83	91

#=p<.1, *=p<.05, **=p<.01, ***=p<.001

The pattern here is consistent with the pattern for political interest, and not supportive of the hypothesized relationship. Once again, the three way interactions in models 2 and 3 are significant and negative. It appears that, consistent with the hypothesis, NE moderates the priming effect, but once again, it is in the wrong direction. As in the case of political interest, it appears that the error is the hypothesis is NE is negatively related to the DV,

and is driving the negative finding for the three way interaction. Models 4 and 5 run regressions only on those in individual conditions, in an attempt to tease out the meaning of the 3 way interaction. The results are somewhat puzzling. The interaction between global warming approval and NE is non-significant, indicating that condition is what is driving the significant 3 way interaction. Strangely, there is only a positive relationship between global warming approval and overall approval in the high choice condition, which runs counter to expectations.

Table 32 tests H_{6b} in the economic context. The results do not lend much support to the hypothesis.

Table 32 Priming the Economy: NE

Model	1 Low Vs Control	2 High Vs Control	3 Low Vs High
Low Choice vs. Control	.79		
High Choice vs. Control		1.62	
Low choice vs. high			.735
Approve of Economy Handling	1.45***	1.44***	1.18**
NE	.036*	.035**	.024
Condition x Econ Handling	-.276	-.441	-.13
Condition x NE	-.014	-.031	-.014
NE x Econ Handling	-.014***	-.014***	-.01
Condition x Econ Handling X NE	.005	.011	.005
Ideology	.247***	.238***	.292***
Gender	.114	.097	.199
Age	.008	.007	.007
Constant	-2.65**	-2.55***	-2.22*
Adj R^2	.64	.70	.71
N	256	263	170

#=p<.1, *=p<.05, **=p<.01, ***=p<.001

The results present no evidence in favor of H_{5b}. Once again, none of the three way interaction terms are significant. There is one interesting interaction here, though again, it is not a test of any hypothesis. It appears that NE actually attenuates the influence of economic approval on presidential approval.

Table 33 Priming Global Warming: NC

Model	1 Low Vs Control	2 High Vs Control	3 Low Vs High
Low Choice vs. Control	.606		
High Choice vs. Control		.533	
Low choice vs. High			-1.22
Approve of Global Warming Handling	.606#	.739#	.036
NC	-.001	.00003	-.028
Condition x GW Handling	.005	-.130	.593
Condition x NC	-.008	-.008	.022
NC x GW Handling	.000	-.001	.011
Condition x GW Handling X NC	.001	.000	-.013
Ideology	.389***	.276***	.296***
Gender	.068	-.051	-.116
Age	-.008	-.006	-.013
Constant	-.211	.071	1.85
Adj R^2	.61	.57	.53
N	251	259	175

#=p<.1, *=p<.05, **=p<.01, ***=p<.001

Table 33 presents the tests of H_{6c}, that NC will moderate the priming effect, especially in the high choice condition. The results are non significant for the hypothesis. None of the 3 way interactions are significant, nor is there any evidence for a priming effect.

Table 34 Priming the Economy: NC

Model	1 Low Vs Control	2 High Vs Control	3 Low Vs High
Low Choice vs. Control	-.989		
High Choice vs. Control		-1.23	
Low choice vs. high			-.554
Approve of Economy Handling	.921**	.939***	1.56***
NC	.002	.002	.023
Condition x Econ Handling	.635	.415	-.136
Condition x NC	.002	.019	.008
NC x Econ Handling	-.004	-.004	-.016*
Condition x Econ Handling X NC	-.011	-.004	.004
Ideology	.231***	.196***	.319***
Gender	.128	.076	.287*
Age	.007	.003	.013
Constant	-.766	-.591	-2.40#
Adj R^2	.62	.69	.71
N	257	262	168

#=p<.1, *=p<.05, **=p<.01, ***=p<.001

Table 34 examines H_{6c} in the economic context. Once again, there is very little to report. There is no evidence of either a priming effect for either condition, or a moderating effect of NC on the priming effect.

Table 35 Priming Global Warming: NO

Model	1 Low Vs Control	2 High Vs Control	3 Low Vs High
Low Choice vs. Control	.221		
High Choice vs. Control		.209	
Low choice vs. high			.203
Approve of Global Warming Handling	.76*	.687**	.915**
NO	.186	.137	.158
Condition x GW Handling	-.016	.002	-.147
Condition x NO	-.036	-.011	.001
NO x GW Handling	-.022	.002	-.032
Condition x GW Handling X NO	.013	-.042	.203
Ideology	.396***	.302***	.325***
Gender	.045	-.074	-.119
Age	-.009	-.008	-.017
Constant	-.137#	-.758	.858
Adj R^2	.61	.58	.55
N	254	262	177

#=p<.1, *=p<.05, **=p<.01, ***=p<.001

Table 35 presents the results from H_{6d}, which predicts that NO will moderate the priming effect, particularly in the high choice condition. There are, once again, no significant findings to report on. None of the three way interactions are significant. The condition by global warming approval variable is not significant either, so there is no evidence in this model of the basic priming effect either.

Table 36 Priming the Economy: NO

Model	1 Low Vs Control	2 High Vs Control	3 Low Vs High
Low Choice vs. Control	-.952		
High Choice vs. Control		-.675	
Low choice vs. high			.270
Approve of Economy Handling	.404#	.449*	.676*
NO	-.043	-.017	.13
Condition x Econ Handling	.317	.325	-.013
Condition x NO	.19	.117	-.055
NO x Econ Handling	.047	.042	-.012
Condition x Econ Handling X NO	-.062	-.038	.012
Ideology	.242***	.202***	.325***
Gender	.126	.128	.233#
Age	.007	-.002	.014
Constant	-.376	-.386	-1.62#
Adj R^2	.62	.69	.708
N	259	267	169

#=p<.1, *=p<.05, **=p<.01, ***=p<.001

Table 36 presents the results for H_{6d} in the economic conditions. Like table 39, there are no significant results to report in support of the hypothesis. The three way interactions across all three models are not significant, and once again, there is no evidence of a priming effect here either.

Table 37 Priming Global Warming: Political Knowledge

Model	1 Low Vs Control	2 High Vs Control	3 Low Vs High
Low Choice vs. Control	-.029		
High Choice vs. Control		-.364	
Low choice vs. high			.187
Approve of Global Warming Handling	.630	.604***	.691***
Political Knowledge	-.011	-.062	.016
Condition x GW Handling	-.124	.165	.062
Condition x Knowledge	.059	.092	.018
Knowledge x GW Handling	-.006	.011	.011
Condition x GW Handling X knowledge	.018	-.069#	-.071
Ideology	.387***	.306***	.335***
Gender	.052	-.11	-.102
Age	-.009	-.002	-.008
Constant	-.158	.429	.817
Adj R^2	.61	.59	
N	256	264	

#=p<.1, *=p<.05, **=p<.01, ***=p<.001

Table 37 presents the results for H_{6e} which predicts that political knowledge will moderate the priming relationship, especially in the high choice condition. There is some limited evidence of an effect here, although once again the sign is not in the expected direction. Only one three way interaction is significant. In the high choice vs. control condition, there is a significant negative three way interaction. It is unclear what is driving this result. The most plausible explanation seems to be that knowledge is attenuating the effect, as it does have a negative (though non-significant) main effect on overall approval in the model. While the effect is significant in the high vs. control condition, and not significant in the low vs. control conditions, the three way interaction in model 3 is not significant, so there is not strong evidence of a differential effect of political knowledge across conditions.

Table 38: Priming the Economy: Political Knowledge

Model	1 Low Vs Control	2 High Vs Control	3 Low Vs High
Low Choice vs. Control	.094		
High Choice vs. Control		.301	
Low choice vs. high			.36
Approve of Economy Handling	.828***	.836***	.94***
Political Knowledge	.076	.074	.101
Condition x Econ Handling	.084	-.021	-.062#
Condition x Knowledge	-.014	-.078	-.073
Knowledge x Econ Handling	-.041*	-.038*	-.062#
Condition x Econ Handling X Knowledge	-.011	.034	.047
Ideology	.272***	.228***	.352***
Gender	.08	.096	.212
Age	.007	.000	.01
Constant	-.956*	-.855*	-1.46*
Adj R^2	.62	.69	.70
N	262	268	171

#=p<.1, *=p<.05, **=p<.01, ***=p<.001

Table 38 contains the results of the tests of H_{6e} in the economic conditions. There is no support in any of the models for this hypothesis, as none of the three way interaction effects are significant. There is also no evidence of priming in the first two models as the condition x economic approval interactions are not significant. Model 3 does indicate that participants in the high choice condition place less weight on the president's economic performance than those in the low choice condition. One consistent finding across all three models is that those with higher political knowledge seem to place less weight on economic performance in their overall evaluation of the president than those who are lower in knowledge.

Table 39 Priming Global Warming: Ideology

Model	1 Low Vs Control	2 High Vs Control	3 Low Vs High
Low Choice vs. Control	-.127		
High Choice vs. Control		.497	
Low choice vs. high			.069
Approve of Global Warming Handling	.523	.646	.278
Condition x GW Handling	-.03	-.116	.244
Condition x Ideology	.021	-.239	-.103
Ideology x GW Handling	.025	-.001	.105*
Condition x GW Handling X Ideology	.028	.028	-.077
Ideology	.294**	.347***	.208
Gender	.08	-.034	-.063
Age	-.011	-.006	-.012
Constant	.011	-.064	.473
Adj R^2	.62	.58	.56
N	258	268	179

#=p<.1, *=p<.05, **=p<.01, ***=p<.001

Table 39 presents the models for H_{6f}, which predicts that ideology will moderate the priming effect, especially in the high choice conditions. Ideology is scored with conservative scored high, so a significant negative finding would indicate that more conservative respondents will be more resistant to being primed with the presence of the global warming stimuli. The three way interactions are, across the board, not significant, again indicating no support for the hypothesis.

Table 40 Priming the Economy: Ideology

Model	1 Low Vs Control	2 High Vs Control	3 Low Vs High
Low Choice vs. Control	-.231		
High Choice vs. Control		-.137	
Low choice vs. high			.205
Approve of Economy Handling	.536***	.529***	.439**
Ideology	.011	.007	.236#
Condition x Econ Handling	-.11	.076	.141
Condition x Ideology	.23	.049	-.187
Ideology x Econ Handling	.051*	.052*	.043
Condition x Econ Handling X Ideology	-.01	.009	.026
Gender	.11	.107	.267*
Age	.004	-.001	.008
Constant	-.042	.019	-.595
Adj R^2	.62	.69	.70
N	263	269	173

#=p<.1, *=p<.05, **=p<.01, ***=p<.001

Table 40 tests H_{6f} for the economic stimulus conditions. There is no evidence here for the hypothesized moderating effect. Like the test in the global warming conditions, none of the three way interactions are significant.

Table 41 Priming Global Warming: Media Use

Model	1 Low Vs Control	2 High Vs Control	3 Low Vs High	4 Low Only	5 High Only
Low Choice vs. Control	.028				
High Choice vs. Control		.372			
Low choice vs. high			-1.38		
Approve of Global Warming Handling	.581**	.925***	.132	-.03	.802**
Media Use	-.11	.09	-.671#	-.67#	-.065
Condition x GW Handling	.019	-.16	.63		
Condition x Media Use	-.144	-.121	.649		
Media Use x GW Handling	.004	-.108	.246#	.284*	-.085
Condition x GW Handling X Media Use	.06	.009	-.351#		
Ideology	.39***	.292***	.315***	.45***	.197*
Gender	.059	-.064	-.104	.19	-.25
Age	-.008	-.005	-.012	-.04	-.02
Constant	.045	-.149	1.68#	1.1	.69
Adj R^2	.61	.58	.55	.62	.49
N	258	266	179	85	93

#=p<.1, *=p<.05, **=p<.01, ***=p<.001

Table 41 presents the test of H_{6g}, that media consumption will moderate the priming relationship, especially in the high choice condition. The results here are suggestive, but inconclusive. The three way interaction in model 3 is significant and negative, indicating that media consumption attenuates the priming effect in the high choice condition compared to the low. While this is not consistent with the hypothesis, it does make some sense. It is possible that people who are higher consumers of media outside of the lab already have a store of information to draw on, and any new information is going to have less of an impact on their attitudes than those who consume less media. Models 4 and 5 break up the 3 way interaction by running individual regressions for each condition. The results are again, somewhat odd. There is only a relationship between global warming approval and overall approval in the high choice condition, while the relationship

between approval and media use is significant and positive only in the low choice condition. This may indicate that under low choice conditions, being a high media user facilitates connecting new information to overall approval, while in the high choice, this relationship is weakened.

