SELECTIVE EXPOSURE TO CAMPAIGN COMMUNICATION: THE ROLE OF ANTICIPATED AGREEMENT AND ISSUE PUBLIC MEMBERSHIP

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ABSTRACT

This article explores two hypotheses about how voters encounter information during campaigns. According to the *anticipated agreement* hypothesis, people prefer to hear about candidates with whom they expect to agree. The "*issue publics*" hypothesis posits that voters choose to encounter information on issues they consider most important personally. We tested both hypotheses by distributing a multimedia CD offering extensive information about George W. Bush and Al Gore to a representative sample of registered voters with personal computers and home Internet connections during the closing weeks of the 2000 campaign. Exposure to information was measured by tracking individuals' use of the CD. The evidence provided strong support for the issue public hypothesis and partial support for the anticipated agreement hypothesis. Republicans and conservatives preferred to access information about George Bush, but Democrats and liberals did not prefer information about Vice President Gore. No interactions appeared between these two forms of selective exposure.

Classical theories of democracy presume that citizens are reasonably well informed about public affairs. Revisionist accounts, while acknowledging that most citizens fall short of the democratic ideal, still presume some minimal level of exposure to political information. The question of just how much exposure occurs is relevant to a wide range of scholarship exploring everything from the impact of campaigns on voters' level of knowledge about the candidates (see, for example, Druckman, 2005; Craig et al. 2005) to the effects of campaign messages on voter preference (Johnston et al. 2005; Hillygus and Jackman, 2003). In general, the question of individual variability in exposure to information is fundamental to political communication research.

We designed this study to explore individual differences in exposure to campaign information. Monitoring the information choices of a large sample of voters over the course of a campaign is a challenging task. We used a relatively new form of campaign communication (a multimedia CD-Rom), which made it possible to track the information voters saw fit to encounter. By providing real voters with real information about real candidates in the context of a significant election (the 2000 presidential election), our research design permitted us to test a pair of long-standing hypotheses (1) the "anticipated agreement" hypothesis -- people seek out information about candidates with whom they expect to agree and avoid information about candidates with whom they expect to disagree; and (2) the "issue public hypothesis" -- people seek out information on policy issues to which they attach a great deal of personal importance.

We begin by reviewing the literature on voluntary exposure to political information and outlining the theoretical rationale for the hypotheses. Next, we describe our methodology, outline the findings, and spell out their implications for understanding voter behavior and campaign communication more generally.

Alternative Accounts of Exposure to Campaign Information

Fifty years ago, voters relied primarily on partisan sources to learn about the candidates. The messages presented by these sources had clear agendas, so voters were exposed to one-sided information that favored "their" candidate (Lazarsfeld, Berelson, and Gaudet 1948). Over the subsequent years, electoral reforms weakened the role of parties and made candidates increasingly reliant on the news media, especially television. Given the norms of journalism, no matter which channel voters tuned in to, they encountered the same body of information, according balanced attention to the competing candidates. In the era of "old media," therefore, it was relatively difficult to exercise partisan selectivity in exposure to the campaign (Mutz and Martin 2001).

But the explosion of "new media" over the past two decades has renewed opportunities for selective exposure. Voters can either avoid news coverage of campaigns altogether or tune in continuously, and they can rely on mainstream news sources or turn to sources that offer a more one-sided and partisan perspective on the candidates and issues. The proliferation of media sources has enhanced voters' ability to be selective in the information they encounter. But just how does this selection occur? Past research suggests two possible forms of what we refer to as "selective exposure."

Anticipated Agreement. Formulated in the heyday of cognitive consistency theories, the "anticipated agreement" hypothesis posited that voters prefer to avoid information that clashes with pre-existing beliefs (e.g., Festinger 1957) and instead put themselves in the path of information that they expect will reinforce their beliefs and attitudes.[1] Early tests of the hypothesis documented the tendency of partisan voters to report greater exposure to appeals from the candidate or party they preferred (Lazarsfeld et al. 1948; Schramm and Carter 1959; Sears

and Freedman 1967). The preference for in-party exposure, considered the principal explanation for the reinforcing effects of campaigns (Klapper 1964), was deemed antithetical to the democratic ideal of reasoned choice. As Lazarsfeld et al. put it, "In recent years there has been a good deal of talk by men of good will about the desirability and necessity of guaranteeing the free exchange of ideas in the market place of public opinion. Such talk has centered upon the problem of keeping free the channels of expression and communication. Now we find that the consumers of ideas, if they have made a decision on the issue, themselves erect high tariff walls against alien notions" (Lazarsfeld et al. 1948, p. 89).[2]

More direct tests of whether people deliberately avoid exposure to information they expect to find disagreeable have proven equivocal at best. In fact, early reviews of the literature typically concluded that dissonance avoidance was only a weak motivation guiding the acquisition of political information (see Sears 1968; McGuire 1968). Although a handful of controlled studies did uncover traces of motivated exposure to in-party sources (Bartlett et al. 1974; Stempel 1961; Sweeney and Gruber 1984), most studies did not (e.g., Sears 1965; Chaffee and Miyo 1983; Meffert et al. 2006; for a review, see Sears and Freedman 1967). And although correlational studies have documented *de facto* selective exposure to congenial information, more direct, controlled tests of motivated or deliberate selective exposure to such information produced mixed evidence at best suggesting that a preference for congenial information occurs only under very limited circumstances (e.g., Frey 1986). For example, people first asked to make a decision and then presented with information choices tend to select information consistent with their decision. Thus, it appears that people are more likely to encounter attitude congruent information as a result of their social milieu rather than any active choices to avoid incongruent information (see Sears and Freedman 1967).

Virtually all controlled research to date on selective exposure has relied on non-spontaneous or limited information search situations. That is, the range of information choices made available to subjects is constrained by the researcher. As Cotton pointed out (1985, p. 29), this design fails to address "how people actively seek and avoid information on their own." In designing the study reported here, we revisited the anticipated agreement hypothesis by allowing participants to select from a wide range of consequential real-world information.[3] During the closing stages of the 2000 campaign, we presented a sample of registered voters with an extensive compilation of information concerning the two major candidates. We then monitored the degree to which they gravitated to information provided by the candidate they preferred.

