Information Effects in Collective Preferences
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*C*ontrary to much of the literature on collective opinion, I find that the low levels and uneven social distribution of political knowledge in the mass public often cause opinion surveys to misrepresent the mix of voices in a society. To assess the bias introduced by information effects, I compare "fully informed" collective preferences simulated from actual survey data to collective preferences revealed in the original data. Analysis of policy questions from the 1988 and 1992 American National Election Studies shows that group differences in knowledge, along with the public's modest average level of political knowledge, can cause significant distortions in measures of collective opinion. The mass public may appear more progressive on some issues and more conservative on others than would be the case if all citizens were equally well informed. To the extent that opinion polls influence democratic politics, this suggests that information effects can impair the responsiveness of governments to their citizens.

A number of path-breaking studies in recent years have suggested that the mass public's inattention to politics may have less bearing on the quality of its collective opinions than previously thought (e.g., Converse 1990; Page and Shapiro 1992; Popkin 1991; Sniderman, Brody, and Tetlock 1991; Wittman 1995). These studies emphasize that while most individuals tend to be ill informed about the political world, the availability of heuristic shortcuts and the filtering process of statistical aggregation may help compensate for this lack of knowledge in measures of collective opinion, such as election results or opinion surveys. If this line of thinking is correct, then we can conclude with Page and Shapiro (1992, 385) that opinion surveys provide a "good deal of coherent guidance about policy." If the mass public is unable to compensate effectively for its lack of political knowledge, then the use of surveys and other measures of collective opinion as inputs to the political process may be rightly questioned.

In this article I extend recent work by Delli Carpini and Keeter (1996) and Bartels (1996) on the measurement of information effects in collective preferences. Contrary to much of the literature on collective opinion, this study finds that the low levels and uneven social distribution of political knowledge in the mass public often cause opinion surveys to misrepresent the mix of voices in a society. Correcting for information asymmetries reveals that many collective policy preferences would look quite different if all citizens were equally well informed about politics.

Because knowledgeable respondents are better able to form opinions consistent with their political predis-

positions (Bennett 1995; Converse 1964; Delli Carpini and Keeter 1996; Lockerbie 1991; Stimson 1975; Zaller 1992), and because they tend to give opinions more frequently than other people (Althaus 1996a; Delli Carpini and Keeter 1996, 230-1; Krosnick and Milburn 1990), the demographic characteristics of well-informed people—who tend to be more affluent, older, white, and male compared to the ill informed—can cause collective preferences to reflect disproportionately the opinions of some groups more than others. These two dynamics can create information effects in measures of public opinion. By *information effect*, I mean a bias in the shape of collective opinion caused by the low levels and uneven social distribution of political knowledge in a population. While others have examined the individual-level effects of political knowledge on response stability (e.g., Delli Carpini and Keeter 1996, 231-4; Feldman 1989, following Converse 1964) and the role of political knowledge as a link between political predispositions and policy or voting preferences (e.g., Bennett 1995; Delli Carpini and Keeter 1996, chapter 6; Zaller 1992), the focus here is more narrowly on the macrolevel impact of these effects on measures of collective opinion.

Building on the simulation approach developed independently by Delli Carpini and Keeter (1996) and Bartels (1996), this article examines the substantive impact of information effects in policy preference data from the American National Election Studies (NES). Simulating "fully informed" collective preferences from actual survey data shows that group differences in knowledge, along with the public's rather modest average level of political information, can cause significant distortions in measures of collective opinion. More important, the direction and magnitude of these distortions fall into predictable patterns. The uneven social distribution of political knowledge causes the mass public consistently to appear more progressive on some issues and more conservative on others than might be the case if all citizens were equally well informed about politics. To the extent that opinion polls influence democratic politics, this finding suggests that information effects may impair the responsiveness of governments to their citizens.

HOW POLITICAL KNOWLEDGE AFFECTS COLLECTIVE OPINION

Survey after survey has shown that citizens are often at a loss to relate basic facts about the players, issues, and rules of the game that structure American political life (Delli Carpini and Keeter 1996). The extent of this ignorance led several early and influential studies to suggest that the public's political opinions are often fickle and not to be trusted (Almond 1950; Berelson, Lazarsfeld, and McPhee 1954; Converse 1964; 1970). Yet, in recent years this pessimistic view of public opinion has been challenged on several fronts. The first challenge stems from work in cognitive psychology showing that people who are ill informed about public affairs can nonetheless form opinions consistent with their political predispositions. They can do this by taking cues from trusted political elites about which policies they should prefer and by harnessing a variety of heuristic strategies to deduce their political preferences, thus avoiding the need to infer preferences from factual bits of knowledge stored in long-term memory (e.g., Ferejohn and Kuklinski 1990; Lupia 1994; Mondak 1994; Popkin 1991; Smith and Squire 1990; Sniderman, Brody, and Tetlock 1991; Zaller 1992). From this perspective, the public's low levels of information may not be a significant problem because many people apparently can compensate for their lack of knowledge with information shortcuts.

The second challenge comes from a line of work suggesting that aggregate opinion may be able to reflect the public's interests even when the opinions of most individuals are ill informed, ambivalent, indifferent, or inconsistent (e.g., Converse 1990; Ferejohn and Kuklinski 1990; Page and Shapiro 1992). This view suggests that the process of aggregating opinions should tend to cancel out the more or less random opinions given by ill-informed respondents. To the extent that this occurs, measures of collective opinion should reflect the nonrandom opinions of knowledgeable respondents. A related argument stemming from Condorcet's jury theorem suggests a similar conclusion. Based entirely on statistical probabilities, the theorem shows that, under certain conditions, groups tend to provide more informed decisions than individuals (Condorcet [1785] 1972; Grofman and Owen 1986; Ladha 1992; Miller 1986; but see Austen-Smith and Banks 1996). From this perspective, it is the aggregation process itself which generates meaningful collective opinions.

Further support for "revisionist" challenges comes from experimental studies suggesting that the common methods used to measure information about politics may actually test recall ability rather than knowledge-in-use. Known as the "on-line" or "impression-driven" model of information processing (Lodge, McGraw, and Stroh 1989; Lodge, Steenbergen, and Brau 1995), this view suggests that many people process information at the time they are exposed to it, update their opinion accordingly, and then quickly forget the information itself while retaining the updated summary judgment. Thus, people may express informed preferences even though they may be unable to recall the factual information used to shape those preferences. From this perspective, the public's apparently low levels of political knowledge may be a red herring. Its judgments may be more informed than they seem in light of the apparently poor performance of those citizens on knowledge tests.