Table 42 Priming the Economy: Media Use

Model	1 Low Vs Control	2 High Vs Control	3 Low Vs High
Low Choice vs. Control	-1.89#		
High Choice vs. Control		-.15	
Low choice vs. high			1.59
Approve of Economy Handling	.896***	.917***	1.53***
Media Use	.065	.062	.830**
Condition x Econ Handling	.625#	.194	-.503
Condition x Media Use	.795#	.026	-.667
Media Use x Econ Handling	-.099	-.098	-.376***
Condition x Econ Handling X Media Use	-.261#	-.025	.252
Ideology	.254***	.200***	.339***
Gender	.106	.048	.249#
Age	.008	.003	.012
Constant	-.785	-.560	-3.02***
Adj R^2	.63	.69	.72
N	263	269	173

#=p<.1, *=p<.05, **=p<.01, ***=p<.001

Table 42 presents the results for H_{6g} for the economy conditions. The results here are not supportive of the hypothesis. The three way interaction in model 1 is significant and negative, indicating that those who are higher media consumers are less likely to be primed than lower media consumers, but only in the low choice condition. None of the other interactions are significant. The negative coefficient makes sense, though it is inconsistent with my original hypothesis. It seems likely that these high media consumers have a greater store of information and are more resistant to the relatively small amount

of new information they are presented within the context of the experiment. It is unclear why media use would only moderate the priming effect in the low choice condition.

Table 43 Priming Global Warming: News Media Use

Model	1 Low Vs Control	2 High Vs Control	3 Low Vs High	4 Low Only	5 High Only
Low Choice vs. Control	.026				
High Choice vs. Control		-.241			
Low choice vs. high			-.827		
Approve of Global Warming Handling	.513**	.625**	.356	.301	.87***
News Media Use	-.085	-.065	-.384	-.32	.066
Condition x GW Handling	-.016	.226	.496		
Condition x Newsmedia	-.089	.156	.496		
Newsmedia x GW Handling	.046	.023	.179		-.141
Condition x GW Handling x Newsmedia	.054	-.18	-.347*		
Ideology	.382***	.300***	.324***	.424***	.225
Gender	.073	-.06	-.093	.165	-.24
Age	-.01	-.005	-.011	-.038	-.001
Constant	-.052	.181	.793	.22	.32
Adj R^2	.61	.58	.55	.61	.51
N	258	266	179	85	93

#=p<.1, *=p<.05, **=p<.01, ***=p<.001

Table 43 tests H_{6h}, which predicts that news media use will positively moderate the priming effect, with the greatest impact occurring in the high choice conditions. There is weak evidence here for news media use as a moderator, but, once again the sign is opposite of what the hypothesis predicted. The evidence is weak because there is no statistical evidence of a priming effect actually occurring in this model, and because the three way interactions in the first two models are not significant, I am hesitant to claim that this is truly moderation of the priming effect. The expected pattern would require that the three way interaction in the high vs. control condition be significant, which is not

the case here. What we can say is that, of those with the opportunity to be read economy stories, those in the high choice condition who are higher in news media use place less weight on the president's handling of the economy than those who are lower in news media use. While directionally this is counter to the hypothesis, as in the previous case of media use, it does make sense as those who are higher in news media consumption should have a greater store of political information, and this is likely buffering them against the priming effect. Models 4 and 5 attempt to disentangle the three way interaction, but again, the results do not offer much guidance. Once again, contrary to the hypothesis, there is only a relationship between approval and global warming in the high choice condition, and the interaction between news media use and global warming approval is insignificant.

Table 44 presents the final model, which tests H_{6h} in the economic conditions. The results are once again, somewhat mixed. Inconsistent with the hypothesis is the negative and significant three way interaction in model 1, which indicates that higher users of news media experience less of a priming effect than lower consumers of news media. Once again, while this is inconsistent with the direction of the hypothesis, it does make sense. The model 2 results for the high vs. control conditions are non-significant. There is no priming effect indicated, nor is there any moderation of that effect by news media consumption. The results of the third model are significant, and the three way interaction is positive, consistent with the hypothesis. In model 3, the condition x economic approval is negative and significant, indicating a stronger relationship between economic approval and overall approval in the low choice condition. The condition x news media interaction

is negative and significant, indicating that in the higher choice condition, those who consumed more news media had lower overall approval of President Bush. The newsmedia x economic approval variable is negative and significant, indicating a lesser role for economic approval in shaping overall approval among those who consume more news. Finally, the three way interaction is positive, indicating a stronger priming effect in the high choice condition for those who consume more news media.

Table 44 Priming the Economy: News Media Use

Model	1 Low Vs Control	2 High Vs Control	3 Low Vs High	4 Low Only	5 High Only
Low Choice vs. Control	-1.57#				
High Choice vs. Control		.328			
Low choice vs. high			1.81*		
Approve of Economy Handling	.821***	.836***	1.28***		
News Media Use	.064	.059	.746**		
Condition x Econ Handling	.469#	.017	-.526#		
Condition x Newsmedia	.727*	-.204	-.849*		
Newsmedia x Econ Handling	-.078	-.073	-.291***		
Condition x Econ Handling X Newsmedia	-.207#	.06	.289*		
Ideology	.256***	.204***	.33***		
Gender	.119	.061	.218		
Age	.006	.003	.01		
Constant	-.773	-.571	-2.58***		
Adj R^2	.626	.69	.72		
N	263	269	173		

#=p<.1, *=p<.05, **=p<.01, ***=p<.001

Conclusion

The priming results are not particularly strong, though there are a few interesting findings. H_5, which predicts that increased choice over content will attenuate the priming

effect, does not receive strong support. In the global warming conditions, neither the high choice nor low choice conditions relies on global warming in forming their overall presidential evaluations than those in the control conditions, indicating no priming effect at all. On the other hand, those in the global warming low condition rely on global warming evaluation significantly more than those in the global warming high condition. In the economic conditions, there is only evidence of priming in the high choice condition, which runs counter to the hypothesis, as well as counter to the effects of condition on story selection and agenda setting.

The hypothesized moderating effects of the various individual differences on the priming effect do not fare much better. For the global warming conditions, political interest, NE, political knowledge, media use, and news media use all show limited evidence of moderating the priming effect in high choice conditions, but the evidence is mostly weak, and the signs are not in the anticipated directions. It appears there is an effect in these cases, but rather than strengthening the priming relationship in the choice conditions, the traits actually attenuate it. The negative direction of the signs, while inconsistent with the hypotheses, does still point to a moderating effect. It does, however, further call into question the hypothesized mechanism, that those high in these traits would consume more of the target stories and therefore be more likely to be primed. A counter hypothesis is that individuals high in these traits are more resistant to being primed, and that in the high choice conditions, they are more able to resist being primed. The collection of traits here makes sense for this to be the case. People high in NE, by definition, are more opinionated than those who are low, and perhaps more likely to resist change. People high in political interest, political knowledge, media use, and news media use are also

likely to have a higher store of political information, so any new piece of information may be less likely to be influential. What is less clear is why this relationship mainly manifests itself in the high choice conditions. For the economic conditions, there are essentially no results, though there is a positive moderating effect of news media use in the high choice condition.

There are several methodological and contextual challenges which may be influencing the findings, or lack of findings. First, there are very high correlations between the interaction terms, the individual difference traits, and the condition dummy variables. This may be clouding any results that are actually present. Second, it is possible that there are problems using President Bush's approval as a priming target during the latter days of his administration. By this point, his approval had slipped into the low thirties, and never recovered, and it appears that people's evaluations of him had calcified. The clearest evidence for this is the high correlations among the various approval variables. Approval of Bush's handling of the economy correlates at .79** with his overall approval, approval of his handling of global warming correlates at .69**, and the two issue approvals correlate with each other at .62**. The five measured issue approvals scale nicely with an alpha of .80. This high interrelationship makes it potentially difficult to prime any issue with Bush. People who approve of his overall job performance approve of his handling of all of the issues, and those who disapprove of him overall disapprove of his performance on all of the issues. With these high correlations, it may be impossible to measure priming. The correlations between the trait and overall evaluations are high and cannot be changed enough to be picked up in multivariate analyses.

Chapter 6 Conclusion, Limitations and Implications

In recent years, we have witnessed a rapid change in the media experiences available to Americans. Technologies such as cable television, satellite radio, and the internet have placed an unprecedented amount of information within easy reach. This is not to say that people did not previously have choice over what information they consumed. In the past, one could choose not to watch television news, could find news sources that only support one's own point of view, or skip straight to the sports section of the newspaper. What has changed is the ease with which one can do this now, and the further opportunities for avoiding news and public affairs information. In the early days of broadcast television, if the television was on at 5:30 PM Central, there wasn't much to see besides the news. Today, that is no longer the case. In the case of television, if you have cable or satellite, there are now a variety of alternatives to watching the news. While there are more news options available on cable, the amount of other content has increased dramatically as well. At 5:30, you could watch one of the three network news broadcasts, choose from three or four cable news shows, or watch something with no news content on any of the other 60+ channels. Ratings for network news indicate that even with the proliferation of news sources on cable, people are increasingly turning away from news programming to do something else in that time slot. The internet takes this phenomenon an even further level. There is a world of information available more or less instantaneously. Certainly, this enables people to get more news. Net users don't have to rely on 3 cable channels or the local newspaper anymore. They can read any paper at any time, or go to any number of news or political websites. On the other hand, just as there has been a proliferation of

available news content, there has been a proliferation of everything else as well. You can go to the New York Times, Politico.com, the Huffington Post, The Drudge Report, or any number of other sources of hard news about politics and current affairs. But you can do anything else on the net with that time as well, from reading celebrity gossip to reading information about hobbies to social networking to things that defy easy description. Even those who make it to news websites may not always focus their attention on news that is relevant to politics. News websites frequently provide all sorts of content beyond hard news. A look at the Drudge Report and the Huffington Post is instructive. Both are websites that aggregate news from other sources, Drudge from the right, Huffington from the left. While both sites feature news about politics as their most prominent stories, they also serve up a selection of celebrity gossip and humorous or shocking, but trivial stories. Tewksbury (2003) found that even individuals who were using news sites often were paying more attention to topics that were not hard news. A look at the most popular stories feature on the Huffington Post would confirm it. On a recent day in August of 2009, with the debate over healthcare heating up (and admittedly featured prominently on the site), the number one story read by viewers had nothing to do with health care or politics, but instead was the revelation of another set of nude pictures of a celebrity. 5 of the top ten most read stories were not news. While anecdotal, this is troubling. Even on a politically focused website, during a time of debate of a tremendously important political issue, fluff captivates public attention.

Approaching this project, I had a series of general expectations about the impacts that choice of content would have over audiences. Giving people more choice over their

media consumption, I expected to find decreased attention to hard news stories, decreased power of the media to influence opinion, and for these results to be predictable by individual differences, rather than just across the board reductions in consumption of hard news and of opinion change.

The results of this project have been mixed. Table 44 provides a summary of the findings of the analyses of the data in this project. A + sign indicates a confirmation of a hypothesis in at least one of its tests (the weak modifier indicates findings that are partially supportive of a hypothesis in at least one model). A 0 represents non findings and a – indicates results that run opposite to hypotheses.

Table 45- A Summary of Findings

	Story Selection GW	Story Selection Econ	Agenda Setting GW	Agenda Setting Econ	Priming GW	Priming Econ
Condition	+	+	+	0	$+^{weak}$	-
Political Interest	0	+	+	+	$-^{weak}$	0
NE	0	+	-	+	-	0
NC	+	0	0	+	0	0
NO	0	-	+	-	0	0
Political Knowledge	0	0	0	0	$-^{weak}$	0
Ideology	0	0	0	0	0	0
Media Use	0	0	$+^{weak}$	0	$-^{weak}$	0
News Media use	0	0	+	0	$-^{weak}$	$+^{weak}$

One of the strongest findings here is that information context matters tremendously in shaping what people do with the media. My experimental manipulation is not a huge one. The low and high choice conditions differ by only 6 stories, and those six stories are hardly exciting ones. Yet some of the effects are quite strong. In both the economic and

global warming conditions, readership of the hard news stories is cut in half in the high choice condition. For the global warming conditions (though not the economy conditions), agenda setting and priming are reduced as well. Increasing the available information, even a little, leads to less of a shared understanding of what issues are important and in what terms we should evaluate the president.

The findings for the effect of individual differences are weaker. My expectation was that, in the high choice conditions, individual differences would drive consumption of hard news more than the low choice conditions. Given the opportunity to choose content, people would not just act randomly, but instead, some would be predisposed to news consumption, and ultimately to experiencing media effects. The results mostly offer only limited support for this proposition, although some of these non findings may be a function of the issues chosen.