Issue Publics. The issue public hypothesis derives from the problem of information overload; attention to an unlimited range of political issues is simply impossible for most people. Instead, as Krosnick (1990) has proposed, people develop particular interests in policy issues toward which they develop attitudes of personal importance to them. To attach importance to a policy attitude is to be a member of that issue's "issue public" (Boninger, Krosnick, and Berent 1995). Attitudes toward policies considered more personally important have greater impact on vote choice (Granberg and Holmberg 1986; Krosnick 1988; McGraw, Lodge, and Stroh 1990) and are more likely to be expressed to elected representatives through behaviors such as letter-writing, and supporting advocacy organizations (Krosnick and Telhami 1995; Schuman and Presser 1981).

Since attaching personal importance to a policy attitude motivates people to use and express the attitude, acquiring information about the issue is likely to be useful. If a person's vote choice is based partly on agreement with the candidates on issues considered personally important, then the person will need information that reveals the candidates' attitudes on those

same issues. In short, members of an issue public will be especially motivated to encounter information on "their" issue.

Price and Zaller (1993) reported evidence that might be viewed as testing this relevance-based exposure hypothesis, although only indirectly. They conducted 24 tests of whether people whose characteristics suggested they might belong to a particular issue public were more able to recall recent news on the issue. They found support for the issue public hypothesis in only about half of their tests. However, several of their indicators of issue public membership were of questionable validity. For example, "reading a great deal of international news in the newspaper" was treated as a potential predictor of recall of international events, while frequency of reading "People" magazine was considered a potential predictor of recall of news reports about Zsa Zsa Gabor. These measures of self-reported exposure to specific information sources do not represent the issue public hypothesis adequately.

In another related investigation, Iyengar (1990) found that recall of news reports about social security and racial discrimination increased significantly among older and minority viewers, respectively. Thus, people directly affected by social security and civil rights policies were most attentive to news stories about these issues. This study found other evidence consistent with the issue public hypothesis as well: African-Americans, for instance, though less informed than whites on typical "civics knowledge" questions, proved more informed on matters pertaining to race and civil rights (Iyengar 1990). Burns et al. (2000) reported parallel findings on gender and information about women's issues: women knew more than men. But again, this analysis was based on an inference that those who had retained information must have chosen greater exposure. In contrast, Holbrook et al. (2005) showed that attaching more personal importance to an issue leads people to remember information on that issue better, holding

exposure constant. Thus, the evidence reported by Price and Zaller (1993), Iyengar (1990), and Burns et al. (2000) could reflect better retention rather than selective exposure by issue public members. In the study reported here, we avoided confounding retention with exposure.

In summary, there are two major forms of selective exposure. The first -- partisan selectivity -- is based on source cues; people prefer to encounter information from favored sources. The second -- the issue public hypothesis -- is based on message content; people prefer to encounter information about issues that they care about. Previous studies have tended to focus on each of these hypotheses separately. In this study, we also attempted to identify possible spillover between the two forms of selective exposure. Specifically, we investigated whether partisans not only favor exposure to their preferred candidate but also exposure to issues on which their candidate has a favorable reputation. Conversely, we examined whether members of particular issue publics are more or less inclined to encounter either of the two candidates.

STUDY DESIGN

To test the extent of partisan and issue-based selective exposure in the context of an ongoing presidential campaign, we produced an extensive and easily usable CD-ROM database about both major party candidates running in the 2000 presidential election. The CD was distributed to a representative sample of American adult Internet users two weeks before Election Day. We tracked individuals' use of the CD electronically, so that we could see what information each person chose to acquire and what he or she chose to forego. These individuals also answered an extensive questionnaire measuring an array of variables we thought might predict their use of the CD.

Sampling

We arranged for the research firm of Knowledge Networks to deliver the CD to a sample of adult Americans. Knowledge Networks has recruited a representative panel of American households through standard telephone RDD survey methods. Their panel members (over 100,000 people between the ages of 16 and 85) receive free access to WebTV, which allows them to surf the Internet and send and receive email. In exchange, these individuals agree to complete a brief questionnaire each week (for details on the survey methodology and response rates, see Krosnick and Chang 2001; Dennis 2001). Because our study required a greater time commitment than a typical survey, we offered participants an additional incentive of $10.00.

Among Knowledge Networks panel members, 13,603 registered voters who had a personal computer at home with a CD-ROM drive and Internet access (so as to permit uploading an electronic file), were initially invited to participate in the study. Participants needed a computer and CD-ROM drive to be able to use the CD at all, and Internet access was necessary to permit transmission of the CD usage tracking data to Knowledge Networks. Of the 1,199 who agreed to participate, a sample of 600 participants was drawn. Participants were mailed the CD on October 23, 2000.[4]

Participants were informed that the CD was an educational initiative of XXXXX University, that they were free to use the CD as they saw fit, and that their usage would be recorded. We also requested that participants not share the CD with other members of their families. Immediately following the election, Knowledge Networks administered our posttest survey. 226 participants completed the questionnaires for a response rate of 37.7%.

Although the CD was mailed to a representative sample of registered voters with

computers and Internet access, the people who chose to use the CD were not a representative subset of this larger group. There were small discrepancies between participants and non-participants in terms of standard demographic variables.[5] Participants tended to be more educated, affluent, and between the ages of 25 and 44. These differences can be attributed to the fact that we sampled registered voters with Internet access, instead of all American adults. While our results are not generalizable to the general population, this study offers an unusual opportunity to test hypotheses concerning selective exposure in a real-world setting and with behavioral rather than self-reported measures of exposure to campaign information.

Design of the CD

As the user navigated through the CD, the built-in tracking feature of the CD recorded every visited page (in the order of visit), the number of times they used the CD, and the length of each viewing session in a log file on the user's computer hard drive. Upon completing the post-election survey, participants were given instructions for finding and uploading their log-files.

Once participants put the CD-ROM in the disk drive, a screen appeared with installation instructions. Once the installation was completed, the CD could be used without restarting the user's computer. The software worked on IBM-compatible and Macintosh computers.