Despite the note of optimism sounded by these revisionist arguments, empirical evidence in support of their claims is quite modest. A number of studies have detailed how people *can* use on-line processing and various information shortcuts to make up for a lack of factual knowledge, but there is surprisingly little evidence that large numbers of people *do* use these strategies effectively, regularly, and across a wide range of situations and issues. More glaring still is the lack of support for the collective rationality hypothesis. I am aware of only two attempts to test this idea empirically. One study (Bartels 1996) found that aggregation helped voters act as if they were somewhat better informed than they actually were, but not as if they were fully informed. The other (Althaus 1995) found that statistical aggregation had quite limited information-pooling qualities.

Revisionist perspectives also tend to overlook an important fact: Low information levels are only half the problem. Just as important is the observation that some kinds of people tend to be better informed than others. Knowledge of politics is concentrated among those who are politically and socially advantaged. College graduates and relatively affluent people tend to be consistently well informed, while high school dropouts and relatively poor people tend to be consistently ill informed (Delli Carpini and Keeter 1996; Neuman 1986; Sigelman and Yanarella 1986). Political knowledge also is distributed unevenly among groups with distinctive and potentially competing political interests. For instance, whites tend to be more informed than blacks, men more than women, and older people more than younger people (Bennett 1988; Delli Carpini and Keeter 1996; Neuman 1986; Sigelman and Yanarella 1986).

There are two ways that information asymmetries among groups can undermine representation in opinion surveys. The first is by affecting the demographic correspondence between a survey sample and the group of people who give substantive responses. Those who are poorly informed about politics tend to give "don't know" and "no opinion" responses at much higher rates than more knowledgeable people (Althaus 1996a; Delli Carpini and Keeter 1996, 230–1; Krosnick and Milburn 1990). This tendency leaves the group of opinion givers disproportionately well educated, affluent, male, white, and middle aged relative to the population they are supposed to represent (Althaus 1996b). Because these voices tend to be overrepresented in the ranks of opinion givers, the particular needs, wants, and values expressed by some groups may come to be represented disproportionately in collective preferences.

The second way that information asymmetries affect representation is by influencing the quality of opinions

that respondents provide. Our ability to form preferences consistent with our political predispositions is often mediated by the quality and quantity of political information we can bring to bear on an issue. The importance of knowledge to the formation of policy preferences comes from the way that values are connected to attitudes through beliefs: beliefs about the state of the world, cause-and-effect processes, what government is currently doing, and the likely outcomes of government actions (Delli Carpini and Keeter 1996, chapter 6; Downs 1957, 79–80). Some ill-informed people may believe a policy is the "correct" solution without knowing whether it is consistent with their predispositions or whether it is the best way to achieve a given end. Others may believe a policy serves their interests, while someone with more perfect or complete information can see that the policy is diametrically opposed to them. Because the well informed are likely to have more accurate beliefs than the ill informed, they are more likely to express policy preferences consistent with their political predispositions (Converse 1964; Lockerbie 1991; Stimson 1975; Zaller 1992). As a result, the interests of respondents who are relatively well informed may come to be more accurately reflected in measures of collective opinion. In other words, such measures may reflect the needs, wants, and values of whites better than those of blacks, men better than women, and the rich better than the poor.

It would seem that the low levels and uneven social distribution of political knowledge may indeed have an important bearing on the quality of surveyed public opinion. The problem is how best to measure any potential distortion in collective preferences brought about by information asymmetries. One must find a way to estimate how the opinions people express in surveys might change if respondents were more completely informed about the issues.

MEASURING INFORMATION EFFECTS IN COLLECTIVE PREFERENCES

Ever since Marx suggested that "false consciousness" distracts workers from their material interests, students of politics have grappled unsuccessfully with how to determine whether people's interests are at odds with their opinions. Some, like Marx and Edmund Burke before him, argue that political interests are objective and can be identified for any group of people without regard to their stated preferences. Some, like Jeremy Bentham and John Stuart Mill, claim that interests are subjective and thus inseparable from the expressed wishes of individuals speaking for themselves. But in light of inherent problems with each of these definitions, more recent work has focused instead on interests as "fully informed" or "enlightened" preferences (Bartels 1990; Connolly 1972; Dahl 1989, 180–1; Delli Carpini and Keeter 1996; Lippmann 1955, 42; Mansbridge 1983, 24–6). In this perspective, as Jane Mansbridge (1983, 25) puts it, interests are revealed in "the preferences that people would have if their information were perfect, including the knowledge they would have

in retrospect if they had a chance to live out the consequences of each choice before actually making a decision." By equating interests with hypothetical fully informed preferences, this perspective provides a useful approach for determining when the preferences expressed by individuals may be at odds with their "fully informed" needs, wants, and values.

The difficulty lies in sorting out the best among several possible ways of operationalizing this definition of interests. Two traditional approaches have been used to explore what collective opinion might look like if opinion givers were relatively better informed than the general public. The first is to purge ill-informed respondents from among the ranks of opinion givers through the use of filtering questions. While this is a particularly blunt method—it ignores completely how individual opinions might change with more political knowledge—it is nevertheless widely used by survey organizations to isolate "informed" public opinion.

The second approach manipulates the amount and quality of information available to people who express preferences of various kinds. Experimental methods for assessing the role of information in preference formation have been used extensively in social and cognitive psychology. These methods have also been used to explore what fully informed collective policy preferences might look like. To date, the most ambitious use of such methods has been by James Fishkin (1991, 1995) in experiments with deliberative opinion polls, which bring a random sample of ordinary citizens to a central location where they are provided with detailed policy information and an environment in which to discuss issues. In this way, argues Fishkin (1995, 171), "the deliberative poll can be thought of as an actual sample from a hypothetical society—the deliberative and engaged society we do not have."

Yet, even experimentation provides an unsatisfactory measure of fully informed collective preferences. It is possible in an experimental setting to provide people who are normally oblivious of the political world with information that they can use to formulate preferences, but ill-informed subjects cannot be equipped with other important traits normally associated with being well informed: the cognitive styles and information processing strategies characteristic of politically knowledgeable people (Fiske, Lau, and Smith 1990; Krosnick and Milburn 1990; McGraw and Pinney 1990; Sniderman, Brody, and Tetlock 1991), the knowledge stored in long-term memory that affects how new information is perceived and used to update attitudes (Delli Carpini and Keeter 1996; Krosnick and Milburn 1990; Zaller 1992), and the confidence, developed through experience, that one is able to understand complicated political issues and events (Krosnick and Milburn 1990). Moreover, typical experimental settings also fail to duplicate the social contexts in which political information is acquired and used to form preferences (Huckfeldt and Sprague 1995). It would seem that while experimental methods are especially useful in differentiating informed from ignorant people, they are less suited to predicting the sorts of policies a fully informed public might prefer.