For the global warming stories, only Need for Cognition offers demonstrates the hypothesized relationship with story attention. Some of this may be due to the fact that global warming, while an issue of great concern, is a fairly slow moving issue, at least compared to other political issues. New information about global warming tends to be very similar to what people already know. There is a scientific consensus that global warming is a problem, and the stories provided in the experiment do provide new information. But that information is not substantively different from information that has come before. Global warming is a problem. Here is some more evidence for that. This is

not novel information. As such, it may not be differentially interesting to people with different predispositions.

In contrast, in the economic conditions, we do have a couple positive findings (and one negative one). Those higher in political interest and in NE are more likely to read the economy stories in the high choice conditions (though NO has the opposite effect of what is predicted). The economic issue is different in the 2007 context than the global warming issue is. After several years of a relatively strong looking economy, in the summer of 2007, we began to see signs that the economy was going to collapse. This represents news that is substantially more novel than the global warming stories, as they represent a change from the storyline people are expecting. In this case, it appears that this aspect is differentially interesting to certain people (those high in political interest and NE). This is to some extent consistent with the idea of the surveillance motive from uses and gratifications theory. There is more incentive to attend to stories where the information has the potential to provide new information. What is confusing then, is why NO has a negative relationship with choosing these stories in the high choice condition. One would expect that high NOs would be drawn to this kind of story because they are concerned about the economy already and they don't think they know much about it. They should be just the kind of people for whom this information is appealing.

The results for agenda setting and individual differences are mixed, and call into question the expectation that the mechanism underlying individual differences shaping agenda setting is story choice. There are some positive findings for both global warming and the

economy. For global warming, political interest, NO, media use, and political media use are associated with greater agenda setting effects in the high choice condition. The difficulty is that none of these things are associated with greater choice of content in the previous models. It appears that something else is driving this moderation of agenda setting. It makes sense that NO would moderate agenda setting (as this is one of the key areas it has been used), and that it would moderate agenda setting more in the high choice condition makes sense as well. What does not make sense is that Weaver's proposed mechanism for NO moderating agenda setting is through content selection, yet that does not happen here.

In the case of the economy, while we did not initially see an agenda setting effect, when we include the various individual difference measures, we do see agenda setting for some groups in some contexts. Political interest and NE conform to the hypothesized relationship. Both drive story choice in the high choice conditions, and both moderate agenda setting in the high choice conditions as well.

The priming results are weak across the board. As discussed in chapter 5, this may be due to the calcified nature of presidential evaluation by the summer of 2007. There are weak condition results, but only for global warming. The interaction results are weak across the board, and signed in the opposite direction from the hypotheses. High political interest, NE, political knowledge, media use, and news media use all limit the priming effect, primarily in the high choice conditions. This may be due to the some inertia among those high in the trait. For example Bizer et al found that high NEs were more likely to engage

in online rather than memory based evaluations of presidential candidates. It seems likely late in the Bush administration that people high in NE are going to have well developed opinions of Bush, and that they are actually less likely to be swayed by a small amount of new information. The same may be true of the high media users. Even though they do have their agenda set by global warming stories (especially in the high choice conditions), they may hold such a store of information about the president that they are particularly insensitive to changing the components of their evaluations.

Methodological Considerations

While generally I am satisfied with the performance of the experimental design, in light of the relatively high number of non-findings, there are some changes that I would consider for future research. First, there is the relative attractiveness of the stories. The filler stories selected tend to be on the bland side, which may present a challenge to external validity. When faced with choices of what to pay attention to, users and viewers are often faced with non news stories that offer them something such as timeliness, personal relevance, novelty or other things. The filler stories here are do not. While they are enough of a distraction to differentiate reading of the target stories across conditions, they may not be compelling enough to tease out the individual differences. For example, consider an individual at the low end of the political interest scale faced with the choice of reading about global warming or the superstitions of NASCAR drivers (this was a content choice available to participants). In this case, the low political interest user may not be interested in reading about global warming, but she may also not be interested in reading the NASCAR story (or anything else in that condition). Essentially, she may as

well flip a coin rather than make the choice. In contrast, if we were to imagine that same low choice individual given the choice between reading about global warming and reading about anything she wanted from the internet, the choice becomes much more compelling. While highs on many scales may be inclined towards consuming news, the lows on these scales may need better choices of alternatives to really differentiate their behavior.

A second concern is that all of the content introduced in the high choice condition is filler rather than introducing more hard news. This was done on purpose. To get a clean manipulation for agenda setting and priming, it is desirable to present only a single issue that is different across conditions. Further, it would look strange to participants to have a news source comprised of a series of fluff stories and 4 stories on the same issue. That said, the stimulus may not provide the right content for those high on various scales to truly behave as they would. Consider the previous example, but this time for the person high in political interest. Once she has read the two hard news stories, all she can read is filler. The high political interest individual may further differentiate herself from the lows if even more political choices were available. It is possible to take these two examples and imagine behavior outside of the experiment setting that is more differentiated than the experiment allows. When faced with the whole internet, the low political interest individual could never look at a political story again, whereas the high interest individual could spend all of her time on political sites. This high choice scenario could still attenuate priming and agenda setting effects for the highly interested individual because she would have a number of political issues to choose from.

A third concern is the choice of issue and the timing of these issues. In pretests, it was found that both the economy and global warming stories could be used to induce an agenda setting effect. There were 5 months, however, between the pretests and the experiment actually going into the field. During that time, the prominence of the economy rose dramatically, limiting the ability of finding any agenda setting effects, since by the summer and fall of 2007, concern for the economy was already high. For global warming, it was possible to raise concern. For the economy on the other hand, people were already about as concerned as they could be.

A final concern is sample size and multioclinearity. All of the hypotheses about individual differences are interactive, which unfortunately introduces potential statistical difficulties. The interaction terms were highly correlated with the variables they were computed from (condition and trait) and this multioclinearity inflates variance for the correlated IVs and biases significance tests against them. It is possible that there were effects happening that my experiment lacked the statistical power to detect. While having approximately 90 respondents in a cell is a relatively large experiment, it is small when dealing with IVs that sometimes correlate with each other as high as .8.

Implications

The results of this study give us some insight into the effects of opportunity to choose content on both choice of story and subsequent media effects. The clearest result that we see here is that increased choice harms overall attention to hard news, limits agenda

setting, and possibly limits priming. While it is possible to view agenda setting and priming as manipulative, they also provide useful functions in focusing attention of citizens on important issues. In a more fragmented media environment it appears that it may be harder to focus attention on a number of issues, or on politics at all. Agenda setting and priming have not been killed off by choice, but they have been weakened. Given the results here, it is critical to take into account the role that individual content choice plays in moderating these effects. Agenda setting and priming are still potentially powerful, but not as powerful as they were.

A further concern is that there does seem to be some differentiation among individuals in terms of attentiveness. A concern of both the political knowledge and political participation literatures is that some groups are disadvantaged when it comes to making their voices heard because they lack the ability to effectively participate. The same could be said for those who actively disengage from following politics. While disengagement is not a new problem, it appears to be exacerbated by choice.

The news on this front is not entirely grim, however. First, the experiment here presents a test in the context of issues that are of moderate concern (they were specifically chosen to not be too high on the agenda so that there would be room to change their position). While it may be harder to call attention to these medium intensity issues, it is not the case that a truly major issue would have trouble setting the agenda for a large number of citizens. 9/11, the housing market collapse, wars involving American troops and other vivid events and situations clearly still set the public's agenda and influence how they

hold leaders accountable. Still, there are many issues that do not reach this magnitude that are worthy of consideration, but may get less attention than they deserve because people do not choose to consume information about them, whereas in the broadcast era, they often could not help but be exposed.

Choice over media content has brought us many good things. Living in the information age allows us access to things we never thought imaginable, all from the comfort of our own homes, with minimal effort. This comes at a cost, however. Allowing individuals access to whatever information they want appears to limit use of information that is important for democratic citizenship. With this limited use of information, we also run the risk of decreased common concern for issues that are politically relevant.

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APPENDIX 1- Pre Test Survey

Pretest

Thank you for agreeing to take our survey! Please answer the following questions with the answer that best reflects your opinions and experiences. All answers you provide will be anonymous and confidential. You may skip any questions that you do not wish to answer, but it is helpful to us that you answer everything.

For each of the following items, please check the box next to the response that best reflects your opinion

1. What do you think is the greatest issue facing the country today (type up to three in boxes below)

. How important do you think each of the following issues is for the country?

	Very Important	Somewhat Important	Not very Important	Not Important
The Economy				
Terrorism				
The situation in Iraq				
The environment				
Gas prices				
Education				
Health Care				
Illegal Immigration				
Global warming				

5. How concerned are you personally with each of the following issues

	Extremely Concerned	Very Concerned	Somewhat concerned	Not very concerned	Not concerned
The Economy					
Terrorism					
The environment					
Education					
Illegal Immigration					
Global warming					

6. How much do you know about the each of the following issues

	I know nothing about it	I know a little about it	I know some about it	I know a lot about it
The Economy				
Terrorism				
The environment				
Education				
Illegal Immigration				
Global warming				

2. How strongly do you approve or disapprove of how George W. Bush is handling his job as President?

1	2	3	4	5	6
Approve Strongly	Approve Somewhat	Approve a little	Disapprove a little	Disapprove Somewhat	Disapprove Strongly

3. How strongly do you approve or disapprove of the way President Bush is handling the following issues:

1	2	3	4	5	6
Approve Strongly	Approve Somewhat	Approve a little	Disapprove a little	Disapprove Somewhat	Disapprove Strongly

The Economy
Terrorism
The environment
Education
Illegal Immigration
Global warming

Now, we would like to ask you a few questions about public figures and the political system in general. Please respond to each of the following questions as thoroughly as possible. Many people do not know the answers to these questions, so if there are some you don't know, just skip them. Please do not look up any answers to questions or consult with anyone else.

7. What job or political office does Dick Cheney currently hold?_____

8. What job or political office does John Roberts currently hold?_____

9. What job or political office does Gordon Brown currently hold?_____

10. What job or political office does Nancy Peolsi currently hold?_____

11. Which political party currently has the most members in the Senate in Washington?_____

12. Which political party currently has the most members in the House of Representatives in Washington?

_____

13. How long is the term of office for a U.S. senator?_____

14. Whose responsibility is it to nominate judges to the Federal Courts — the President, the Congress, or the Supreme Court?

_____

____

15. How may congress override a presidential veto?

_____

In the next section, please tell us a bit about how often you use the following media and technologies in a typical week. If you are not familiar with a source, please select "never."

15. In a typical week, how many days do you use the following media?

	Never	One or two	Three or four	Five or six	Everyday
Television					
National Television news (NBC Nightly News, CNN, Fox News, etc)					
Local Television News (KARE 11, WCCO, etc)					
News Magazines (Newsweek, Time, etc)					
Newspaper (Paper format, not the Daily)					
The Internet					
Internet News Sites (CNN.com, Salon.com, Slate.com, etc.)					
Chatrooms/Newsgroups/Bulletin Boards/Etc					
Political Chatrooms/Newsgroups/Bulletin Boards/Etc					
Download or stream video or music on your computer					
Read blogs					
Radio					
News or talk Radio (Rush Limbaugh, NPR, Air America, etc)					

16. Approximately How many hours a week do you spend on the internet at all tasks?

_____

17. Do you have a Myspace or Facebook Page

___ Yes
___ No

18. Do you have a blog?

___ Yes
___ No

19. Below is a list of genres of television shows that many people like to watch. Please rank your top four choices (1 being your favorite) by placing a number in the box next to the genre. Please mark any genres you particularly dislike with an X.

Science Fiction shows (such as Battlestar Galactica or Stargate)
Comedies/Sit Coms (such as The Office or The Simpsons)
Dramas (such as Law & Order or Grey's Anatomy)
Daytime Soap Operas (Such as One Life to Live or General Hospital)
Reality TV Shows (Such as Survivor or The Apprentice)
Sports
Game Shows (such as Jeopardy or Deal or No Deal)
News
Documentary Programs (such as the History Channel or The Discovery Channel)
Music Videos
Celebrity news (Such as Entertainment Tonight or Extra!)
Talk Shows (Such as Oprah Winfrey or The View)

20. In the next section, please tell us a little more about yourself

Please indicate how characteristic or uncharacteristic of you each of the following statements is.