The multimedia CD, entitled *The Campaign Sourcebook*, offered text of the candidates' campaign speeches (delivered between July 1 and October 7, 2000), video of the televised ads aired by the candidates and their parties, and the texts of the two major political parties' platforms.[6] The CD also included soundtracks and transcripts of the candidates' nomination acceptance speeches and the first televised (held on October 8, 2000). The CD software enabled users to scan the database selectively, applying their own criteria for comparing the candidates.[7]

The *Campaign Sourcebook* consisted of twelve thematic chapters. The opening "Overview" chapter (pp. 5-128) introduced readers to the two major candidates, described their family backgrounds and career experiences, and offered a full transcript and audio file of the first presidential debate. Each of the eleven remaining chapters addressed a particular policy issue, as follows: (2) Economic Issues, (3) Monetary and Fiscal Policy, (4) Government Management, (5) Education and Youth, (6) Health Care and Retirement, (7) Poverty and Inequality, (8) Crime, (9) Environment and Natural Resources, (10) Civil Liberties and Constitutional Rights, (11) Campaigns and Elections, (12) Foreign Policy and National Defense.

The list of chapters appeared on the first page as the table of contents, and clicking on each chapter title produced a detailed list of the contents of the chapter -- the "subchapter index page." An example of a subchapter index page appears in Figure 1. As shown there, the Health Care and Retirement chapter offered text on four specific policy issues: health insurance, social security, Medicare and prescription drugs, and veterans' benefits. Under each specific issue title appeared the names of the two candidates, Bush and Gore. Participants could click on either name to read the text from that candidate addressing the issue appearing above the name. Thus, the chapter consisted of eight subchapters. In total, there were 62 subchapters about a single issue and single candidate, plus a subchapter featuring both candidates (the first presidential debate).

<Figure 1 about here>

If the participant clicked on "Bush" under Medicare and Prescription Drugs," he or she would see the first page of that Bush subchapter (See Figure 2). The clickable header displaying the chapter title was always visible to participants allowing them to move quickly to other chapter index pages, and thus to any subchapter of interest. CD users could also search for

information via a keyword-based process. In addition, a user could jump directly to a page by simply typing in the page number.

<Figure 2 about here>

In sum, the CD offered an "equal opportunity" information environment in which users could encounter information from either candidate with equal ease. The two candidates were roughly equally represented in terms of the number of pages and subchapters that focused on them: the 31 subchapters about Mr. Bush amounted to 284 pages, while 309 pages comprised the 31 subchapters about Mr. Gore.[8]

Operationalization

Our dependent measures of exposure to information reflect actual CD use. In the case of exposure to the candidates, we tallied the number of visits to pages featuring either Bush or Gore. In the case of exposure to issue content, we computed the total number of visits to the pages of each subchapter, including multiple visits to the same page. As a behavioral measure of exposure, CD use is preferable to self-reports, which are subject to both errors of memory and self-presentational biases (see Ansolabehere, Iyengar, and Simon 1999). Our exposure tracking process was minimally reactive because participants used the CD at their own discretion, when they chose to, and in the privacy of their home or elsewhere, although they did know their behavior would be studied by researchers later.

The post-test survey included an array of measures that permitted testing our selective exposure hypotheses. To test the anticipated agreement or partisan selectivity hypothesis, we assessed whether participants who identified themselves as Republicans or conservatives[9] would be more likely to encounter information about Bush than Gore, whereas participants who

identified themselves as Democrats or liberals would be more likely to show the opposite pattern. In order to indicate whether a subchapter contained information about Mr. Bush or Mr. Gore, we first created two dummy variables capturing the content specific to each of the two candidates. More specifically, "Bush Content" was coded 1 for the 31 subchapters containing information about Mr. Bush and 0 for the 31 Gore subchapters and the debate subchapter.[10] Subsequently, we created interaction terms "strong Republicans x Bush Subchapters," "strong Democrats x Bush Subchapters," "strong conservatives x Bush Subchapters," and "strong liberals x Bush Subchapters." The anticipated agreement hypothesis predicts a pattern of significant and positively signed interaction coefficients linking strong Republicans and conservatives with Bush content and strong Democrats and liberals with Gore content

Next, we pursued the issue public hypothesis by assessing whether people whose material interests or social identities made them likely to be affected by a particular issue public were more apt to access that issue. We first created a series of dummy variables corresponding to the issue content of the CD. These included health care (Subchapters 30 and 31 versus all others), education (consisting of the subchapters labeled "School Performance," "School Choice and Higher Education," and "Youth Culture and Family Values"), veterans' issues (corresponding to the two relevant subchapters), urban issues (consisting of subchapters labeled "Welfare Reform and Child Care" and "Housing and Urban Development"), and abortion (subchapters 52 and 53).

We posited that the health care issue public would include people who worked in the health care industry.[11] We further posited that the social security/Medicare issue public would include people over age 60 and people who had a parent older than age 70;[12] that the public education issue public would include mothers of children between ages 8 and 18,[13]and low-income individuals (since school quality is particularly problematic for many such individuals).[14]

Similarly, we posited that the veterans' issue public would consist of people who had served in US military,[15] the urban problems issue public would include people who lived in urban areas,[16] and (given the position of the Catholic Church) that the abortion issue public would include Catholics.[17] We then tested the issue public hypothesis by computing interaction terms between issue-specific subchapter visits and the above indicators of issue public membership. The hypothesis predicts a pattern of significant, positively signed interactions between membership in a given issue public and exposure to information about that issue.

In addition to the above tests of the two hypotheses, we attempted to identify possible interactions between the anticipated agreement and issue-based forms of selective exposure. Democrats and Republicans, by extension, might seek out information on issues "owned" by their respective parties (for a discussion of issue ownership, see Petrocik 1996; Petrocik et al. 2003). For instance, Democrats might seek out information on unemployment anticipating that the material will work to their candidate's advantage. Conversely, members of particular issue publics might be partisans in disguise, who would prefer exposure to their favored candidate. Members of the healthcare public, for instance, might be expected to prefer encountering information from Gore since he was generally perceived as more supportive of government involvement in healthcare.

We controlled for two important attributes of CD users -- their generic interest in politics[18] and their proficiency with computers.[19] Political interest is relevant because it allows us to assess "exposure gaps" between more and less attentive voters. In general, the evidence indicates that the audience for campaigns is concentrated among more interested citizens and we anticipated that political interest would be associated with greater CD use. Technological proficiency is also relevant, because CD use requires some minimal familiarity with the use of

computers. In addition to interest and computer proficiency, we controlled for the standard demographic variables of education,[20] age,[21] gender,[22] ethnicity (coded as black, Hispanic, and Native American versus whites), and region (coded as southerners versus others).