Where filter questions and experimental methods fall short, a third way of simulating fully informed preferences offers promise. Independently pioneered in work by Delli Carpini and Keeter (1996, chapter 6) and Bartels (1996), this approach uses multivariate regression to simulate how individual opinions might change if opinion givers were better informed about politics. Unlike filter questions and experimental methods, this approach is explicitly premised on the concept of "enlightened preferences" and on the social construction of political interests. Estimates of fully informed opinions are generated by assigning the preferences of the most highly informed members of a given demographic group to all members of that group, simultaneously taking into account the influence of a wide range of demographic variables. For instance, if policy preferences of well-informed respondents from union families differ from those of ill-informed respondents from union families, then this approach assigns the mix of fully informed preferences to all respondents from union families. But instead of considering only the bivariate relationship between union membership and policy preferences, this method looks at union respondents who are women, from a certain income level, who live in eastern states, are married, own homes, of a certain age, and so on. If the most informed people sharing all these characteristics have different preferences from the least informed people, then their mix of fully informed preferences is assigned to everyone who shares their demographic characteristics.

The present study extends this basic approach in several ways. First, I use logistic regression to avoid the restrictive assumption that political information must have a linear relationship with preferences.[1] Second, I estimate fully informed preferences for people who give "don't know" and "no opinion" responses in the actual data, following the assumption that as information levels rise, the proportion of people who give opinions or turn out to vote should also rise. Third, while Bartels examined vote choices in presidential elections and Delli Carpini and Keeter analyzed five scales representing different policy domains, I conduct simulations on individual policy questions representing a broad range of political issues. Although the individual questions analyzed here may be less reliable measures of attitudes than scales composed of multiple questions, analyzing the marginals of specific questions has two distinct advantages. It can reveal the influence of question wording on information effects and, since marginal percentages seem to be the lingua franca of opinion surveys in the political sphere, how the surveyed opinion that "counts" politically may be skewed by the social distribution of political knowledge.

The logit model I use for simulating fully informed opinions is structured as follows:

prob $(Y_i = 1)$

$$= \alpha + \beta_1 I_i + \sum \beta_k D_{ik} + \sum \delta_k (I_i * D_{ik}) + e_i,$$

where Y_i is respondent i's dichotomous policy preference (e.g., 1 = "favor," 0 = "oppose"); I_i is respondent i's score on a scale of political information; D_{ik} is respondent i's score on the kth demographic characteristic; $I_i * D_{ik}$ is the product of respondent i's information score multiplied by respondent i's score on the kth demographic characteristic; and e_i is the error term for the ith observation. In this equation, β_1 is the coefficient for the information variable, β_k is the coefficient for the kth demographic characteristic, and δ_k is the coefficient for the kth interaction term.

The measures of political information are scales developed for NES data by Delli Carpini and Keeter (1993, 1996). These scales, which are detailed in Appendix A, are built primarily from direct measures of factual knowledge, in contrast to the exclusive reliance by Bartels on subjective ratings of interviewers.[2] The political information scale for the 1992 NES has a maximum value of 23, with a mean of 12.7 and standard deviation of 5.8; the scale for the 1988 NES has a maximum value of 20, mean of 10.3, and standard deviation of 5.0. These scales have respective alpha reliabilities of .893 and .876.

The D_{ik} terms account for the effects of *Education, Income, Age, Partisanship, Race, Gender, Marital Status, Occupation, Religious Affiliation, Union Membership, Homeowner Status, Parental Status, Financial Status, Region,* and *Type of Community* (see Appendix A for coding details). For the 1992 data I also included *Receiving Welfare Benefits* and *Receiving Other Benefits*.[3] These characteristics represent all the available demographic variables that tend to be relatively stable features of a respondent's makeup and that may be expected to have some bearing on policy preferences. Excluded from the analysis were attitudinal variables that may be determined by or confounded with levels of political information. The resulting mix of demographic variables is quite similar to that used by Bartels (1996) and by Delli Carpini and Keeter (1996), with one significant exception. I include party identification because it is a relatively stable trait, which puts it on par with the other demographic variables; more important, partisanship is a widely used cueing mechanism

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[1] Delli Carpini and Keeter (1996) use ordinary least squares to estimate parameters in their simulation; Bartels (1996) uses a probit model to estimate parameters, which are then transformed in a way that assumes linearity of information effects.

[2] Interviewer ratings of respondent knowledge levels discriminate well relative to factual knowledge scales (Zaller 1985), but correlations between these measures run between .57 and .68, which demonstrates that the two are not synonymous (Delli Carpini and Keeter 1992, 1993; see also Luskin 1987). While interviewer ratings are frequently used as components of political knowledge scales (Delli Carpini and Keeter 1996; Zaller 1985), these findings suggest that they may be poor stand-alone substitutes for direct measures of political knowledge.

[3] These two variables were not available in the 1988 data. Including the constants and interaction terms, there were 52 parameters estimated in the 1988 data and 56 parameters in the 1992 data. While the number of parameters is substantial, the large sample size of the NES studies (1,775 completed interviews in 1988; 2,255 in 1992) should ensure the asymptotic properties of efficiency, lack of bias, and normality (Aldrich and Nelson 1984, 53; also see King 1989, 74–80).

and information shortcut for issue positions (Campbell et al. 1960; Page 1978; Rahn 1993; Rahn and Cramer 1996). To the extent that party identification serves as a heuristic shortcut, excluding it from analysis could exaggerate the apparent importance of factual information to policy preferences (cf. Dimock and Popkin 1995).

This model was applied to a set of policy questions asked in the 1988 and 1992 NES (Miller et al. 1991, 1993). Since a logistic regression (logit) model was used to estimate coefficients, the data set consists of all policy questions from these studies with binary response options and any other policy questions that can be collapsed straightforwardly into dichotomous distributions. This made for a total of 45 usable questions out of the approximately 100 available.

The simulation proceeds in four steps. First, policy preferences are regressed on the full set of information, demographic, and interaction variables. This step estimates the relationships among these variables and provides a set of coefficients for simulating fully informed opinions. Second, each respondent's score on the political information scale is changed to the highest possible value. In the 1992 NES, for instance, that value was 23 points, so all respondents in the 1992 study were assigned a score of 23. Third, each respondent's fully informed opinion is calculated by plugging the coefficient values obtained from step one into each respondent's actual demographic characteristics, substituting only the new values of the altered information variable and interaction terms. Fully informed opinions are also estimated in this step for respondents who gave "don't know" or "no opinion" responses in the actual survey. Thus, respondents counted as "missing" in the actual data were assigned the same mix of fully informed preferences as the people who share their demographic characteristics and who actually gave opinions. In essence, this is a sophisticated way of weighting the preferences of opinion givers who have a certain combination of demographic characteristics by the number of respondents who share those characteristics. Fourth, all the individual fully informed opinions, including those of people who originally responded "don't know" and "no opinion," are aggregated into a fully informed collective preference. I use the mean of the Y_i probabilities to construct fully informed marginal percentages that can be compared directly to actual marginal percentages. Using marginals to gauge the substantive influence of information effects provides what is probably the most easily interpretable test statistic that can be generated with logistic regression methods.