	Extremely uncharacteristic	Somewhat uncharacteristic	Uncertain	Somewhat Characteristic	Extremely Characteristic
I would prefer complex to simple problems					
I like to have the responsibility of handling a situation that requires a lot of thinking					
Thinking is not my idea of fun					
I would rather do something that requires little thought than something that is sure to challenge my thinking abilities					
I try to anticipate and avoid situations where there is a likely chance I will have to think in depth about something.					
I find satisfaction in deliberating hard and for long hours.					
I only think as hard as I have to.					
I prefer to think about small daily projects than to long-term ones.					
I form opinions about everything					
I prefer to avoid taking extreme positions					
It is very important to me to hold strong opinions					
I want to know exactly what is good and bad about everything					
I often prefer to remain neutral about complex issues					
If something does not affect me, I do not usually determine if it is good or bad					
I enjoy strongly liking and disliking new things					

21. In the past five years, did you do any of the following?

	No	Yes
Talk to people to persuade them to vote for a candidate?		
Wear a campaign button or place a sticker on your car or somewhere else?		
Go to a political rally, meeting, speech, or dinner?		
Work for a party, candidate, or interest group?		
Donate money to a campaign or party?		

22. In an average week, how often do you discuss politics with your family or friends?

Never	One or two	Three or four	Five or six	Everyday

23. In General, how interested are you in politics National Politics?

- ☐ Not at all
- ☐ A little
- ☐ Somewhat
- ☐ Very
- ☐ Extremely

24. Generally speaking, do you consider yourself a Democrat, Independent, or Republican?

- ☐ Strong Democrat
- ☐ Weak Democrat
- ☐ Democratic leaning independent
- ☐ Independent
- ☐ Republican Leading Independent
- ☐ Weak Republican
- ☐ Strong Republican

25. Which point on this scale best describes your political views?

- ☐ Strong Liberal
- ☐ Liberal
- ☐ Liberal Leaning Moderate
- ☐ Moderate
- ☐ Conservative Leaning Moderate
- ☐ Conservative
- ☐ Strong Conservative

26. What is your gender?

- ☐ Male
- ☐ Female

27. Which of the following races/ethnicities most closely describes you?

- ☐ White
- ☐ African American
- ☐ Latino/Latina
- ☐ Asian/Pacific islander
- ☐ Other

28. How old are you

_____

29. What is the highest level of education you have completed?

- ☐ Some high school
- ☐ High school graduate
- ☐ Some College
- ☐ College Graduate
- ☐ Graduate/Professional Degree

30. Please indicate how characteristic or uncharacteristic of you each of the following statements is.

	Extremely uncharacteristic	Somewhat uncharacteristic	Uncertain	Somewhat Characteristic	Extremely Characteristic	Extremely uncharacteristic
I like tasks that require little thought once I've learned them.						
The idea of relying on thought to make my way to the top appeals to me.						
I really enjoy a task that involves coming up with new solutions to problems						
Learning new ways to think doesn't excite me very much.						
I prefer my life to be filled with puzzles that I must solve.						
The notion of thinking abstractly is appealing to me.						
I would prefer a task that is intellectual, difficult, and important to one that is somewhat important but does not require much thought.						
I feel relief rather than satisfaction after completing a task that required a lot of mental effort.						
It's enough for me that something gets the job done. I don't care how or why it works.						
There are many things for which I do not have a preference						
It bothers me to remain neutral						

I like to have strong
opinions even when I am
not personally involved
I have many more
opinions than the
average person

I would rather have a
strong opinion than no
opinion at all
I pay a lot of attention to
whether things are good
or bad

I only form strong
opinions when I have
I like to decide that new
things are really good or
really bad
I am pretty much
indifferent to many
important issues

Appendix Two: Post Test Survey

Post Test

Thank you for looking at our website. Please answer the following questions.

For each of the following items, please check the box that best reflects your opinion

1. What was the topic of the article that you found most interesting?

---

2. Please indicate how you feel about this story.

The site was						
Good	1	2	3	4	5	Bad
Pleasant	1	2	3	4	5	Unpleasant
Unfavorable	1	2	3	4	5	Favorable
Unlikable	1	2	3	4	5	Likable
Credible	1	2	3	4	5	Not Credible
Trustworthy	1	2	3	4	5	Not Trustworthy
Contained interesting articles	1	2	3	4	5	Did not contain interesting articles

3. Do you think there were Not enough, the right amount, or too many articles on each of the following topics

	Not Enough	The Right Amount	Too Many
Business/Economy			
Entertainment			
Sports			
Politics			
The arts			
Local News			

In the next set of questions, please tell us a little bit about your political beliefs

4. How strongly do you approve or disapprove of how George W. Bush is handling his job as President?

Approve Strongly									Disapprove Strongly
10	9	8	7	6	5	4	3	2	1

5. What do you think is the greatest problem facing the country today (type up to three in boxes below)

1. What do you think is the greatest issue facing the country today (type up to three in boxes below)

. How important do you think each of the following issues is for the country?

	Very Important	Somewhat Important	Not very Important	Not Important
The Economy				
Terrorism				
The situation in Iraq				
The environment				
Gas prices				
Education				
Health Care				
Illegal Immigration				
Global warming				

5. How concerned are you personally with each of the following issues

	Extremely Concerned	Very Concerned	Somewhat concerned	Not very concerned	Not concerned
The Economy					
Terrorism					
The environment					
Education					
Illegal Immigration					
Global warming					

6. How much do you know about the each of the following issues

	I know nothing about it	I know a little about it	I know some about it	I know a lot about it
The Economy				
Terrorism				
The environment				
Education				
Illegal Immigration				
Global warming				

2. How strongly do you approve or disapprove of how George W. Bush is handling his job as President?

1	2	3	4	5	6
Approve Strongly	Approve Somewhat	Approve a little	Disapprove a little	Disapprove Somewhat	Disapprove Strongly

3. How strongly do you approve or disapprove of the way President Bush is handling the following issues:

1	2	3	4	5	6
Approve Strongly	Approve Somewhat	Approve a little	Disapprove a little	Disapprove Somewhat	Disapprove Strongly

The Economy
Terrorism
The environment
Education
Illegal Immigration
Global warming

10. Please indicate how you feel about the news website on the whole:

The site was						
Good	1	2	3	4	5	Bad
Pleasant	1	2	3	4	5	Unpleasant
Unfavorable	1	2	3	4	5	Favorable
Unlikable	1	2	3	4	5	Likable
Credible	1	2	3	4	5	Not Credible
Trustworthy	1	2	3	4	5	Not Trustworthy
Contained interesting articles	1	2	3	4	5	Did not contain interesting articles

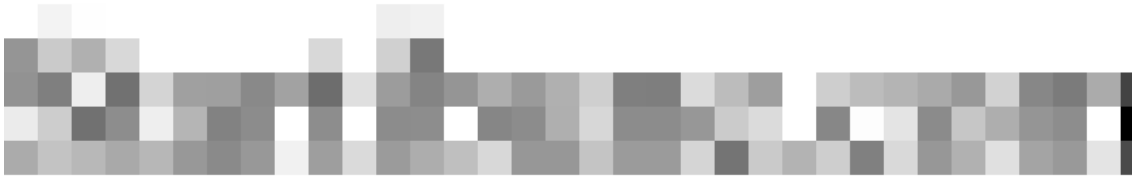
Appendix 3: Web Pages for Surfing Experiment

Instructions for All Participants

Thank you for participating in the second part of our study. The next web page is the home page for a beta version of the website for a local news organization. The name of the publication and authors of the articles have been obscured because the site is still in the development phase and we are seeking your evaluations of the content and the site, not the organization or the authors. You will have 15 minutes to select and read stories from the home page. Just follow the links to any stories you want to see. At the end of each story, there is a link to take you back to the home page. Do not worry if you cannot read all of the stories in 15 minutes. Please focus only on your screen, and do not open any additional web browsers. At the end of 15 minutes, you will be directed to take a survey to gauge your reaction to the stories and answer a few follow up questions to survey one and some questions about the site itself.

Go to the homepage

Condition 1 Homepage- Global Warming, Low Choice

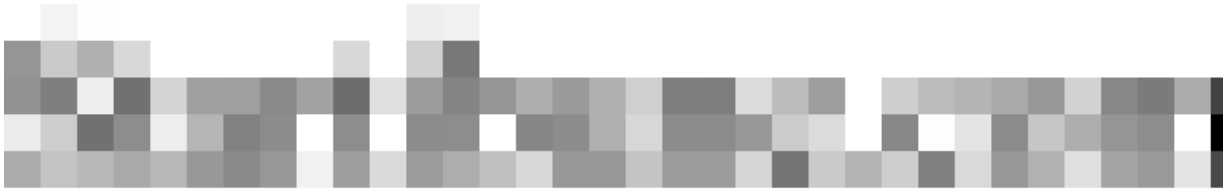


Accessories for iPhone Hit Market	A Climate Change Warning	Sailing Superior's Apostle Islands
Hollywood's Summer of Sequels	Art Auction Sets Records	Pompeii Exhibit Comes to the Twin Cities
Global Warming Dust Bowl Fears	Frisbee Turns 50	

Condition 2 Homepage- Global Warming, High Choice

Accessories for iPhone Hit Market	A Climate Change Warning	Sailing Superior's Apostle Islands
Hollywood's Summer of Sequels	Art Auction Sets Records	Pompeii Exhibit Comes to the Twin Cities
Global Warming Dust Bowl Fears	Frisbee Turns 50	Point, Shoot, Email
Summer in Wisconsin's Dells	New Fall Shows From CBS	Massive Shipwreck Discovered
Subway Violinist comes to St. Paul	NASCAR Driven by Superstitions	

Condition 3 Homepage- Economy, Low Choice



Accessories for iPhone Hit Market	Economy Crawls, Recession Feared	Sailing Superior's Apostle Islands
Hollywood's Summer of Sequels	Art Auction Sets Records	Pompeii Exhibit Comes to the Twin Cities
Signs of Distress in Housing	Frisbee Turns 50	

Condition 4 Homepage- Economy, High choice

Accessories for iPhone Hit Market	Economy Crawls, Recession Feared	Sailing Superior's Apostle Islands
Hollywood's Summer of Sequels	Art Auction Sets Records	Pompeii Exhibit Comes to the Twin Cities
Signs of Distress in Housing	Frisbee Turns 50	Point, Shoot, Email
Summer in Wisconsin's Dells	New Fall Shows From CBS	Massive Shipwreck Discovered
Subway Violinist comes to St. Paul	NASCAR Driven by Superstitions	

A Climate Change Warning

Panel says humans are probably causing shifts around world

Manmade global warming is probably already causing noticeable environmental changes throughout the world, the leading authority on climate change announced yesterday, such as the earlier arrival of spring in some regions, thawing permafrost, and the northward shift of some animal and plant habitats.

In a report released by the United Nations' Intergovernmental Panel on Climate Change (IPCC), scientists for the first time linked changes being observed in nature on every continent and in most oceans to rising temperatures from greenhouse gases, chiefly carbon dioxide, emitted by power plants, factories, and cars.

If emissions are not reduced, the panel warned, 20 percent to 30 percent of plant and animal species could face increased risk of extinction, and rising temperatures could cause widespread human suffering from more frequent droughts, floods, and outbreaks of disease.

"If a government doesn't react to this [report], it could be considered negligence,"

said Susanne Moser, a research scientist at the National Center for Atmospheric Research in Colorado and a contributing author to the document. "It's a fairly bleak picture."

The report's depiction of the effects of global warming are the most detailed, definitive, and grim since international scientists began assessing the state of the warming world in a formal way. The report says tens of millions of people could suffer from water scarcity, and coastal regions all over the world could face severe flooding.

If emissions are not curbed, North Americans can expect more heat waves in cities, which tend to be hotter than less populated areas, putting at risk many vulnerable people. Forests will have more wildfires and tree pests, the report predicts, and there could be increased flooding and fiercer storms. The Southwest will get drier. Regions such as the Western United States that get drinking water from melting mountain snow will suffer shortages. The warming temperatures are projected to increase smog in the Eastern United States, with as much as a 68 percent increase in the number of days with poor air quality by 2050.

The new 23-page report is a summary of a much longer scientific treatise and is the second of four being produced by the IPCC this year to educate policy makers about the science and predictions of global climate change. The IPCC

assessments, issued about every five years since 1990, have shown that scientists are becoming progressively more certain that humans are causing much of the warming. The report two months ago said scientists are more than 90 percent certain that warming temperatures in the last 50 years are mostly due to human activities. The growing weight of scientific evidence was a factor in Monday's US Supreme Court ruling that greenhouse gases are pollutants, a decision that some climate change analysts say may push the Bush administration to regulate carbon dioxide emissions from cars and power plants.

IPCC scientists said yesterday they are highly confident they are seeing impacts today of climate change. As part of the report they reviewed 75 studies that showed significant changes in everything from ice on lakes to species' migration. Of those changes, more than 89 percent are consistent with a warming world. Natural variability in temperatures, alone, is unlikely to account for so many changes, the scientists said.