Finally, we controlled for a series of design features that may have affected exposure to CD content. First, to control for the number of preceding subchapters, each subchapter was assigned a score between 0 and 62; the first subchapter was coded 0, and the last subchapter was coded 62. Also, to control for the number of interceding subchapters between the chapter index page and each subchapter, we controlled for the number of subchapters that interceded between the subchapter index page and each subchapter.[23] We also controlled for the number of pages in each subchapter.[24] (The average number of pages per subchapter was roughly ten.) We expected that the "sound and light" associated with the presentation would make a substantial difference to page popularity. Accordingly, each subchapter was assigned a score to indicate the number of available audio or video items ranging from 0 to 6.

DATA ANALYSIS

The data set contained 220 individuals who made any use of the CD, and each individual had a recording of visit counts to each subchapter in the CD.[25] Accordingly, our task is to model the association between number of visits to each subchapter and covariates using repeated measurements from each individual, with proper care to account for the correlation structure stemming from "clustering" (or dependency) of observations.[26] In analyzing the usage tracking data, therefore, we compiled a panel data set, consisting of one observation for every participant for each subchapter. We observed the count of each participant's (indexed by *j*) visits to each

subchapter (indexed by *i*). Accordingly, our dependent variable Y_{ij} is the count of the *j*th participant's visits to the *i*th subchapter, where *j* ranges from 1 to 220, and *i* can range from 1 to 63. As a result, each subchapter is the unit of analysis, and each participant's visits to that subchapter constitute a single observation. Because there were 63 subchapters, we had 63 repeated observations for each participant *j*.

Since our dependent variable is a *count* capturing the number of hits the participant registered in each subchapter, the conventional methods for modeling normally distributed dependent variables are inappropriate. Also, the data points are not all independent of one another, because we had multiple observations on each of the 220 participants. Although issues relating to serial or temporal correlation have recently received a good deal of attention among political scientists (e.g., Beck and Katz 1995), few of the methods for dealing with correlation over time are appropriate for use with non-continuous dependent variables (e.g., event counts), as noted by Zorn (2001).

Given the nature of our data, we adopted the method of generalized estimating equations (GEE), because it offers significant advantages for modeling correlated data where the outcome variable is a count (for a detailed review of the GEE and its application to political data, see Zorn 2001).[27] The GEE is an extension of the GLM (Liang and Zeger 1986) to panel studies or time-series cross-sectional data.[28] With cross-sectional data, the generalized linear models (GLM) approach provides a convenient framework for modeling the relation between dependent variables from the exponential distribution family (e.g., binomial or Poisson, among others) and relevant covariates (for reviews, see Gill 2000; McCullagh and Nelder 1989). In GLM, count variables are typically modeled as a Poisson distribution with a log link (see McCullagh and Nelder 1989); we model the count of subchapter visits accordingly. We assume that

observations on different subjects are independent, while allowing for association between outcomes observed on the same subject. GEE adjusts for repeated observations by estimating the within-subject correlation separately (i.e., the "working correlations structure") from the regression parameters, yielding consistent estimates of the regression coefficients without stringent assumptions about the actual correlation among the subjects' observations (Liang and Zeger 1986).

GEE allows for flexible dependence across repeated measures of the same object and provides robust parameter estimates despite possible misspecification of the time dependence (Zorn 2001). Our CD was structured sequentially, so exposure to any given subchapter depended partly on location within the CD (see Huberman and Adamic 2000; Iyengar, Norpoth, and Hahn 2004). Although, as indicated earlier, we included various features designed to facilitate effective searching, these are unlikely to have completely eliminated "sequential usage." CD users could more easily encounter subchapters at the beginning of the CD. Furthermore, when finished with one subchapter, minimal effort was required to at least scan the initial pages of the ensuing subchapter. Accordingly, the most plausible form of within-subject correlation is an autoregressive process and we specified our "working correlation" to AR(1) (see Caldeira et al. 1999; Liang and Zeger 1986).[29] GEE yields consistent parameter estimates of covariate parameters even if the chosen working correlation structure is incorrect, and "this robustness is one of the primary advantages of the GEE" (Zorn 2001, pp. 476).

Although GEE offers the potential of providing asymptotically unbiased estimates of the parameters of primary interest even in cases where the exact nature of the intra-cluster dependence is unknown, the consistency of the variance estimate for parameters does depend on the intra-correlation matrix (Zorn 2001, pp. 472). Therefore, we obtained robust standard errors

proposed by Liang and Zeger (1986) for our parameter estimates (see also White 1980) to further guard against making false inferences stemming from a potentially misspecified working correlation matrix. This allowed us to estimate standard errors for our coefficients that are consistent even in the presence of a misspecified working correlations matrix.

In summary, we assume the marginal regression model $g(E[Y_{ij}]) = \mathbf{x}_{ij}\boldsymbol{\beta}$, where $\mathbf{x}_{ij}$ is a $p \times 1$ vector of all the covariates listed earlier for the ith subject at the jth outcome, and $\boldsymbol{\beta}$ consists of the p regression parameters of interest and $g(\cdot)$ is the log link function as indicated earlier. In addition to this marginal mean model, we model the covariance structure of the correlated observations on a given subject. The $j \times j$ covariance matrix of $\mathbf{Y}_j$ is modeled as $\mathbf{V}_j = \phi\mathbf{A}^{1/2}_j\mathbf{R}(\boldsymbol{\alpha})\mathbf{A}^{1/2}_j$, where $\mathbf{A}_j$ is a diagonal matrix of variance functions $v(u_{ij})$. $\mathbf{R}(\boldsymbol{\alpha})$ is the working correlation matrix of $\mathbf{Y}_j$ indexed by a vector of parameters $\boldsymbol{\alpha}$, for which we assume AR(1) as indicated earlier.

RESULTS

Table 1 presents descriptive statistics of the number of visits made to all pages, the candidate pages, and the issue pages. The overall level of CD use was considerable. Participants registered over 160 page visits on average, dividing their attention about evenly between the two candidates. Among the issues, healthcare subchapters registered the highest number of hits, M = 15.93 (SD = 36.01). Each participant visited education-related subchapters 13.01 times on average (SD = 30.56). Other issues received much lower levels of attention; the mean counts for veteran's issues, urban issues, and abortion were 1.26 (SD = 3.45), 3.41 (SD = 8.31), and .81 (SD = 2.23), respectively.