It is important to note that the marginals resulting from this simulation process can be compared directly to the actual marginals only because they are operationalized as the mean of the individual probabilities that $Y_i = 1$ instead of the sum of the predicted values of Y_i. For instance, if 60% of all respondents sharing a certain demographic profile favor a certain policy, each respondent has a probability of .6 for favoring the policy. The mean of these probabilities recovers the actual percentage in favor (.6 = 60%), but since the

predicted value of Y_i for each respondent is 1 (because .6 > .5), estimates from predicted values would mistakenly show a group that is 100% in favor of the policy. The upshot is that most ordinary least squares applications (including the simulation method used in Delli Carpini and Keeter 1996) are less suited for estimating information effects than maximum likelihood applications because they introduce large amounts of error into such estimates.

The end results of this four-step transformation are uniformly high information levels across demographic groups and substantive opinions for all respondents. Using only the observed differences between well- and ill-informed respondents, this method imputes to all respondents the information processing strategies and cognitive styles employed by well-informed people. It also allows political information to interact with demographic characteristics in ways that may move preferences in one direction for some groups and in the opposite direction for other groups. This flexibility allows the model to reflect accurately the social diversity of needs, wants, and values. Of course, increasing levels of information may lead instead to greater consensus of opinion across groups, and the simulation method leaves that possibility open as well. Most important, this method is not predisposed to finding any information effects at all: If well- and ill-informed respondents give essentially the same mix of preferences, then the shape of the resulting fully informed preference should be about the same as the actual one (Bartels 1996, 208–9).

INFORMATION EFFECTS IN COLLECTIVE PREFERENCES

The appropriate test for the significance of information effects in the model used here is the likelihood ratio test (Bartels 1996, 209).[4] This test was found to be significant at the $p < .01$ level in 84.4% of the 45 questions and at the $p < .05$ level in 88.9%. In other words, the unrestricted model, which takes information effects into account, tends to provide a substantially better fit to the data than does the restricted model, which assumes no information effects. Information effects in policy questions appear to be the norm rather than the exception.

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[4] Similar to the F-test used to compare improvement of fit in OLS equations, the likelihood ratio test compares the log likelihoods of an unrestricted logit model, which includes all the variables, and a restricted logit model, which lacks the information and interaction terms, to determine the significance of the differences between them. For example, the -2 log likelihood of the unrestricted equation in Table 1 is 2063.7, while that of the restricted equation without interaction terms (not shown) is 2159.0. The result is a χ^2 value of 95.3, with $m = 28$ degrees of freedom, where m is equal to the number of parameters in the restricted model. This value is significant at the $p < .00001$ level, so the null hypothesis of no information effects can be safely rejected.

TABLE 1. Logit Coefficients for Opposition to Spousal Notification Laws (1 = Oppose)

Independent Variables	Main Effects		Interaction Effects (× Information)	
Information (1–23)	−.027	(.089)	...	...
Education (years)	−.043	(.072)	.013**	(.005)
Income (percentile)	.011	(.008)	−.000	(.001)
Age (years)	.009	(.014)	−.001	(.001)
Republican	.568	(.443)	−.075*	(.033)
Democrat	−.149	(.408)	.015	(.031)
Black	.663	(.447)	−.057	(.034)
Female	.062	(.358)	.053*	(.024)
Married	.783*	(.367)	−.072**	(.026)
Union family	−.353	(.460)	.028	(.031)
Homeowner	−.948**	(.358)	.048	(.025)
Parent w/child at home	.069	(.352)	−.003	(.024)
Receive welfare benefits	.045	(.472)	.020	(.034)
Receive other benefits	.397	(.428)	−.046	(.034)
Financially worse off	.178	(.321)	−.015	(.022)
Protestant	.186	(.473)	−.041	(.032)
Catholic	.188	(.518)	−.063	(.035)
Other religion	−.353	(.587)	−.006	(.040)
East	−.328	(.524)	.004	(.034)
Midwest	−.683	(.479)	.024	(.031)
South	−.645	(.456)	.030	(.030)
Urban	−.194	(.352)	.021	(.023)
Rural	−.575	(.398)	.026	(.028)
Retired	−.021	(.670)	−.018	(.047)
Homemaker	−.058	(.499)	−.004	(.038)
Executive/Professional	−.244	(.573)	.020	(.036)
Clerical	.606	(.531)	−.036	(.039)
Technical/Sales	.873	(.585)	−.050	(.039)
Constant	−1.808	(1.262)		

Note: Standard errors of parameter estimates are in parentheses. Beginning log likelihood = −1221.9; ending log likelihood = −1031.8. Beginning correct classifications = 65.4%; ending correct classifications = 73.1%. N = 1,894. *$p < .05$, **$p < .01$.

Information Effects in Attitudes toward Spousal Notification Laws

Before discussing the general findings from these simulations, it will be helpful to take a close look at an example of how information asymmetries can bias collective preferences. A question from the 1992 NES asked: "Would you favor or oppose a law in your state that would require a married woman to notify her husband before she can have an abortion?" To illustrate how the fully informed collective preferences discussed later were obtained, the logit coefficients for this question are displayed in Table 1. Although this equation correctly predicts responses for nearly three-quarters of opinion givers and represents a statistically significant improvement over the restricted model,[5] the relative paucity of significant coefficients is notable. A similar pattern was found in the Bartels simulation of information effects in vote choices: Only between 14%

[5] See footnote 4.