"People are beginning to experience global warming in a way they have not before. We are all sensing the changes in the Northeast, the warmer winters, the hotter summers," said Peter Frumhoff, director of science and policy for the Union of Concerned Scientists, a national advocacy group based in Cambridge.

They were very clear about what would happen if IPCC projections hold true and the earth warms 3.2 to 7.2 degrees Fahrenheit and seas rise as much as 23

inches in the next century. As soon as 2020, water scarcity could become a major issue for more than 75 million Africans. Drier places will get drier. Home

A Study Says Global Warming Threatens to Create Another Dust Bowl

A permanent drought seen for Southwest

The driest periods of the last century -- the Dust Bowl of the 1930s and the droughts of the 1950s -- may become the norm in the Southwest United States within decades because of global warming, according to a study released Thursday.

The research suggests that the transformation may already be underway. Much of the region has been in a severe drought since 2000, which the study's analysis of computer climate models shows as the beginning of a long dry period.

The study, published online in the journal Science, predicted a permanent drought by 2050 throughout the Southwest -- one of the fastest-growing regions in the nation.

The data tell "a story which is pretty darn scary and very strong," said Jonathan Overpeck, a climate researcher at the University of Arizona who was not involved in the study.

Richard Seager, a research scientist at Lamont-Doherty Earth Observatory at Columbia University and the lead author of the study, said the changes would force an adjustment to the social and economic order from Colorado to California.

"There are going to be some tough decisions on how to allocate water," he said. "Is it going to be the cities, or is it going to be agriculture?"

Seager said the projections, based on 19 computer models, showed a surprising level of agreement. "There is only one model that does not have a drying trend," he said.

Philip Mote, an atmospheric scientist at the University of Washington who was not involved in the study, added, "There is a convergence of the models that is very strong and very worrisome."

The researchers tested a "middle of the road" scenario of future carbon dioxide emissions to predict rainfall and evaporation. They assumed that emissions would rise until 2050 and then decline. The carbon dioxide concentration in the atmosphere would be 720 parts per million in 2100, compared with about 380 parts per million today.

The computer models, on average, found about a 15% decline in surface moisture -- which is calculated by subtracting evaporation from precipitation -- from 2021 to 2040, as compared with the average from 1950 to 2000.

A 15% drop led to the conditions that caused the Dust Bowl in the Great Plains and the northern Rockies during the 1930s..

Kelly Redmond, deputy director of the Western Regional Climate Center in Reno, who was not involved in the study, said he thought the region would still have periodic wet years that were part of the natural climate variation.

But, he added, "In the future we may see fewer such very wet years."
The U.S. and southern Europe will be better prepared to deal with frequent drought than most African nations.

For the U.S., the biggest problem would be water shortages. The seven Colorado River Basin states -- Colorado, Wyoming, Utah, Nevada, New Mexico, Arizona and California -- would battle each other for diminished river flows.

Mexico, which has a share of the Colorado River under a 1944 treaty and has complained of U.S. diversions in the past, would join the struggle.

Inevitably, water would be reallocated from agriculture, which uses most of the West's supply, to urban users, drying up farms. California would come under pressure to build desalination plants on the coast, despite environmental concerns.

"This is a situation that is going to cause water wars," said Kevin Trenberth, a scientist at the National Center for Atmospheric Research in Boulder, Colo.

"If there's not enough water to meet everybody's allocation, how do you divide it up?"

Officials from seven states recently forged an agreement on the current drought, which has left the Colorado River's big reservoirs -- Lake Powell and Lake Mead -- about half-empty. Without some very wet years, federal water managers say, Lake Mead may never refill.

In the next couple of years, water deliveries may have to be reduced to Arizona and Nevada, whose water rights are second to California.

Economy Crawls, Raising Recession Fears

The worst economic growth in four years is raising concern that troubles in the U.S. housing market will spread and throw the country into a recession before the year is out.

The economy practically crawled at a 1.3 percent pace in the opening quarter of 2007, the Commerce Department reported Friday. That was even weaker than the sluggish 2.5 percent rate in the closing quarter of last year.

The main culprit in the slowdown: the housing slump, which made some businesses act cautiously. The bloated trade deficit also played a role.

Consumers largely carried the economy in the first quarter. But will they stay resilient in light of the troubled housing market, fallout from risky mortgages and rising energy prices?

"The No. 1 question is can the consumer continue to play Atlas while the housing market crumbles around him?" said Richard Yamarone, economist at Argus Research. Others worry about businesses' appetite to spend and invest -- also important ingredients for a healthy economy.

Friday's report brought some of these uncertainties to the fore. For now, though, economists believe the risk of a recession is low. Former Federal Reserve Chairman Alan Greenspan has put the chance of a recession this year at one in three.

Federal Reserve Chairman Ben Bernanke, however, has said he doesn't believe the economic expansion, now in its sixth year, is in danger of fizzling out. Neither does the Bush administration.

The reading on gross domestic product in the first quarter was the weakest since a 1.2 percent pace in the opening quarter of 2003. GDP measures the value of all goods and services produced within the United States and is considered the best barometer of the country's economic fitness.

The performance was even weaker than the 1.8 percent economists had forecast.

"The economy went through a very soggy period," said Lynn Reaser, chief economist at Bank of America's Investment Strategies Group. "The biggest risk to the economy is if the housing market doesn't stabilize. That could force consumers and businesses to cut back sharply in spending. Even though the economy slowed in the first quarter, inflation picked up. That could complicate the Fed's work of keeping the economy and inflation on an even keel. "This is a knife's edge scenario," observed John Silvia, chief economist at Wachovia Economics Group.

An inflation gauge tied to the GDP report and closely watched by the Fed showed that core prices -- excluding food and energy -- rose at a rate of 2.2 percent in the first quarter, up from 1.8 percent in the fourth quarter.

The biggest factor behind the first quarter slowdown was the crumbling housing market. Investment in home building was cut by 17 percent on an annualized basis. Such investment had been slashed at an even deeper 19.8 percent pace in the fourth quarter.

"The report tells me housing is probably going to be in a more prolonged and deeper recession," said Stuart Hoffman, chief economist at PNC Financial Services Group.

Weak investment by businesses in inventories also held back GDP. So did the trade deficit, shaving 0.52 percentage point off GDP.

However, consumers whose shopping is indispensable to a booming economy boosted their spending at a 3.8 percent pace. That was a solid showing although it was slightly weaker than the 4.2 percent rate in the fourth quarter.

A key reason consumers have remained resilient, even in the face of the painful housing slump, is that the jobs markets has managed to stay in good shape.

The nation's unemployment rate dropped in March to 4.4 percent, matching a five-year low. However, economists predict that rate will climb -- perhaps to close to 5 percent by the end of this year -- as economic activity cools.

In other economic news, employers' costs to hire and retain workers grew 0.8 percent in the first quarter, down slightly from a 0.9 percent increase in the fourth quarter, the Labor Department reported.

Signs of Distress in Housing Market

A dismal June capped an even worse six months as home construction plummeted in the Twin Cities metro area.

In the housing market, what a difference four years makes.

New building permits issued in June in the Twin Cities metro area fell 22 percent while the number of planned units dropped 34 percent compared with the same period last year, according to data released Tuesday by the Builders Association of the Twin Cities.

The declines are not an aberration. During the first six months of the year, new permits in the Twin Cities metro area plummeted 34 percent and the number of new units was down 31 percent.

That was the worst performance in more than a decade. Residential construction activity so far this year in the Twin Cities is down nearly 50 percent compared with activity at the same time in 2003, the year the market peaked. The drop is spilling into other parts of the economy, including the retailers who cater to home buyers and builders. Existing home sales numbers for the Twin Cities area, scheduled to be released today, are expected to be down again, as they have been all year.

"The next six months will be a telling sign of where our market is headed," said Michael Noonan, association president and president of Toll Brothers' Minnesota division. "It's not practical to expect a record pace year after year," he said in a written statement.

D.R. Horton, the third-largest builder in the Twin Cities metro area and the nation's largest based on sale closings, also issued a somber report for the coming months.

The Fort Worth, Texas-based company said Tuesday that net orders nationwide are down 40 percent, cancellations of homes already ordered rose to 38 percent of total orders, and no short-term improvement is expected. Its shares were down about 3 percent recently.

"I wouldn't encourage anyone to be optimistic based on what we've seen," chief financial officer Carol Tome told Dow Jones Newswires.

Retailers hurt too

The slowdown is being felt by a cross-section of retailers specializing in building materials, appliances and other products for homeowners.

Home Depot and Sears, for example, warned of lower-than-expected earnings because of a decrease in purchases of everything from wall studs to washing machines and offered pessimistic views of the housing market based on lagging sales.

On Tuesday, Home Depot Inc. lowered its 2007 earnings outlook and Sears Holdings Corp. said that a slowdown in second-quarter sales will cause earnings during that period to be only half of what was expected.

To date in the housing slowdown, home builders have focused on reducing inventories of unsold homes that accumulated in the wake of record construction activity. They've also had trouble taking new orders, in large part because of a slowdown in sales of existing homes.

Even with mortgage interest rates still within a percentage point of all-time lows due to fears abou the overall economy , many home buyers have been reluctant to pay prices based on those at the market's peak.

Lowering prices

At the same time, many existing-home sellers have been unwilling to adapt to market conditions by lowering prices, and the difficulty they have in selling is causing them to think twice before making a new-home purchase while they still own a home.

Historically, builders have been reluctant to sell new houses contingent on sales of existing ones, but more are doing so to help stimulate new home sales.

And some builders even have lowered the price of their new houses to encourage buyers to drop the price on their existing homes. Mike Hartman, president of Hartman Homes in Hudson, Wis., for example, said that strategy has helped him generate enough home sales to beat last year's total.

In some cases he's dropped the price $10,000 to $20,000 on a new house to give his buyers additional incentive to sell their existing houses without giving up more of their equity. He's also building in several developments and price ranges to capture the broader market.

Hartman, in the business for 25 years, said sellers finally are realizing the market has indeed changed.

"A year or two ago, people selling a home wouldn't let go of that home and wouldn't drop that price," he said. "Now people are coming to an acceptance stage that their equity isn't what it used to be."

Home

Accessories for iPhone Are Hitting Market

Some are Worthwhile

The hundreds of thousands of people who have bought the Apple iPhone since its debut Friday may soon start looking for add-on hardware and software for their shiny new devices.

At first glance, this should be easy. The iPhone uses the same hardware ports as the iPod, which has attracted thousands of accessories. And the iPhone uses a modified version of Apple's Macintosh operating system, which runs numerous small programs called "widgets" that would be perfect for the iPhone. But, in fact, using add-on hardware for the iPhone will, in many cases, require buying new gear, or at least adapters to make the old iPod gear work, because of subtle differences in the way its hardware ports work.

I have been testing some of the very first crop of iPhone add-on hardware and software. Some work well, others not so much. I expect to return to this topic when the add-on market is more mature, but here is an early look.Most of the first hardware accessories are cases and headsets, for both music and phone calls. I didn't test any cases, though I liked the look of one from Belkin, called

simply the Acrylic Case, because it has a kickstand on the back that makes it easy to watch videos on the iPhone without having to hold it upright. It costs $30.

Many headphones for the iPod won't work on the iPhone, because its headphone jack is deeply recessed and the connectors on even expensive headphones just can't reach in deep enough. Belkin sells an $11 adapter to solve this problem. I tested it with my expensive Shure iPod headphones and it worked.

The bigger problem is that even the costliest iPod headphones lack a microphone and a call-answering button, so they can't handle the dual functionality of the iPhone -- listening to music and conducting phone calls. Apple includes such a combo headset with the iPhone. It looks like the standard white iPod earbuds, but includes a tiny controller, embedded in the right earbud cord, that incorporates a microphone and also acts as a button. Push it once and it answers calls or ends them. When playing music, a single push pauses a song and a rapid double push skips to the next song. I found these Apple earbuds worked very well and were much more comfortable than Apple's old iPod earbuds.

If you want to use your existing third-party earbuds or headphones, Shure will begin selling in August a $40 adapter called the MPA-3c. It not only fits the phone's recessed jack, but also includes a microphone and control button that works just like Apple's. I tested it with several iPod earbuds, from Apple and

others, and it worked fine, though the mic is very low on the cord and must be clipped higher up on your clothing to work optimally.

Plantronics also plans several wireless Bluetooth headsets to work with the iPhone. Most existing Bluetooth headsets should also work, but only for phone functions. The iPhone doesn't currently support playing stereo music through Bluetooth. I tested a new Plantronics Bluetooth headset, the $130 Discovery 665, and it worked well. It is available now. Apple will also be bringing out its own Bluetooth headset for phone calls for $129.