<Table 1 about here>

Table 2 displays the coefficient estimates from the equation predicting subchapter visits. The anticipated agreement hypothesis rests on the interactions of Bush content with the dummy variables identifying strong Republicans, strong Democrats, strong conservatives, and strong liberals.[30] The hypothesis predicts that Republicans and conservatives should exhibit a tendency to visit more Bush than Gore subchapters, and that this tendency should be stronger than among Independents or moderates. Positive interactions between Bush content and the strong Republican/strong conservative dummy variables would reflect this pattern. In contrast, Democrats and liberals were expected to manifest a preference for Gore pages over Bush pages, and to a greater degree than for independents or moderates. This pattern would be documented by negative interactions between the Bush content dummy variable and the strong Democrat/ liberal dummy variables.

The issue public hypothesis was tested by interactions between the dummy variables representing the subchapter "target" issues and the various indicators of issue public membership. Each of these interactions was anticipated to be significant and positive, indicating a greater tendency to access subchapters on a particular topic among people who were members of the relevant issue public.

<Table 2 about here>

The coefficient estimates shown in Table 2 offered support for the issue public hypothesis. The hypothesis was confirmed across virtually all of the policy domains. Nearly every relevant interaction was positive and statistically significant or marginally so. Issue public members viewed significantly more pages on their topic of interest than non-members. The coefficients were relatively large. When compared to non-members, members of issue publics

registered between 38% (low income respondents for the education issue, b=.32) and 80% (Catholics for the abortion issue, b=.58) more visits.

The anticipated agreement hypothesis received some support as well. The main effect of Bush content was non-significant suggesting that participants accessed material from both candidates equally. However, the significant positive interaction of Bush content with the strong Republican dummy variable (b=.10, $p<.05$) indicates that strong Republicans, as expected, accessed Bush subchapters significantly more often than Gore subchapters. Similarly, the marginally significant positive interaction of Bush content with the strong conservative dummy variable (b=.15, $p<.10$) was as anticipated. In short, strong Republicans and conservatives manifested a pattern of selective exposure to the candidates that was consistent with the anticipated agreement hypothesis.

Surprisingly, the interactions of Bush content with the strong Democrat and strong liberal dummy variables were not significant, b=-.04 (s.e.=.08) and b=-.00 (s.e.=.11), respectively. Strong Democrats and liberals chose to encounter Bush subchapters just as often as Gore subchapters. It is worth noting that others have found similar asymmetry in exposure to supportive information between Republicans and Democrats (e.g., Lau, Andersen, and Redlawsk 2006; Lau and Redlawsk 2006).

As a supplementary analysis, we re-estimated our model after adding interaction terms between partisanship and particular issue subchapters and between membership in issue publics and candidate subchapters. However, none of these interactions proved significant, and we only present the results from the more parsimonious model in Table 2. Although partisans on the right preferred exposure to Bush, they did not also exhibit a preference for issues on which Bush (as a Republican) enjoyed a favorable reputation. Thus, neither Republicans nor conservatives

gravitated to pages focusing on veterans' affairs or abortion. Likewise, members of particular issue publics showed little propensity to favor exposure to one candidate over the other.[31] All told, these results provide further reassurance for our earlier inferences.

Among the control variables, interest in politics was significantly associated with page visits across both candidates and all issues (b=.39, $p<.05$); the more interested encountered more information. Participants who were more proficient with computers, however, did not use the CD more extensively (b=.84, n.s.) suggesting that our efforts to make the CD accessible to technological novices were reasonably successful.

Several design-related features influenced user behavior. The location of the subchapter within the CD was especially important; there was a strong primacy effect meaning that the greater the number of prior subchapters, the lower the number of subchapter visits (b=-.058, $p<.01$). In other words, later-appearing subchapters received fewer visits. Since we did not rotate subchapter topic across participants, it is impossible to know whether this decline in usage is due to the content of the later chapters, their placement within the CD, or both. Within-chapter location also proved significant; subchapters placed further away from the chapter index page registered fewer hits (b=-.06, $p<.01$). As might be expected, subchapter length had a positive and significant effect on page visits (b=.06, $p<.01$).[32]

Finally, the presence of multimedia segments boosted subchapter exposure (b=.03, $p<.01$). Audio-visual content served to entice participants and sustain their interest in a particular subchapter beyond what occurred when only text was presented (for similar findings in media psychology, see Zillmann, Knobloch, and Yu 2001). Perhaps multimedia segments break up the monotony of a predominantly text-based presentation and reduce the information processing burden of accessing the messages, thus motivating participants to progress further

into the CD.

DISCUSSION AND CONCLUSIONS

These results provide evidence in favor of the issue publics hypothesis, and some modest support for the hypothesis of anticipated agreement as well. People especially affected by a particular policy issue were especially likely to access information about that issue. Partisans on the right preferred to encounter more information provided by President Bush at the expense of information coming from Vice President Gore. But Democrats and liberals were no more likely to prefer exposure to Mr. Gore than Mr. Bush. This finding may be idiosyncratic (i.e. specific to this particular election), but a similar pattern has also emerged in recent experimental work on information search (Lau and Redlawsk 2006). Taken together with the earlier survey-based evidence suggesting greater selectivity of exposure among Democrats (see Sears and Freedman 1967), the question of partisanship as a potential moderator variable warrants further investigation and explanation.

The format of the information presentation on the CD might have encouraged issue-based information selection over candidate-based selection. The reason is that respondents were forced to select an issue before they were offered a choice between candidates. Perhaps making the choice between issues first enhanced the likelihood of finding support for the issue public hypothesis. But since respondents nonetheless had to make choices between candidates after selecting an issue, we could have seen a systematic bias in such selections as well, though we did only for Republicans and conservatives.

Ideally, the study design would have counter-balanced the order of selection (issues

before candidates versus candidates before issues) and might even have presented a choice array that allowed for candidate-based and issue-based selection equally easily (see, e.g., Huang and Price 2001). However, some evidence does suggest that the modest level of partisan selectivity was not an artifact of CD design. The opening chapter of the CD (used as the baseline in the analyses reported above) focused exclusively on the candidates with subchapters on their biographies, their convention acceptance speeches ("Why I seek the Presidency"), and the first televised debate. When we conducted our analyses using only this chapter, the observed pattern of partisan selectivity was essentially unchanged. Among the four interaction terms capturing party- and ideology-based selectivity, only "Strong Conservative x Bush" proved to be statistically significant. Thus, we are skeptical that the modest level of "in-party" CD use is an artifact of participants choosing between candidates after first selecting an issue.