and 24% of coefficients achieved conventional levels of significance (Bartels 1996, calculated from tables 1 and 4–8). The reason for this pattern appears to be a multicolinearity problem stemming from the abundance of interaction terms correlated with political information scores as well as with the demographic variables.[6] Examining the restricted form of this equation confirms that, absent the information and interaction terms, almost half the coefficients attain conventional levels of significance (data not shown). Rerunning the regression using only the significant variable clusters identified in Table 1 produces no unexpected changes in the size or direction of coefficients. These findings suggest that the relatively large standard errors of many of the coefficients in the unrestricted equation should have little or no effect on the unbiasedness of the coefficients themselves.
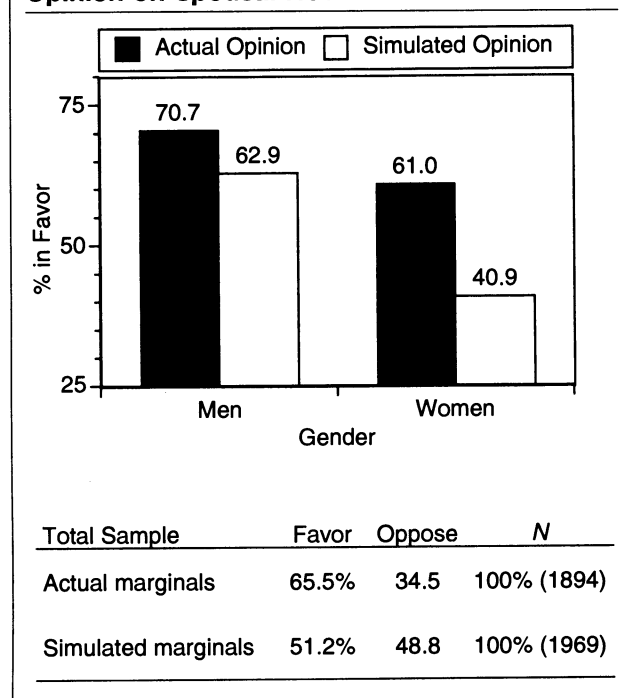
A more substantial concern with the data shown in Table 1 is the potential for specification error that comes from excluding attitudinal variables. Given the need to exclude such obviously relevant measures as attitudes toward abortion and women's rights, in the analyses that follow I avoid any suggestion that the model used here can *explain* individual-level opinions. Instead, I focus on what the model is intended to capture: differences in opinion between groups as well as the relationship between information and policy preferences within groups.

Figure 1 provides a detailed comparison of the actual marginal percentages for this question and those simulated for a public with uniformly high levels of political knowledge. In the actual marginals, nearly two-thirds of respondents said they favored a spousal notification law. Yet, in contrast to this apparently strong majority opinion, the fully informed collective preference is almost evenly divided on the issue. The only difference between these two measures is that the latter controls for the uneven social distribution of political knowledge.

As a precaution, I also tested whether the presence of insignificant coefficients in Table 1 affected the simulated marginal percentages. A second measure of fully informed collective opinion was estimated using a regression containing only the significant variable clusters shown in Table 1 (information, education, partisanship, gender, marital status, and home ownership). The result of this alternative simulation was a fully

[6] Most of this multicolinearity comes from the nature of the demographic variable clusters. For instance, in the 1992 NES, Republican partisanship is correlated with Democratic partisanship at −.78. Likewise, living in a suburban area is correlated at −.57 with living in an urban area and −.42 with living in a rural area. The rest is due to associations between different variables. For example, the scale of political information is correlated at .56 with education and .42 with income. Being married is correlated at .42 with income and .33 with being a homeowner. All of this is complicated by the set of interaction terms, which are linearly but imperfectly related to both the information scale and the set of demographic terms. Despite these associations, the theoretical approach to information effects adopted here dictates that all these variables be included in the logit model. The result is a large number of insignificant coefficients, but the coefficients themselves should nonetheless be valid for the purposes to which they are put.

FIGURE 1. Actual and Fully Informed Opinion on Spousal Notification Laws

Total Sample	Favor	Oppose	N
Actual marginals	65.5%	34.5	100% (1894)
Simulated marginals	51.2%	48.8	100% (1969)

informed collective preference that was 52% opposed and 48% in favor of spousal notification laws. Deviating only about three percentage points from the simulated marginals of the full equation, this result confirms the accuracy of the model shown in Table 1, despite the frequency of insignificant coefficients.[7]

Even more interesting than the substantive shift in the collective preference are the underlying dynamics of change among male and female respondents. Figure 1 shows that the direction of change from actual to simulated opinion is identical for both genders: Controlling for information asymmetries led to decreased support among both men and women for spousal notification laws. But the magnitude of this change was much smaller for men than for women. Opinion among male respondents shifted only eight percentage points, compared to twenty points among females. This smaller change among males was primarily due to a ceiling effect from their higher average information scores and to the weaker relationship for males between political information levels and opposition to notification laws (data not shown).

After assigning all respondents equally high information levels, the group preference of fully informed men (i.e., support for notification laws) remained unchanged from that of actual opinion. Thus, the fifteen-point swing in collective opinion came mostly from

[7] In this particular case, a shift on the magnitude of three points nevertheless signals a reversal in the collective preference simulated for a fully informed public. Although a shift of this magnitude does not count as a change in preference ordering for this study (it would still be counted as a tie: see footnote 9 below), it demonstrates the importance of examining the size of point changes in conjunction with any changes in preference ordering.

changes in the opinions of female respondents. As shown in Figure 1, group opinion among women shifted twenty percentage points in a pro-choice direction once information levels were raised and standardized. This resulted in an almost perfect reversal of majority opinion among female respondents: Whereas 61% of women said they favored a spousal notification law in the actual data, 59% said they opposed it in the simulated data.

These findings suggest that the information imbalances between men and women suppress the magnitude of pro-choice opinion revealed in opinion surveys. The fully informed majority preference of women on the issue of spousal notification laws is diametrically opposed to that of men, while their actual majority preference is the same as that of men.

General Patterns of Information Effects in Collective Preferences

With this insight into the effects of information disparities on collective preferences, we now turn to the general findings from the simulation data. Table 2 displays these overall results for each of four issue categories and for all questions together (Appendix B contains results for individual questions). Foreign policy covers the use of military force abroad, economic sanctions, arms agreements, and whether the United States should become more involved in solving problems around the world. The fiscal category addresses levels of government spending and taxation. Operative issues deal with the size and scope of the federal government, the election of legislators, and government regulation of the economy. Social policy covers such topics as abortion, gay rights, the death penalty, and affirmative action.

The first column shows the mean percentage point change between actual and fully informed opinion for all questions in each category. A score of five, for example, indicates a five-point shift in the marginals of one of the response options, as when collective opinion changes from 50% to 55% in favor. Table 2 shows that the average difference between actual and fully informed opinion was about seven percentage points. Questions dealing with fiscal issues had the largest average point change, while social policy questions had the smallest average difference between actual and simulated opinion measures.

These averages give a somewhat misleading picture, however, as the distribution of point differences is skewed toward the low end of the scale. Twenty of the 45 questions (44%) had a difference of between zero and five points, 13 (29%) differed between six and ten points, nine questions (20%) had differences of between eleven and fifteen points, and three (7%) differed by more than fifteen points. In the more than half of observations in which nontrivial changes were observed—that is, changes on a magnitude greater than five percentage points—the differences between actual and fully informed opinion averaged 10.8 points. When collective opinion changed by more than a few points, it tended to shift quite dramatically.