Many accessories, such as car audio kits and home speakers, that worked with the iPod's bottom connector, will require a simple plastic adapter for the iPhone to fit into them. Apple sells these for $9 for a pack of three.

Other accessories that use the iPod connector won't work right on the iPhone because they don't reroute the sound from its speaker, a feature the iPod lacks; or because they aren't properly shielded against interference from the iPhone's transmitters. New versions are likely to be rolling out. These will display an Apple-endorsed label that says "Works with iPhone."

Home

Outrageous Fortune for a Novice Sailor in the Apostle Islands

Curious boaters face 200 miles of open water and fly through 10-foot waves

The boat is called Outrageous, and to my landlubber's eye it lives up to the name. It's like a 37-foot floating knife blade of metal and fiberglass.

I'm standing on the dock at Port Superior Marina in Bayfield, Wis., looking over the vessel that will be my home for the next three days as I and two companions sail the Apostle Islands National Lakeshore.

The Apostles consist of 21 islands scattered like a handful of pebbles thrown into Lake Superior's water. They've been home to American Indians, miners, fishermen and farmers, but since they became part of the national park system several decades ago only a few grandfathered vacation homes remain in private hands; the rest has reverted to wilderness.

With 154 miles of shoreline and the nation's largest collection of historic lighthouses, the Apostles are an increasingly popular vacation destination. Most folks see the islands by chartered boat, but my friends, Bob Deegs and Chris Powell, and I are going where the wind takes us.

Bob hands out T-shirts made by his wife, Patricia. They feature a grinning pirate and the word "Arg !" The word becomes our mantra. When we're excited or hungry or bored, we'll erupt in a chorus of "Args!"

Stockton has the Lakeshore's biggest and busiest campground. Several times a day cruise services drop off and pick up vacationers. A half-mile walk across the island takes us through a lush forest of pines and hemlocks. Ferns flourish in the loamy soil, as do red and white mushrooms. Emerging from the woods, we find ourselves overlooking Julian Bay on the island's north side. To our right the island narrows to a point, forming a dramatic natural breakwater of brownstone shelves and boulders. To our left a pristine beach of pink sand curves into the distance.

By the time we paddle back to Outrageous, a dozen more sailboats have anchored in Presque Isle Bay. Beneath a gorgeous sunset, we cook fresh trout

on a gas grill mounted on the boat's stern. The shoreline is illuminated by the flickering of a dozen campfires. The Outrageous gently rocks.

Consulting the charts, Bob and Chris realize we have a direct shot at Devil's Island, one of the most outlying of the Apostles. Neither has been there, and they're curious what sailing will be like on the far side, where boaters face 200 miles of open water.

We realize from the beginning that the 10-mile run to Devil's Island could be a wild ride. We're beating to windward -- tacking at a 30-degree angle to the oncoming breeze -- and immediately my colleagues start giving off nervous energy like hunting dogs eager to get off their leashes. Outrageous tilts precipitously, forcing us to grab onto anything to keep from being pitched into the water.

Despite the dangerous angle of the deck, Bob crawls forward to tighten lines, tweaking the mainsail and jib to get even more speed. Chris clutches the wheel. It's twisting so violently with the pressure of wind and water that his hands are blistered.

Every now and then they look at each other with manic glee and exchange a few happy "Args."

Devil's Island offers a dramatic landscape. Brownstone cliffs riddled like Swiss cheese rise 30 or 40 feet from the water, topped off by a thick forest. Sea caves are everywhere. As we cruise the island's leeward west coast, we can see the top of a lighthouse through the foliage.

But when we round the northern edge and turn into the open lake, things really get exciting. Outrageous leaps forward, tilting nearly 40 degrees to starboard. We find ourselves running through a series of 10-foot waves. Outrageous is flying.

She doesn't stop until we've left Devil's Island far behind and we're back among the other Apostles.

Bob and Chris exchange delirious "Args" and agree that it was the single best sailing run either of them has ever experienced.

I'd sail the Apostles again in a minute.

Arg.

Filler Story 3- All Conditions

Hollywood Unleashes the Summer of the Sequel

This summer's releases stick with what works.

Hollywood is banking that good things really do come in threes as it prepares to unleash an unprecedented series of blockbuster sequels on the summer box-office, continuing a trend of offering sequels to popular summer movies.

In a rare alignment of the tinseltown stars, three of the most profitable franchises in history release their long-awaited third installments next month: "Pirates of the Caribbean", "Spiderman" and "Shrek."

The trio of blockbuster follow-ups are part of a broader trend of summer sequels as Hollywood studios opt for tried and tested formulas on the basis that "if ain't broke, don't fix it."

"Somebody counted it and said there were 14 sequels this summer," Lew Harris, the editor of the respected movies.com website. "This is absolutely the summer of the sequels."

As well as "Pirates", "Spiderman" and "Shrek", a number of other successful films of recent years were readying sequels, with a fifth installment of the money-spinning Harry Potter based on J.K Rowling's books heading the field.

George Clooney and Brad Pitt will return for crime-caper "Ocean's 13", while Matt Damon is reprising his role as assassin Jason Bourne for a third time in "The Bourne Ultimatum."

Other sequels include Bruce Willis action movie "Die Hard 4 (Live Free and Die Hard), "Fantastic Four", "Evan Almighty" and "Hostel 2".

"The funny thing is that this summer, they (the sequels) are going to do well," Harris said. "They're all kind of different. In fact, all of these sequels are going to rule the summer."

Leading the first wave of the sequel-blitz is "Spiderman 3", which opens in the US on May 4. The two previous films in the series about the Marvel comic-book

hero have already raked in 1.6 billion dollars worldwide since 2002.

Two weeks later, the jolly green ogre that is Dreamworks' "Shrek" will return, three years after the phenomenal success of "Shrek 2", the third highest-grossing film in US box-office history behind "Titanic" and "Pirates of the Caribbean 2". The third film in the "Pirates" series, starring Johnny Depp as captain Jack Sparrow", opens in the US on May 25. The two previous films in Disney's "Pirates" series have grossed over 1.6 billion dollars, and Harris is tipping the third to be the grand-daddy of this year's sequel season.

"My money would be on Pirates," Harris said. "There's something about Johnny Depp as well. You just mention Depp and people go crazy. It's a lot of fun."

The trend of sequels reflected the cautious nature of studios as well as the enduring appeal of characters like Depp's Jack Sparrow and Spiderman, Harris said. "Studios are more and more afraid of trying something new," he said.

"The tried and true. In fact, the more familiar things are, the more people seem to like them. We seem to go more and more that way in books and music."

Yet the recent success of films like "300" -- a stylized historical epic about ancient Greece -- proved that rewards remained on offer for studios willing to take creative risks, Harris said.

"The studios don't want to take a chance," Harris said. "The films that they want to rely on are the movies that they think there's very little chance that they're going to lose money.

"But then you get something like "300" and look what happens. The different things do quite well."

Gitesh Pandya, an analyst with Boxofficeguru.com, said that while "Spiderman", "Pirates" and "Shrek" would slug it out as the biggest box-office films of the year, they would impact each other's earnings.

"May is going to be the biggest month in box-office history," he said. "You have three 800-pound gorillas stepping out at the same time.

"I don't think they're going to cannibalize each other that much. They're so important and so popular that people are going to take the time and see each of them."

Filler Story 4- All Conditions

Art Auction Sets Records

Three sculptures sell for record prices and Warhol Stars again at Phillips Auction

Three sculptures — one fashioned from a dozen African masks, a dead deer cast in bronze, and a ball of painted and chromium-plated steel mangled as if hit by a truck — by some of today's most popular artists brought record prices last night at Phillips de Pury & Company. After a week of records at the auction giants Christie's and Sotheby's, the contemporary-art sale at Phillips, the Chelsea-based boutique firm, had a mix of lower-priced works. Still, the lust to collect continued.
Of the 74 works, only 6 failed to sell. The auction totaled $33.3 million, just above its high estimate of $30.8 million.

Warhol has been a big draw this week, and last night Phillips was selling one of his seminal silkscreen paintings of a Campbell's Soup can, this one from 1965 and rendered in soft, almost washed-out shades of green, blue and orange. Only one bidder went for the painting, and Simon de Pury, chairman of Phillips and the evening's auctioneer, brought down the hammer right at the low estimate, $3 million, or $3.4 million with the fee Phillips charges buyers.

It was a high price compared with most last night; the audience clearly had no trouble dropping six figures but seemed hesitant to move higher. Although the painting was the evening's top seller, it paled in comparison with Warhol's "Green Car Crash (Green Burning Car I)," from 1963, which brought $71.7 million, a record for the artist, at Christie's sale of postwar and contemporary art on Wednesday night.
Phillips had two other Warhols last night, both camouflage images. One, from 1986, in bright orange and yellows, was estimated at $800,000 to $1.2 million; a telephone bidder paid $1.4 million. The other, from the same year but in shades of brown and green, was expected to sell for $500,000 to $700,000; it sold to a telephone bidder for $712,000.

The sale catalog's cover image, an untitled wall sculpture fashioned by the Conceptual sculptor David Hammons from 12 African masks, wood, metal, wire,

rope, straw and mirror, had been on for sale at art fairs recently, and today's savvy buyers knew it. Last night Phillips estimated it would sell for $1.5 million to $2 million. Again there was only one bidder for the work, which sold just below its low estimate, for $1.3 million, or $1.49 million including Phillips's fee. It was a record for the artist.

The sale included several works by the British artist Damien Hirst. "Naja Haje" (2007), one of his well-known "Dot" paintings, was expected to bring $800,000 to $1.2 million. Larry Gagosian, the Manhattan dealer, was the only bidder and paid a hammer price of $720,000, or $846,400 with Phillips's fee. The low estimate was $800,000. Mr. Gagosian had more competition for another work by the artist, "Loss of Memory Is Worse Than Death" (1994), a painted steel cage filled with formaldehyde containers, a mask, gloves and a syringe. Estimated at $300,000 to $400,000, it sold for $600,000. A painting by Gerhard Richter, "Three Grays One Upon the Other," a minimalist canvas created in 1966, was estimated at $1.2 million to $1.8 million; it sold for $1.3 million.

Ms. Brown's 2003 painting of a reclining nude attracted six bidders. It ended up selling to a telephone bidder for $992,000, more than twice its high estimate of $400,000. An early, larger and more complex painting, "The Pyjama Game" (1997-98), set a record for Ms. Brown at Christie's on Wednesday night, bringing $1.6 million.

Some big-name artists sell well no matter what. "Find a Quiet Table," a 1996 painting by Jeff Koons of a liqueur ad, sold for $824,000 after Adam Lindeman, a Manhattan collector, and a telephone bidder both tried to buy it. The price from the unidentified bidder was far above its high estimate of $600,000.
After the sale, Michael McGinnis, director of Phillips's contemporary-art department, said the strong results were due at least in part to the momentum from the sales earlier in the week.

Home

Pompeii Exhibit Comes to St. Paul Science Museum

Ancient Italy, meet modern St. Paul

In what is a coup for the Science Museum of Minnesota, more than 250 priceless artifacts from the infamously ruined city of Pompeii have been transported -- very carefully -- to the downtown St. Paul museum. The 10,000-square-foot exhibition opens Wednesday, its second stop on a four-city tour and already twice the size of its first installment in Mobile, Ala.

"A Day in Pompeii" will give visitors a close-up look at the remains of the southern Italian city, which was overcome with volcanic ash during an eruption of nearby Mount Vesuvius in 79 A.D. The disaster destroyed the city and is believed to have taken the lives of thousands of its citizens, yet the ash preserved artifacts of everyday life

The featured artificats -- national treasures of Italy -- were uncovered from beneath 30 feet of volcanic materialin this once-cosmopolitan city. The exhibit brings those priceless artifacts, along with body casts of eight of the victims of Vesuvius' fury, across the Atlantic to Minnesota for the first time. Visitors will have a once-in-a-lifetime opportunity to see treasures of ancient history. Many of the artifacts on display, including a stunning large- scale garden fresco, gold coins, jewelry, marble and bronze statuary, and other dazzling examples of ancient Rome's artistry andcraftsmanship, are precious and have never been on public display before2007. The artifacts paint a picture of everyday life and, along with the
body casts, provide a haunting connection between visitors of the 21st century and people who lived thousands of years ago. Among the highlights are:

• Loaf of bread, abandoned in baker's oven.
• Medical kit, used to heal ailments with a mix of science and magic.
• Media Theater for "A Journey to Pompeii," a virtual reconstruction of the city of Pompeii.
• Frescoes, including the large triptych from the House of the Golden Bracelet, two smaller panels and
other, smaller fresco studies.