More generally, our results should be viewed as illuminating voluntary exposure to information under conditions that enhance the audience's capacity to control their consumption of information, e.g. users of new media. Presumably, as the digital divide is narrowed, this pattern of selective exposure will diffuse to a majority of the population.

Our findings are also limited to situations in which potential users of campaign information are not pressed for time. In this study, CD users had more than two weeks to peruse the information making it more likely that they might widen their information choices to include disliked sources or issues of secondary relevance. Had we forced participants to complete their CD use in a restricted number of sessions with a time limit, they might well have chosen to limit their exposure to the in-party candidate (see Fischer et al. 2005).[33] Future research should address the potential interaction between different forms of selective exposure and the amount of time available to media consumers.

Finally, our study only generalizes to people who encounter unmediated information supplied by the candidates, parties or civic organizations. Judging from the available evidence on Internet use (see Iyengar and McGrady 2007), this genre of campaign websites is at the moment significantly less popular than mainstream news sites. Our findings apply most readily to the smaller audience that gravitates to the former -- people interested in hearing from the candidates and interest groups rather than tracking news media coverage of the campaign.

In this context, it is worth noting here that this study's participants did not ignore the CD. A substantial portion of our participants used the CD, and they used it extensively. Because the CD was distributed in the context of a research study administered by Knowledge Networks, it is likely that participants felt obligated to at least look at the CD. But there is little reason to think that "experimental demand" would encourage participants to view as many pages on the CD as they did. Instead, the level of CD use suggests to us that campaign information presented in this format is potentially capable of attracting a large audience. Even though CD users were more educated and affluent than non-users, on a variety of other attributes those who chose to use the CD were minimally different from those who did not. The appeal of campaign CDs that convey information from the candidates and not the news media is not limited to a narrow slice of the electorate.

In one important respect, however, our findings have strong generalizability. They closely parallel the evidence on issue publics reported by Holbrook et al. (2005). These investigators offered information on many issues to participants in laboratory experiments and asked the participants to choose which information they would like to acquire. Participants also reported the amount of personal importance they attached to each issue. Consistent with the issue public hypothesis, people who deemed an issue important were more likely to seek out

information on that issue. In addition, Holbrook et al. showed that members of issue publics were especially likely to remember information on "their" policy issue, but only when they could selectively expose themselves to issue-relevant information. When all participants were exposed to information on all issues, the tendency to recall information on relevant issues disappeared. This is indirect evidence that issue importance motivates exposure to information, which in turn leads to learning of the information. Thus, our findings, although based on indirect indicators of issue public membership, converge with Holbrook et al.'s findings based on more direct measures of issue importance, reinforcing confidence in their findings and ours.

In closing, our findings address the ongoing debate over the normative implications of the information revolution. As technology spreads, it is certain that individual selectivity will replace media or editorial selectivity as the major gateway between candidates and voters. Candidates, parties, interest groups and civic organizations have all begun to compete with the news media as sources of campaign information. How will this increase in direct access to the candidates affect the electorate?

One scenario, suggested by the anticipated agreement hypothesis, is increased polarization and fragmentation. Voters will seek out information and ideas that reinforce their preferences. Our results, however, suggest that enhanced consumer autonomy does not necessarily propagate ideologically homogeneous "gated communities." In fact, our participants' information exposure decisions were driven more by generic interest in politics and interest in particular issues, so there was plenty of exposure to potentially distasteful information. Thus, increased consumer choice may well facilitate voter engagement and learning. It is well known that media-based campaigns are light on substantive information. At the expense of the candidates' positions on the issues, news coverage gravitates inevitably toward the more

"entertaining" facets of the campaign -- the horse race, the strategy and, whenever possible, instances of scandalous or unethical behavior. The professional culture of journalism further impedes the public's ability to learn. Rather than depicting the candidates as agents of the political parties who are committed to implementing their campaign pledges, reporters emphasize the scripted and typically manipulative aspects of candidate behavior (Patterson 2000). Carefully controlled studies demonstrate that this "strategic" frame activates generalized cynicism about the electoral process itself (Cappella and Jamieson 1997). Media coverage thus discourages voters from approaching campaigns.

Against this backdrop, direct access to the candidates makes it possible for voters to bypass or supplement media treatment of a campaign and to screen information on the basis of a relevance or utility-based criterion that prompts them to tune in to discussion of issues that affect them. This form of selectivity is hardly an impediment to deliberation: paying attention to what the candidates have to say facilitates issue-oriented voting; paying attention to media coverage of the candidates, for the most part, does not. Thus, there is good reason to hope that unmediated campaigns will provide a better way to inform and engage voters.

Endnotes

[1] This hypothesis has most often been referred to in the literature as the "selective exposure" hypothesis. We prefer to use the term "selective exposure" more broadly, to refer to a person's preference for exposure to any particular sort of information for any reason, not necessarily anticipated agreement. This broader use is appearing in print increasingly often (see, e.g., Holbrook et al. 2005).

[2] More recent work has confirmed this pattern. Studies using a dynamic information board designed to mimic the flow of information during a presidential campaign, for instance, found that voters on average learned slightly more about the in-party than out-party candidate (Lau and Redlawsk 2006; also see Barlett et al. 1974).

[3] Because our participants were learning about real candidates in preparation to vote in a real election, this context made it especially likely that selective exposure to agreeable information would occur if people were so inclined.

[4] Prior to sending the CD, Knowledge Networks contacted participants and ascertained their willingness to participate in the study.

[5] These results are available at www.XXXXX.

[6] *The Campaign Sourcebook* is available at www.XXXXX.

[7] In total, the CD contained approximately 80 speeches and 52 televised ads on 652 pages of text and in three hours of multimedia material. In order to distribute the CD to participants in advance of the election, speeches, ads, and debates occurring after the CD "publication" date (October 8, 2000) were provided on a companion website in the same format as presented on the CD. Between October 8 and Election Day, the candidates made eight speeches, and ten additional ads appeared.