TABLE 2. Differences between Actual and Fully Informed Collective Preferences

Category	Average Point Change	N with Different Preference Order	Fully Informed Opinion Relative to Actual Opinion
Foreign policy issues (N = 8)	6.13 (3.80)	1 of 8	More dovish and interventionist
Fiscal issues (N = 6)	11.61 (7.28)	3 of 6	More willing to pay for more services and deficit reduction, less willing to maintain high defense spending
Operative issues (N = 8)	9.22 (6.41)	2 of 8	More opposed to government control of economy, more in favor of free market approaches
Social policy issues (N = 23)	5.49 (4.16)	3 of 23	More progressive in general, but slightly less progressive on some racial issues
All issues	7.08 (5.35)	9 of 45	

Source: Pooled data from 1988 and 1992 NES.
Note: Standard deviations are in parentheses.

Earlier it was suggested that the point differences between actual and simulated opinion might be exaggerated if party identification variables were omitted from the simulation equations. This expectation turned out to be incorrect. Rerunning the simulations without party identification variables (data not shown) produced estimates of information effects that were essentially identical to the simulation results reported here.[8]

While Table 2 shows that correcting for information asymmetries can lead to substantial shifts in collective opinion, changes of equal size may not be equally meaningful. A change from 80% to 90% in favor of a policy is in some ways less important than a change from 45% to 55% support; the former merely reinforces the majority opinion, while the latter indicates a substantive shift in majority opinion. The relative importance of the differences between actual and fully informed opinion can thus be clarified by noting when they cause collective policy preferences to change.

The middle column of Table 2 shows the number of questions in each category for which the preference order of fully informed opinion differed from that of actual opinion. Three possible collective preferences were considered: a majority in favor, a majority opposed, or a tie between options.[9] Any case in which the collective preference in actual opinion differed from that in the simulated marginals was coded as a change in preference order.

The frequency with which preference shifts occurred is a significant finding. After controlling for information effects, collective preferences changed in fully

one-fifth of policy questions. Change was most frequent in the fiscal category and least frequent in the area of foreign policy, although the small number of questions makes it difficult to draw any firm conclusions about differences between issue categories. The important point is that controlling for the effects of information on individual responses often results in new collective preferences. This contrasts somewhat with the findings of Bartels (1996), who studied information effects in presidential election outcomes. Although Bartels found information effects in vote choices that are comparable to the patterns examined here, in every election he studied, correcting the popular vote totals for the presence of information effects would have resulted in the same outcome as was historically the case.[10] In contrast, the collective ordering of policy preferences seems to be much more sensitive than aggregate vote choices to information effects.

My interpretation of what fully informed opinion looks like relative to actual opinion is given in the third column of Table 2. Fully informed opinion on foreign policy issues is relatively more dovish and interventionist than actual opinion. For example, while 29% of respondents in 1988 agreed that the United States should stay out of problems in other parts of the world, the level of agreement dropped to just 18% of fully informed responses. An example of dovishness in fully informed foreign policy preferences comes from another question from the 1988 NES: "Do you favor or oppose using American military forces in the Middle East to protect oil shipments?" While 64% of actual responses favored military deployment, support dropped to 58% of fully informed responses.

[8] Of the simulations controlling for party identification, 57.8% (n = 26) produced smaller estimates of information effects than the simulations that omitted party identification variables, hardly an improvement over chance. Moreover, the mean difference between simulations that omitted party identification and the measures of fully informed opinion listed in Appendix B was only two-thirds of a percentage point. Contrary to expectations, controlling for party identification seems to have little influence on the size or direction of information effects in these data.

[9] A tie was defined as any marginals falling within plus or minus 3 percentage points of the 50% mark. These boundaries approximate the 95% confidence interval for point estimates from these data. It follows that a majority is defined as at least 53.5% of responses.

[10] Calculated from Table 2 of Bartels 1996 and popular vote totals from the *Statistical Abstract of the United States*. Correcting actual popular vote totals with the estimated aggregate deviations from fully informed voting reported in Table 2 of Bartels 1996 has the following results: Nixon wins by 59.0% instead of 60.7% in 1972, Carter by 51.5% instead of 50.1% in 1976, Reagan by 56.3% instead of 50.7% in 1980 and by 53.9% instead of 58.8% in 1984, Bush by 56.4% instead of 53.4% in 1988, and Clinton by 45.2% instead of 43.0% in 1992.

Simulated opinion on fiscal issues is more favorable toward paying for deficit reduction and for a larger number of governmental services than is actual opinion. The proportion of respondents willing to pay higher taxes in order to reduce the deficit rose from 31% in the actual data to an impressive 53% in the simulated data. And while 35% of actual respondents agreed that "the government ought to cut taxes even if it means putting off some important things that need to be done," agreement dropped to 22% when controlling for information effects. Likewise, only 30% of actual respondents in the 1992 NES said that they would be willing "to pay more in taxes so that the government could spend more on the services you favor," but support rose to 47% among fully informed respondents. There were only two exceptions to the tendency for fully informed opinion to favor increased federal spending. While 68% of actual respondents felt that the United States should maintain high levels of defense spending, support dropped to 64% for fully informed respondents, and in terms of satisfaction with current levels of Social Security, 40% of actual respondents said benefits were about right or too high, compared to 48% of fully informed respondents.

With regard to operative issues, fully informed opinion is relatively more opposed than actual opinion to the idea of "big government." While 63% of actual opinion givers in 1988 agreed that "the government is getting too powerful," the level of agreement rose to 71% among fully informed respondents. Likewise, in 1992, 65% of actual respondents felt "there are more things that government should be doing," compared to only 50% of fully informed respondents. In simulated opinion, this option tied with "the less government the better."

In the area of social policy, fully informed opinion is more progressive than actual opinion on most issues. Simulated opinion is consistently more pro-choice than actual opinion (39% versus 25% opposed to parental notification laws) and more supportive of gay rights (40% versus 28% favored allowing gay couples to adopt children). A similar direction of change was observed for most social policy issues, the one exception being specific programs aimed at giving preferential treatment to African Americans. On matters such as affirmative action and school integration, fully informed opinion tends to be slightly less supportive than actual opinion. At the same time, simulated opinion is slightly more progressive than actual opinion on the general need for government to guarantee equal opportunity and fair treatment to blacks (see Appendix B).

The general pattern emerging from the simulations is for fully informed opinion to be more dovish and interventionist on foreign policy, more progressive on social and fiscal issues, and more conservative on operative issues. It is interesting that the same general trends were found when the simulations were reestimated using years of education in place of the factual knowledge scales and using only statistically significant variable clusters (data not shown). Furthermore, these general patterns of differences between actual and fully

informed opinion are consistent with results from other simulation methods (Althaus 1996a; Delli Carpini and Keeter 1996; chapter 6), with the broad patterns of opinion change among participants in the National Issues Convention held in January 1996 (Public Broadcasting Corporation 1996), and with the results of question filter experiments (Bishop, Oldendick, and Tuchfarber 1983). They are also consistent with previous studies comparing differences between well- and ill-informed survey respondents on a variety of policy issues (e.g., Althaus 1996a; Dimock and Popkin 1995; Key 1961, 331–41; Neuman 1986, chapter 3; Popkin and Dimock 1995).