• Cast of a watchdog, a chained pet in the throes of its last breath.

"What an extraordinary piece of archaeology," said Mike Day, Science Museum senior vice president. "They really bring it to heart. I saw people weeping in the body-cast gallery in Mobile."

The current exhibition -- a previous effort visited Boston and Chicago in the 1970s -- is on a two-year tour. In January, the Gulf Coast Exploreum Science Center in Mobile presented the show's U.S. debut. More than 135,700 people came through. Exhibits of the rarity, emotional content, quality, and name-recognition of A Day in Pompeii are hard to find and rarely travel to the U.S.

To improve upon the Alabama exhibit, curators have added a video component, an eight-minute movie called "A Journey to Pompeii," and an interactive floor map showing 20 of the world's most famous volcanoes. The museum also rewrote the label copy and translated it into Spanish.
The exhibit, insured for more than $5.5 million, arrived June 12 in five trucks. The artifacts had to be conditioned to the climate of the museum gallery for 24 hours; unpacking began June 14. That morning, half a dozen museum crew members gingerly inched a 9- by 4-foot panel of the largest garden fresco from a forklift onto the platform where it will rest for the next six months.
The exhibit is a dream come true for Day, who chased volcanoes for a video project earlier in his career.

"You'll find me up there multiple times as they unpack these items," Day predicted. "We knew they were coming, but there's still a fear I am going to wake up in the morning and Pompeii isn't going to be here."

Tickets: $5-$7 surcharge on regular museum admission. Tickets are dated and timed. Reservations recommended.
Audio tours: Admission includes two types of audio tours, an adult version that guides visitors through the artifacts, and a children's version that tells the story about a father and daughter living in Pompeii.

Home

Frisbee Still Flying High at 50

There are three basic ways to toss the famous plastic disc

Acadia Klain wasn't even a glimmer in her parents' eyes when one of her enduring passions was invented.

Klain is co-captain of Carnegie Mellon University's Ultimate Frisbee women's team, in which the plastic disc is used in a game that combines the skills of basketball and outdoor soccer.

The senior architecture major is 23. The Frisbee itself turned 50 this year.

Walter Frederick Morrison, the man credited with inventing the Frisbee, said recently that he got the idea as a teenager in the 1930s after his family began flinging popcorn can lids around to burn off the tryptophan from a Thanksgiving dinner.

It wasn't until 1955, though, that he invented the plastic disc, which he originally named the Pluto Platter in honor of all the UFO sightings being reported at the time.

Two years later, Morrison sold the rights to the disc to Wham-O Inc., which patented it as the Frisbee. The name was changed to evoke the pie tins made by the Frisbie Pie Co. of Bridgeport, Conn., which Yale students had been tossing around for years. Even though all of this predated Klain's appearance on the globe, she does own a piece of Frisbee history.

It was her sport, Ultimate Frisbee, that caused the disc to become more than just a national phenomenon and start spreading worldwide in the 1970s, said Phil Kennedy, a Frisbee aficionado and co-author of "Flat Flip Flies Straight: True Origins of the Frisbee."

The platter has spawned not just Ultimate Frisbee, but Frisbee Golf, in which the discs are thrown into baskets that function as holes; Freestyle Frisbee, which combines gymnastics and midair Frisbee tricks; the telegenic Canine Frisbee; Guts, a sort of Frisbee dodgeball in which teams fire the disc at each other from digit-threatening distances, and even attempts to set records in distance and time aloft, all governed by the World Flying Disc Federation.

For the average family or student gang headed to the park, though, these organized permutations of Frisbeeology are the last things on their minds.

Many of them have a more fundamental question: How do I throw the darn thing so that it won't dive-bomb into the grass six feet after it leaves my hand?

Klain has the answers, and she was happy to demonstrate the three basic Frisbee throws one morning last week at Carnegie Mellon's stadium.

First, there is the standard backhand. The key, she said, is to grip the disc tightly, fingers curled under the lip of the disc, thumb on top. That will ensure a good spin, which is critical to the Frisbee's flight path.

Second is the forehand flip. In this throw, the index and middle fingers are extended under the rim, with the thumb on top and the other two fingers curled into the palm. The crucial movement on the forehand flip is sharply flicking the wrist, she said.

Finally comes the hammer, an overhand throw least likely to be used in recreational Frisbee. Designed to get the Frisbee over a defender, it is gripped the same way as the forehand flip, but the Frisbee starts out in a vertical position next to the thrower's face and ends up rotating in a flat upside-down spin..

The Frisbee world distance record is held by Christian Sandstrom of Sweden, who hurled one about 820 feet (nearly three football fields) in 2002.

The flattest Frisbees can now be thrown so far, Kennedy said, that experienced disc golf players are considering competing on real golf courses, instead of the smaller customized courses they currently use.

Disc golf also has generated nearly 100 different types of Frisbees -- thin, flat ones for "drivers," heavier ones for "irons" and smaller, domed ones for "putters."

Aside from these embellishments, no one is attempting to alter the basic Frisbee design, the experts said. "I mean, how do you improve on simplicity?" asked inventor Morrison.

Home

Filler Story 7- High Choice Conditions Only

Point, Shoot, and Email

Digital cameras, long tethered to the PC, are increasingly breaking loose

Nikon Inc., Eastman Kodak Co. and Sony Corp. have recently introduced new digital cameras with integrated wireless technology such as Wi-Fi or Bluetooth. Earlier wireless digital cameras allowed users to transfer their pictures to a nearby PC without a bulky attachment cord. But the new generation of devices goes further by wirelessly sending photos to cellphones and other gadgets, photo-sharing Web sites and email addresses.

In March, Sony introduced its first digital camera that can wirelessly send and receive photos from other Sony wireless cameras, as well as upload photos to PCs. Nikon in February launched a camera that can wirelessly email pictures to Flickr, Yahoo Inc.'s photo-sharing site, or to an email address, and can also upload them to a Nikon photo-storage and sharing site. And Kodak last year updated one digital-camera model that allows users to wirelessly upload photos to and view photos on Kodak's photo-sharing site and launched another model that can send photos to Bluetooth-enabled devices such as printers, BlackBerrys or cellphones.

The integration of wireless technology into digital cameras -- which started two years ago but hasn't gone mainstream until recently -- is part of an effort to fight back against camera-equipped cellphones and make digital cameras more of a stand-alone device. For years, digital cameras had to be docked or attached to a PC for consumers to get their photos. When people traveled, they worried about filling up their cameras' memory cards or losing them, and could only empty the cameras by heading home to a PC or toting along their laptops.

By allowing users to wirelessly send pictures to a photo-sharing Web site or cellphone, camera makers are giving users the same flexibility that they have with camera phones. For instance, travelers can leave their laptops behind and use a hotel's Wi-Fi network to email pictures to themselves or upload the shots to photo sites. Plus the cameras offer better photo quality than the phones. Digital point-and-shoot cameras boast an average picture quality of seven megapixels, while camera phones have an average 1.3-megapixel picture quality, according to IDC.

Overall, wireless digital cameras made up just 1% of the 30.6 million digital cameras sold in the U.S. last year, according to IDC. Ron Glaz, an IDC analyst, says successfully implanting more wireless technology into cameras is crucial for the industry. "The whole market is moving wireless," he says. "If they don't do it, the camera phone will become the solution."

Wi-Fi cameras aren't always easy to use, however -- partly because Wi-Fi isn't available everywhere yet. That may leave some users hunting around for a "hot spot," or wireless network, before they can use their camera. Some of the new wireless cameras can connect to one kind of device, but not others. Kodak's Bluetooth camera, for instance, can sniff out and connect to Bluetooth devices within roughly 30 feet of the camera but doesn't wirelessly connect to PCs.

Wireless cameras are also pricier than their wired counterparts. Sony's new camera, the Sony Cyber-shot DSC-G1, sells for $600, compared with $400 for other high-end wired models. The company says the price is due partly to the high-resolution liquid crystal display on the camera and its two gigabytes of internal storage built-in. Meanwhile, Nikon's new wireless digital camera, dubbed the S50c, costs $350. That's $50 more than the S50, the same camera without wireless technology.

For those who don't want to shell out for a new wireless camera, some companies are creating less expensive technology to turn ordinary digital cameras into wireless devices. Eye-Fi Inc., a Mountain View, Calif., start-up, has combined networking technology and memory chips into a single card. The card can be inserted into digital cameras and will wirelessly send pictures stored on the card to computers or photo-sharing Web sites. An Eye-Fi spokeswoman says the card will start selling in the U.S. in the fall for roughly $100.

Home

Splash down in the Dells

Wonders and warnings: Your guide to all that sinks and swims at Wisconsin's popular family fun spot.

A decade ago, our neighbors invited my husband and me to pack up our three young kids and join them for a summer weekend in Wisconsin Dells. Happy to experience one of the Midwest's most popular family getaways, we hopped into our car a few days later and took off.

Today, after vacationing in the Dells more summers than I can count, I know what to see, where to stay, where to dine and what to avoid no matter how much your little one begs. So before you plan your own trip, read on.

Splashiest Outdoor Water Park

Noah's Ark opened in 1979 as the Dell's first outdoor water park, and it remains the undisputed king. The 70-acre park in the heart of the Strip has nearly 50 water slides -- from kiddie size to heart-stopping vertical plunges -- plus wave pools, winding rivers, amusement park rides, mini golf and more. Every season a new ride is unveiled, ensuring there's always a reason to come back -- and that Noah's Ark remains America's largest water park.

Most fascinating museum

Believe it or not, Ripley's Believe It Or Not Museum is worth the $12 admission ($10 for kids 5-11). Sure, there are a few lame exhibits, like the barbed wire collection. But the majority are so fascinating, horrifying or odd that they'll keep you spellbound. One of my favorites: the amazingly lifelike statue of Hananuma Masakichi. After being diagnosed with tuberculosis, the Japanese gentleman recreated his own anatomically correct image as a gift for his fiancée, using tiny pieces of wood so skillfully interlocked you can't see any lines. To top off this masterpiece, he adorned it with his own hair, fingernails and toenails. Rumor has it that when his fiancée saw the statue, she dumped poor Masakichi -- who later learned he didn't have TB after all .

Best Live Show

Master illusionists at the Rick Wilcox Theater and the Fab '50s Live musical dinner show at Chula Vista are darn good. But nothing's quite as captivating as the 55-year-old Tommy Bartlett Show. This year's 90-minute, pirate-themed extravaganza features a high-speed water-skiing/stunt-and-trick segment, followed by various land-based performances, such as T.J. Howell's juggling show with the likes of machetes, fire and bowling balls.

Best New Attraction

My family was excited to stumble upon Wizard Quest last year, an interactive computer attraction. Players get 90 minutes to wind through a 13,000-square-foot, castle-like facility (or "quadrasphere") and collect enough "glimmers" to release four imprisoned wizards. You receive glimmers every time you correctly answer one of the riddles or questions scattered throughout the facility, which is filled with secret passages, hidden entrances and even some traps.

Wildest Experience

You may not realize it when you're driving bumper-to-bumper on the Strip, with a four-story Trojan horse looming on one side and a 130-foot bungee tower on the other, but the Dells area contains some prime places to commune with nature. The best is Devil's Lake State Park, about 20 minutes south. Wisconsin's most popular state park, Devil's Lake sits in one of the oldest river valleys in the world, created when swirling waters cut a gorge into hard quartzite millions of years ago. The scenic park features a crystal-clear lake and nearly 30 miles of hiking trails that criss-cross the surrounding 500-foot cliffs.

Biggest Tourist Trap

Even if you've got little kids, skip Storybook Gardens. It may seem enchanting, with its landscaped grounds featuring giant characters from children's stories (Simple Simon and Cinderella, for instance), but the 1950s-era metal characters are more worn than quaint. There's a tiny train and carousel, but it's insulting to pay for similarly-faded mechanical rides after you've shelled out $11 for adults and $9 for kids over 2 just to get in. A few years ago the owners added a wildlife park featuring giraffes, zebras and lions, but the place is still more whimper than roar.

Home

Three Hits and a Bomb

What to expect from CBS this fall

Yesterday, about eight-tenths of an inch of precipitation fell on New York City, so CBS's annual post-presentation party at Tavern on the Green was a moist affair. To venture into the courtyard was to get soaked, though it was still preferable to being inside the restaurant, which was as dank as a mosh pit. When a dude from CBS's New York affiliate told me that it had been eight years since rain fouled this parade, I wondered aloud where Leslie Moonves—the network's top dog, a charmer who traditionally stakes out an al fresco sweet spot about five yards from the coat check—would instead hold court. "Well," said the dude, "where he really holds court is the private party afterwards." Touché, Mr. Important Guy, touché!