[8] As our description makes clear, the design of the CD was organized around policy issues. CD users first encountered chapters focusing on specific issues and then immediately had to choose between either of the two candidates' statements on this issue. The fact that the candidate choice occurred after the issue selection may have diminished the tendency to select material on the basis of partisan affinity. As noted in the discussion section, however, we observed similar results within the one chapter of the CD that focused on the candidates themselves rather than issues.

[9] Party identification was measured by asking respondents: "Generally speaking, do you think of yourself as a Republican, a Democrat, an Independent, or what?" Partisans were then asked to indicate the strength of their identity. In the case of ideology, we asked "When it comes to politics, do you usually think of yourself as extremely liberal, liberal, slightly liberal, moderate or middle of the road, slightly conservative, conservative, extremely conservative, or haven't you thought much about this?" Participants who said "extremely conservative" or "conservative" were coded 1 on the strong conservative dummy variable, and all others were coded 0. Participants who identified themselves as "extremely liberal" or "liberal" were scored 1 on the strong liberal dummy variable, and all others were coded 0.

[10] The second dummy variable, "Debate Content," was coded 1 for the fifth subchapter, which contained information about both candidates' involvement in the debate, and 0 for all other subchapters.

[11] Participants were asked: "Do you or anyone in your household currently work for any of these types of companies?" Those who checked "Medicine/Health Care" were coded 1, and all others were coded 0.

[12] Participants reported their ages and, after indicating whether their parents were still living, the age of their parent(s). Participants older than 60 and those with a living parent older than 70 were coded 1, and all others were coded 0.

[13] Female participants with children between the ages of 8 and 18 were coded 1, and all others were coded 0.

[14]Participants with a 1999 (pre-tax) annual household income of less than $40,000 (and who were therefore unlikely to be able to consider private schools as an option) were coded 1, and all others were coded 0.

[15] Participants were asked: "Have you ever served on active duty in the U.S. Armed Forces, Military Reserves, or National Guard? Those who responded "on active duty now," "were on active duty but not now," or "trained for Reserves or National Guards" were coded 1, those responding "never served in the military" were coded 0.

[16] Residents of cities with populations exceeding 300,000 were coded 1, and all others were coded 0.

[17] Catholics were coded 1, and all others were coded 0.

[18]The interest index consisted of three questions: (1) "Which of the following best describes how often you follow what's going on in government?" (Responses ranged from "hardly at all" to "most of the time"); (2) "How many days in the past week did you talk about politics with family or friends?" (Responses ranged from "none" to "everyday"); (3) "Generally speaking, how much do you care about who won the presidential election?" (Responses

ranged from "not at all" to "very much"). The items were averaged to yield an index ranging from 0 (low) to 3 (high). Cronbach's Alpha was .54.

[19] Computer proficiency was measured with five questions: (1) "How comfortable do you feel using computers?" (2) "How comfortable do you feel using email?" (3) "How comfortable do you feel using the Internet?" (4) "Other than email, which of the following activities do you use the Internet for?" (5) "Excluding email and the Internet, what do you use the computer(s) in your home for?" The responses to (4) and (5) encompassed a wide array of activities and tasks; we tallied the total number cited by each respondent to yield two count variables ranging from 0 to 13 and 0 to 7, respectively. Finally, the five items were each projected onto a scale ranging from 0 to 1 and averaged to yield an index ranging from 0 (low proficiency) to 1 (high proficiency). Cronbach's Alpha was .75.

[20] Participants were asked, "What is the last grade or class that you completed in school? Responses were coded into seven categories that ranged from Grades 1-8 to post-graduate or professional degree.

[21] Age in years ranged from 18 to 81 and averaged 41 for the sample.

[22] Gender was coded 1 for females and 0 for males. Roughly 44% of the participants were female.

[23] Accordingly, each subchapter received a score of $S_t - 1$ where S_t denotes the subchapter's placement within the chapter. For instance, the first subchapter in each chapter received a score of 0.

[24] Each subchapter received a score indicating the number of pages in it, ranging from 1 to 44.

[25] The number of participants who completed the post-test survey was 226. However, our analysis is limited to the 220 who also returned their CD tracking files.

[26] In fact, each respondent has a recording of visit counts for each page in the CD. Since the content varies by subchapters, however, we decided to set each individual's recording of visit counts to each subchapter (not page) as the unit of observation.

[27] An alternative modeling approach is hierarchical linear models (HLM), but since our primary interest lies in the population-average estimates, we see no particular advantage in HLM over our current strategy.

[28] GEE models are used in the same way as standard generalized linear models, and the coefficients have the same interpretation. They measure differences in the response for a unit change in the predictor, averaged over the whole sample. GEE models are thus particularly suitable when the correlation is of no substantive interest and is merely a nuisance parameter.

[29] We assessed the fit of AR(1) by utilizing a Wald-test suggested by Wooldridge (2002). The results showed that AR(1) was not strong but plausible ($p<.15$), providing at least partial support for our decision to specify the working correlation structure as AR(1). Furthermore, we also estimated an alternative model by specifying the working correlation structure to be "exchangeable," where within-subject correlations are assumed to be uniform across the observations from the same individual. Substantively, our results concerning the effects of issue public membership and anticipated agreement remained identical.

[30] Preliminary analysis showed that the effects of party- and ideology-based selection were not linear. The effects were concentrated among the strong Republicans and Conservatives. These findings led us to adopt the current dummy variable specification instead of including respondents' party identification and ideology as ordinal variables.

[31] The only statistically significant ($p<.05$) exception was that health care workers were found to be less likely to visit subchapters featuring George W. Bush.

[32] We re-estimated the GEE using alternative measures of our dependent variable in order to ensure that the results are not sensitive to the functional form of the dependent measure (i.e., the *count* of visits). First, we defined the level of exposure to each subchapter as a ratio between the number of visits to the subchapter and the number of featured pages. Alternatively, we examined the logged count of subchapter visits. Substantively, our results remained unaltered in both cases. The only deviation was that the interaction between Catholics and abortion content became slightly weaker ($p<.10$) in both cases. These results are available upon request.

[33] To best approximate this time-constrained scenario, we examined subchapter visits among CD users who registered only a single session (N=74). These results showed little support for the anticipated agreement hypothesis; in fact, none of the relevant interaction terms proved significant. These results are available upon request.