CONCLUSION

Correcting for the low levels and uneven social distribution of political knowledge can change our understanding of collective preferences in significant ways. This study found that the effects of information asymmetries on collective opinion are both larger and more common than suggested by previous work. Controlling for information effects produces an average change of seven percentage points in question marginals and reveals that one in five policy questions might have a different collective preference if everyone were equally well informed about politics.

Obviously, these findings only suggest what collective opinion might look like in a hypothetical world of politically attentive citizens. While it is tempting to suppose that simulations of fully informed opinion somehow reflect the underlying political interests of the mass public, I draw no such conclusion from these data. The key contribution of this study lies not with speculating about the public's true interests but with demonstrating that survey results sometimes look the way they do because so many people are ill-informed about politics and because certain people tend to be better informed than others.

Interpreting the findings presented here in light of the existing literature on public opinion is a surpassingly difficult task, for the results of this study seem to both challenge and support the idea that the mass public's command of political knowledge is related to the quality of its collective preferences. On the one hand, the results can be seen as validating the hypothesis that on-line processing, heuristic shortcuts, and statistical aggregation help the mass public compensate for its lack of political knowledge. After all, the optimist might say, nearly half the question marginals shifted less than six points after correcting for information effects, and the ordering of collective preferences remained unchanged for eight in ten questions. On the other hand, the findings can be seen as challenging the view that heuristics, on-line processing, and statistical aggregation help an ill-informed public express policy preferences similar to those it might give if it were more knowledgeable about politics. After all, the pessimist might say, more than half the question marginals shifted at least five percentage points, and one-quarter shifted more than ten points after correcting for information effects. Moreover, the pessimist might add, the

ordering of collective preferences changed for one out of five questions when information effects were controlled.

Choosing between these competing interpretations requires a standard for determining when information effects are a problem. Earlier I made use of three such standards for evaluating individual questions: when likelihood ratio tests for the presence of information effects attain statistical significance, when differences between actual and fully informed collective opinions exceed five percentage points (which corresponds roughly to exceeding the 95% confidence interval for point estimates made from 1988 and 1992 NES data), and when correcting for information effects results in different preference orderings for collective opinions. Yet, such standards are of little help when moving beyond individual questions to evaluate more general patterns in groups of questions. Here the issues of interest are how often preference orderings must change for information effects to be called frequent, and how sizable mean point changes must be for information effects to be called large. As the answers to these questions vary with the vantage point and expectations of the individual observer, I submit my own assessment of the relative importance of information effects, recognizing that it is one among several valid interpretations of these results.

Given the frequency of shifts in collective preferences and the sizable point changes that occurred with some regularity when controlling for information asymmetries, I am inclined to see these results as challenging more than supporting the revisionist arguments that collective preferences are "rational" and reliable guides for public policy. Yet, the familiar warnings about the public's civic incompetence that have been made since the early 1950s are similarly challenged by this analysis. It would seem that a middle position fits best with the results presented here: Sometimes collective policy preferences are significantly influenced by the public's modest level of knowledge about politics, and sometimes they are not. Most of the time, at least in NES data, the aggregate effect of information asymmetries seems likely to be palpable but not decisive.

APPENDIX A: VARIABLES AND CODING

Demographics

Income is measured as income percentiles, *Education* is measured as years of formal schooling, and *Age* is measured in years. *Republican* and *Democrat* are coded 1 for the appropriate partisan identification (including independent "leaners") and 0 for all others. *Black* is coded 1 for African Americans and 0 for all others, *Female* is coded 1 for women and 0 for men, *Union Family* is coded 1 if any member of the respondent's household belongs to a union. *Homeowner* is coded 1 for people who own their own home and 0 for all others, and *Parent with a Child at Home* is coded 1 for respondents whose minor children reside with them and 0 for all others. *Receiving Welfare Benefits* is coded 1 for people living in a household where they or family members receive food stamps, Medicaid, unemployment, and/or AFDC and is

coded 0 for all others. *Receiving Other Benefits* is coded 1 for people living in a household where they or family members receive payments from Medicare and/or Social Security. *Financially Worse Off* is coded 1 for respondents who reported being worse off financially compared to one year before and 0 for all others. *Protestant, Catholic,* and *Other Religion* are each coded 1 for the appropriate religious affiliation and 0 for all others, with atheists, agnostics, and those with no religious affiliation comprising the reference category for this set. *East, Midwest,* and *South* are coded 1 for respondents living in the respective census region and 0 for all others, with those from western states as the reference category for this set. *Urban* and *Rural* are coded 1 for those from the appropriate census-defined place of residence and 0 for all others, with suburban as the reference category for this set. *Retired, Homemaker, Executive/Professional, Clerical,* and *Technical/Sales* are coded 1 for the respective occupational status and 0 for all others.

Political Information

The information measures used in this study were originally constructed and tested by Delli Carpini and Keeter (1993, 1996). These scales are primarily additive measures of correct answers to factual knowledge questions (correct = 1; incorrect or no answer = 0). They also incorporate a subjective assessment of respondent knowledge level made by the interviewer at the conclusion of each interview. Three kinds of factual knowledge items were used to construct these scales: relative location tests, in which correct answers are constructed by comparing responses to two different questions; open-ended questions asking respondents to identify the job or political office held by a public figure; and closed-ended questions testing knowledge of constitutional powers, which party held majority status in both houses of Congress, and which party was more conservative than the other. An example of a correct answer to a relative location test is placing the Republican Party as relatively more conservative than the Democratic Party on a seven-point ideology scale, regardless of where on the ideology scale a respondent actually places the two parties.

Besides the interviewer rating score (v555, reverse coded), the questions for the 1988 NES information scale included identifying the offices held by Ted Kennedy (v871), George Shultz (v872), Margaret Thatcher (v875), Yasser Arafat (v876), William Rehnquist (v873), Michail Gorbachev (v874), and Jim Wright (v877); naming the majority party in the House (v878) and Senate (v879); identifying the relative ideological locations of Bush and Dukakis (v231, v232), identifying the relative ideological locations of the Republican and Democratic parties (v234, v235), and locating the relative positions of the Republican and Democratic parties on national health insurance (v321, v322), government services (v307, v308), defense spending (v315, v316), and job assurances (v328, v329).