When I finally found Moonves, he was standing just inside an entrance to the Crystal Room, but I had nothing to ask. Many partygoers had set aside their crudités for a moment to chat about CBS's six new shows, and everything now seemed powerfully clear. CBS—at the top of the heap in the ratings, at the bottom of barrel when it comes to buzz—had gone into pilot season looking to refresh a schedule horsy with aging procedural dramas. The network came out of it with one passable sitcom, three possible hits, one show I am never going to watch, and a high-profile bomb.

The Big Bang Theory: A sitcom in which two mega-nerd super-geniuses share an apartment. "They can solve any problem except one—the hot new girl across the hall." Nerds are in this year, so I'd like to inform the Nabokov scholars in the audience that, in the pilot episode, VN's name appears as an answer in a crossword puzzle.

Cane: Jimmy Smits, playing the son of a Cuban-American rum baron, tries leading the family business to greater glory. A family saga where the stakes are higher than the sniffling of Brothers & Sisters? A Latino drama? Smits—tall, brown, and chiseled—as Michael Corleone meets Tony Montana meets Bobby Ewing meets Gregory Peck? This looks like the most likely to succeed.

Kid Nation: A few years back, some English channels aired a program in which a horde of prepubescent girls were left to their own devices in a Big Brother-style house. Does anyone remember the name of it? Or how many minutes it took for matters to reach Lord of the Flies proportions? We'll see how things go for the 40 children sent to govern themselves in a ghost town in this reality show. It looks, to me, potentially huge.

Moonlight: A misty drama about a crime-fighting vampire. Plainly atrocious, as even CBS employees will gaily volunteer. Still, several million sapheads watch The Ghost Whisperer, the supernatural procedural drama that will precede it at 8 p.m. on Fridays, so maybe it's got a shot.

Viva Laughlin: Hugh Jackman, well-known among showbiz insiders for his love of musicals, has helped to import Viva Blackpool—a kind of karaoke drama about a struggling casino—from the BBC. Viva Laughlin is already dead. People didn't get it. People who did musical theater in high school didn't get it. People didn't understand why it was scheduled for Sundays at 8 p.m., leading into the macho procedural drama Cold Case.

Swingtown: A midseason replacement about wife-swapping in 1970s Chicago. They'd promised this would be sexed up—two weeks ago, somebody spun Nikki Finke, such that she wrote it might be too hot to air—and it looks satisfyingly racy indeed. The first scene of the preview found a commercial airline pilot smoking a cigarette in the cockpit while someone with a blond up-do attended to his lap. You know you were sold at wife-swapping.

The rain let up a bit. Steve Kroft was enjoying the lamb chops. The 24-year-old ad kids had ceased even trying to hold their liquor. Moonves was gone, but, curiously, Mr. Important Guy was still hanging out, hacking butts, drinking beer.

Home

Massive Shipwreck Discovered

New find may set record for riches

Deep-sea explorers said Friday they have mined what could be the richest shipwreck treasure in history: 17 tons of colonial-era silver and gold coins estimated to be worth $500 million.

A jet chartered by Tampa-based Odyssey Marine Exploration landed in the United States recently with hundreds of plastic containers brimming with coins raised from the ocean floor, Odyssey co-chairman Greg Stemm said. The more than 500,000 pieces are expected to fetch an average of $1,000 each from collectors and investors.

"For this colonial era, I think (the find) is unprecedented," said rare coin expert Nick Bruyer, who examined a batch of coins from the wreck. "I don't know of anything equal or comparable to it."

Citing security concerns, the company declined to release any details about the ship or the wreck site. Stemm said a formal announcement will come later, but court records indicate the coins might come from a 400-year-old ship found off England.

Because the shipwreck was found in a lane where many colonial-era vessels went down, there is still some uncertainty about its nationality, size and age, Stemm said, although evidence points to a specific known shipwreck. The site is beyond the territorial waters or legal jurisdiction of any country, he said.

"Rather than a shout of glee, it's more being able to exhale for the first time in a long time," Stemm said of the haul, by far the biggest in Odyssey's 13-year history.

In keeping with the secretive nature of the project dubbed "Black Swan," Odyssey also isn't talking yet about the types, denominations and country of origin of the coins.

Bruyer said he observed a wide range of varieties and dates of likely uncirculated currency in much better condition than artifacts yielded by most shipwrecks of a similar age.

The Black Swan coins -- mostly silver pieces -- likely will fetch several hundred dollars to several thousand dollars each, with some possibly commanding much more, he said. Value is determined by rarity, condition and the story behind them.

The richest ever shipwreck haul was yielded by the Spanish galleon Nuestra Senora de Atocha, which sank in a hurricane off the Florida Keys in 1622. Treasure-hunting pioneer Mel Fisher found it in 1985, retrieving a reported $400 million in coins and other loot.

Odyssey likely will return to the same spot for more coins and artifacts.

''We have treated this site with kid gloves and the archaeological work done by our team out there is unsurpassed,'' Odyssey CEO John Morris said. ''We are thoroughly documenting and recording the site, which we believe will have immense historical significance.''

The news is timely for Odyssey, the only publicly traded company of its kind.

The company salvaged more than 50,000 coins and other artifacts from the wreck of the SS Republic off Savannah, Ga., in 2003, making millions. But Odyssey posted losses in 2005 and 2006 while using its expensive, state-of-the-art ships and deep-water robotic equipment to hunt for the next mother lode.

''The outside world now understands that what we do is a real business and is repeatable and not just a lucky one shot deal,'' Stemm said. ''I don't know of anybody else who has hit more than one economically significant shipwreck.''

In January, Odyssey won permission from the Spanish government to resume a suspended search for the wreck of the HMS Sussex, which was leading a British fleet into the Mediterranean Sea for a war against France in 1694 when it sank in a storm off Gibraltar.

Historians believe the 157-foot warship was carrying nine tons of gold coins to buy the loyalty of the Duke of Savoy, a potential ally in southeastern France. Odyssey believes those coins could also fetch more than $500 million.

But under the terms of a historic agreement Odyssey will have to share any finds with the British government. The company will get 80 percent of the first $45 million and about 50 percent of the proceeds thereafter.

Filler Story 11- High Choice Only

Subway Violinist Comes to St. Paul

Passersby at a D.C. subway station may not have recognized Joshua Bell, but the SPCO has become accustomed to his face

Joshua Bell, one of the most recognizable violinists in the world, went famously unnoticed one day in January when he posed as a street musician in a Metro station in Washington, D.C. But members of the St. Paul Chamber Orchestra have become very familiar with the star violinist over the past three years.

Bell has conducted nine programs with the SPCO as an Artistic Partner. Next weekend, he will play the final concerts of his partnership, which has drawn on his talent as a violinist as well as his emerging interest in conducting.

"I've had a great time here," said Bell, seated in a practice room in the SPCO offices last week, still perspiring after a vigorous 2½-hour rehearsal. "Usually, I do a week with an orchestra and then come back two years later. And that's fine. But what I've done here is develop a relationship with the players, and I seem to have developed a rapport with audiences, too. I see the same people at the concerts."

Bell was no stranger to the Twin Cities area even before he hooked up with the SPCO. He toured Europe with the Minnesota Orchestra in 2004. In the summer of 1996, during a birthday concert for conductor David Zinman, Bell walked on stage with another young violinist, Pamela Frank, both wearing bib overalls and straw hats, and the two of them played a dueling fiddle hoedown number that brought down the house. But he said that the SPCO gig has been a special experience.

" It's been a big year for the 39-year-old Bell. Last month he received the Avery Fisher Prize, a gift of $75,000 awarded once each year for outstanding achievement and excellence in music. Shortly thereafter, Bell's alma mater, the University of Indiana (where he was a protégé of legendary violinist Joseph Gingold), announced that Bell will join the faculty starting in the fall of 2008.

"Right now, it's a small thing, just a couple of weeks a year," Bell said. "But hopefully, it will grow."

Yet neither of these carries the impact of his experience playing his $3.5 million Stradivarius for 43 minutes at a D.C. Metro stop in January, wearing jeans, a long-sleeved T-shirt and a Washington Nationals baseball cap, with his case open at his feet for passersby to toss their spare change. Of the more than 1,000 people who walked by, a mere seven stopped to listen for more than a minute, and only 27 gave money. The total take: $32.17. Thanks to a widely read article by the Washington Post's Gene Weingarten, Bell's experience became a cautionary tale of our indifference not just to great art but to the less fortunate.

" I did it because I thought it would be a fun experiment, and it was a journalist I knew. The whole idea wasn't meant to see if people recognized me. That's what some people thought, that it was some kind of ego stunt. They used me because they wanted someone who was a proven musician."

A friend of Bell's who is a musician and an expert in artificial intelligence wrote an essay on the experience, and Bell found he agreed with it.

"For my friend," he said, "it highlighted the fact that in today's society, music -- and great music -- is often relegated to the background, like in elevators and restaurants. Music has become like wallpaper, like if you painted every wall with Picassos and Monets. You don't even notice it anymore. We're all in a rush. I mean, I'm not even sure that I would have stopped or even listened to someone playing at the Metro.

"If the experience proves something, it's that if you're going to get anything out of classical music, you've got to give it your full attention. Classical music is something you have to concentrate on and actively use your mind, and, you know, you just can't do that in a Metro station."

Home

Filler Story 12- High Choice Only

Nascar Driven by Superstions

Green? Peanuts? You won't see these on the track

NASCAR drivers take safety precautions seriously. They step into flame-retardant jumpsuits. They wear crash-proof helmets. They're strapped into a five-point harness, as well as head and neck restraint systems. And most of them won't, under any circumstances, eat peanuts before the race.
Peanuts?

Nutty but true
It's true. Peanuts are a long-standing taboo for NASCAR drivers. The origin of the superstition is up for debate. One story has some of Junior Johnson's teammates chomping peanuts in the shop right before an engine blew. The logical conclusion? Blame the peanuts.

Unlucky 13
If you were driving 3,400 pounds of metal at 200 miles per hour, just inches away from other drivers trying to nudge you out of the way, you'd want some good luck, too. You'd probably avoid black cats and walk around ladders, and you most likely wouldn't want anything to do with the number 13.
You wouldn't be alone. Many drivers consider 13 unlucky when it comes to car numbers, pole positions, and the day of the month. Nobody was more scared of number 13 than 1962 and 1963 cup champion Joe Weatherly. When he qualified for position 13 at Bristol in 1962, he insisted that it be changed to 12a. And he refused to enter the 13th Southern 500 in Darlington until the name was changed to the "12th Renewal of the Southern 500."

It's not easy being green
If you look at the track during a NASCAR race, you'll see of a sea of yellow, blue, red and black cars, but one thing you won't see too much of is green. The discomfort with green goes beyond the racetrack. "The luck of the Irish" notwithstanding, green has actually been considered an unlucky color for several centuries in the United States and the United Kingdom. Scottish folklore describes the "Green Lady" as a ghost who is a harbinger of bad news. The theater world has also long considered it to be an unlucky color. It's supposed to be, along with black, the unluckiest color for bridal gowns.
So green was already a bit on the outs, but a couple of early racing tragedies might have secured its fate as a racing "Fashion Don't." The accidents have

become part of racing lore, where facts sometimes mingle with fiction, but the first story is that in 1911 Lee Oldfield's car blew a tire, sending it careening through the infield, where it killed 10 spectators. The car? Green.
Whatever the reason, "green avoidance" is a tradition in NASCAR. The most superstitious guy in NASCAR history was Weatherly, who was just as scared of green as he was of the number 13. Legend has it that he once raced without socks because rain had turned his socks from blue to green.

Are the times a-changing?
Several drivers are flirting with disaster and doing the almost unthinkable. Joe Nemechek fearlessly drives the Chevrolet #13, and J. J. Yeley drives a green car. Not a car with a few green decals, but an unapologetically bright green car. He wears a green jumpsuit to match. Jeff Burton drives an orange car in his Nextel races, but he drives a green car in Busch races. He's not doing half bad either, racking up wins in that "unlucky" car. Sterling Marlin also drives a green car, but he makes up for it by eating a bologna sandwich before every race as a lucky ritual.

The color of money
Ultimately, enough of the green stuff (money, that is) can cause a driver to buck tradition. Ricky Rudd drives a car plastered with the Snickers logo, although it's not clear if peanuts encased in nougat, caramel and a milk chocolate coating still bring bad luck. If a company with a green logo offers enough sponsorship dollars, fewer and fewer owners and drivers will say "no way." Sponsorships pay the bills and, to some drivers, turning them down because of superstitions is starting to seem a little … nuts.

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