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Table 1. Mean and Standard Deviation of the Number of Visits to All Pages, Candidate Pages, and Issue Pages

Subchapters	Mean	SD
All Pages	166.13	237.50
Candidate Pages		
Bush	70.32	107.05
Gore	81.41	114.81
Issue Pages		
Economy	17.81	34.50
Monetary Policy	12.68	25.42
Government	5.76	11.08
Education	13.01	30.56
Health	15.93	36.01
Veterans' Issues	1.26	3.45
Urban Issues	3.41	8.32
Crime	4.82	9.60
Environment	7.09	19.03
Civil Rights	9.00	20.66
Abortion	0.81	2.23
Campaign	3.00	6.14
Foreign Policy	17.87	34.13

Table 2. Predicting Number of Subchapter Visits: GEE Estimates

		b	s.e.
CD Design	Placement	-.008***	.002
	Within Chapter Placement	-.058***	.009
	Length	.060***	.002
	N. of Audio/Video	.028**	.013
Demographics	Female	-.268	.223
	Age	.010	.012
	Education	-.114*	.069
	Political Interest	.389**	.200
	Computer Proficiency	.844	.743
CD Content	Bush	-.027	.026
	Debate	-.330***	.082
	Education	-.376***	.139
	Health Care	-.973***	.178
	Abortion	-1.391***	.204
	Urban Issues	-.807***	.199
	Veterans' Issues	-.667***	.163
PID/Ideology	Strong Republican	-.066	.350
	Strong Democrat	-.878***	.321
	Strong Conservative	-.364	.425
	Strong Liberal	-.287	.523
Issue Public	Having School Aged Children	.256	.261
Membership	Inner-city & Low Income	.275	.289
	Health Care Worker	.842***	.210
	Elderly/Having Elderly Parents	.062	.201
	Catholic	.007	.220
	Urban Residents	.302	.195
	Veterans	.179	.301
Anticipated	Strong Republican x Bush	.097**	.048
Agreement	Strong Democrat x Bush	-.036	.083
Hypothesis	Strong Conservative x Bush	.151*	.090
	Strong Liberal x Bush	-.003	.113
Issue Public	Children x Education	.129	.232
Hypothesis	Inner-city/Low Income x Education	.316*	.193
	Health Care Worker x Health Care	.559***	.184
	Elderly x Health Care	.438**	.190
	Catholic x Abortion	.582**	.272
	Urban x Urban Issues	.515**	.212
	Veterans x Veterans' Issues	.323	.270
	Constant	-.816	.833
	Wald Chi^2	3262.96***	
	N	13,860	

Note. *p<.10; **p<.05; ***p<.01.

Figure 1

Sample Chapter Index Page – “Health Care and Retirement”

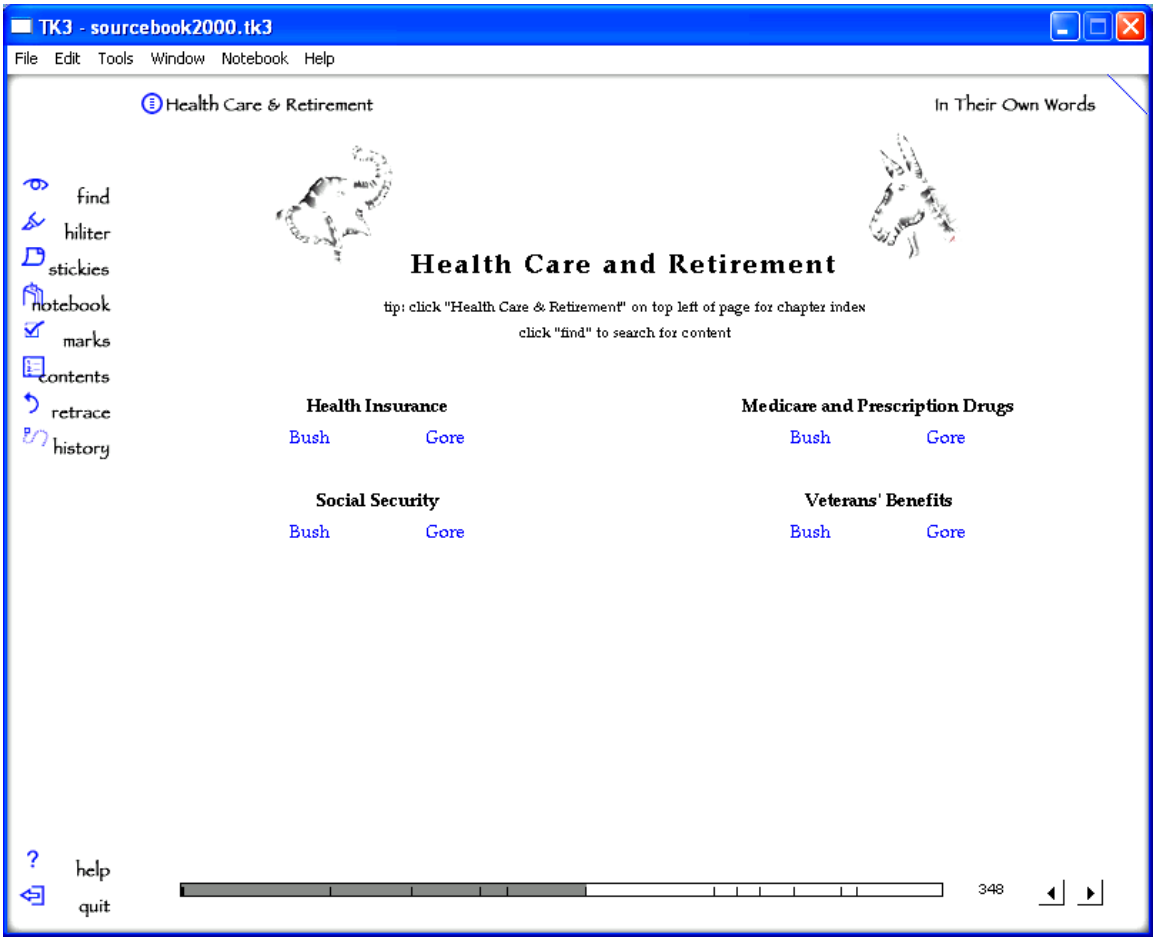

Figure 2

Sample Medicare and Prescription Drugs/Bush Page