Aside from the interviewer rating score (v4205, reverse coded), the questions for the 1992 NES information scale included identifying the offices held by Dan Quayle (v5916), William Rehnquist (v5917), Boris Yeltsin (v5918), and Thomas Foley (v5919); identifying which branch of the federal government was responsible for deciding the constitutionality of laws (v5920) and for nominating federal judges (v5921); naming the majority party in the House (v5951) and Senate (v5952); identifying which was the more conservative party (v5915); identifying the relative ideological locations of Republicans and Democrats (v3517, v3518), Bush and Clinton (v3514, v3515); and identifying the relative position of the parties on government services (v3704, v3705), Bush and

Clinton on government services (v3702, v3703), the parties on defense spending (v3710, v3711), Bush and Clinton on defense spending (v3708, v3709), the parties on job assur- ance (v3721, v3722), Bush and Clinton on job assurance (v3719, v3720), and Bush and Clinton on abortion (v3733, v3734).

APPENDIX B: SIMULATION RESULTS FOR INDIVIDUAL QUESTIONS

Table B-1. Levels of Actual Opinion and Simulated Estimates of Fully Informed Opinion, by Question

Question	Type	Year (Var #)	Actual Opinion	Simulated Opinion
"I am going to read you a statement about U.S. foreign policy and I would like you to tell me whether you agree or disagree: 'This country would be better off if we just stayed home and did not concern ourselves with problems in other parts of the world.' " (percent disagreeing)	Foreign	1988 (v254) 1992 (v3604)	71.1 73.7	81.6 85.8
"The United States and the Soviet Union have recently reached agreements to reduce the number of nuclear arms. Do you approve or disapprove of these agreements?" (percent disapproving)	Foreign	1988 (v364)	12.6	8.7
"Do you favor or oppose using American military forces in the Middle East to protect oil shipments?" (percent opposed)	Foreign	1988 (v366)	35.7	42.6
"Some people think that the U.S. should increase the pressure on the South African government to change its racial laws. Others think the U.S. should not do this. What do you think—should the U.S. apply more pressure or not?" (percent opposed to more pressure)	Foreign	1988 (v861)	41.3	34.5
"The U.S. should maintain its position as the world's most powerful nation even it if means going to the brink of war." (percent disagreeing)	Foreign	1988 (v972)	42.9	48.2
"Do you think we did the right thing in sending U.S. military forces to the Persian Gulf or should we have stayed out?" (percent saying should have stayed out)	Foreign	1992 (v3608)	21.0	18.4
"Some people think that the U.S. and its allies should have continued to fight Iraq until Saddam Hussein was driven from power. Others think that the U.S. was right to stop fighting after Kuwait was liberated. What do you think? Should the war have continued or should it have stopped?" (percent saying should have stopped)	Foreign	1992 (v3630)	36.7	35.4
"In order to reduce the size of the federal budget deficit are you willing or not willing to pay more in federal taxes?" (percent unwilling)	Fiscal	1988 (v249)	68.9	46.3
"The government ought to cut taxes even if it means putting off some important things that need to be done." (percent disagreeing)	Fiscal	1988 (v944)	64.5	78.0
"Some people say the U.S. should maintain its position as the world's strongest military power even if it means continuing high defense spending." (percent disagreeing)	Fiscal	1992 (v3603)	31.9	35.6
"Would you personally be willing to pay more in taxes so that the government could spend more on the services you favor or would you rather keep your taxes the same even if this meant the government couldn't increase its spending as you would like?" (percent saying keep taxes the same)	Fiscal	1992 (v5922)	70.0	52.9
"In your opinion, are Social Security retirement benefits too low, about the right amount, or too high?" (percent saying about right/too high)	Fiscal	1992 (v6132)	40.1	48.7
"Do you favor or oppose taxes on Social Security benefits?" (percent opposed)	Fiscal	1992 (v6134)	87.0	81.0

Table B-1. (continued)

Question	Type	Year (Var #)	Actual Opinion	Simulated Opinion
"Some people have suggested placing new limits on foreign imports in order to protect American jobs. Others say that such limits would raise consumer prices and hurt American exports. Do you favor or oppose placing new limits on imports, or haven't you thought much about this?" (percent opposed)	Operative	1988 (v376)	23.7	39.7
		1992 (v3802)	33.1	38.5
"What is your feeling, do you think the government is getting too powerful or do you think the government is not getting too strong?" (percent saying government not getting too strong)	Operative	1988 (v848)	36.7	29.2
		1992 (v6016)	29.9	31.1
"Over the past year would you say that the economic policies of the federal government have made the nation's economy better, worse, or haven't they made much difference either way?" (percent saying worse)	Operative	1992 (v3541)	43.2	60.0
"A law has been proposed that would limit members of Congress to no more than 12 years of service in that office. Do you favor or oppose such a law?" (percent opposed)	Operative	1992 (v3747)	18.5	19.8
"Choose which of two statements I read comes closer to your own opinion ... One, the less the government the better; or two, there are more things that government should be doing?" (percent saying there are more things government should do)	Operative	1992 (v5729)	64.9	50.3
"Choose which of two statements I read comes closer to your own opinion ... One, we need a strong government to handle today's complex economic problems; or two, the free market can handle these problems without government being involved?" (percent favoring free market)	Operative	1992 (v5730)	26.5	41.5
"Do you favor or oppose laws to protect homosexuals against job discrimination?" (percent opposed)	Social	1988 (v852)	45.8	41.8
		1992 (v5923)	39.9	34.5
"Do you favor or oppose the death penalty for persons convicted of murder?" (percent opposed)	Social	1988 (v854)	19.9	24.8
		1992 (v5933)	20.6	24.0
"Some people say that because of past discrimination, blacks should be given preference in hiring and promotion. Others say that such preference in hiring and promotion of blacks is wrong because it gives blacks advantages they haven't earned. What about your opinion—are you for or against preferential hiring and promotion of blacks?" (percent against)	Social	1988 (v856)	79.9	83.1
		1992 (v5935)	79.9	84.0
"Should the government in Washington see to it that black people get fair treatment in jobs or is this not the federal government's business?" (percent saying this is not the government's business)	Social	1988 (v865)	42.7	39.7
		1992 (v5938)	42.7	42.9
"Some people say that because of past discrimination it is sometimes necessary for colleges and universities to reserve openings for black students. Others oppose quotas because they say quotas give blacks advantages they haven't earned. What about your opinion—are you for or against quotas to admit black students?" (percent against)	Social	1988 (v869)	63.7	65.8
		1992 (v5947)	67.4	68.4
"Equal opportunity for blacks and whites is very important but it's not really the government's job to guarantee it." (percent disagreeing)	Social	1988 (v965)	43.2	49.0
"Do you think the government should require companies to allow up to six months unpaid leave for parents to spend time with their newborn or newly adopted children, or is this something that should be left up to the individual employer?" (percent favoring decision left to employers)	Social	1992 (v3717)	68.8	63.0

Table B-1. (continued)

Question	Type	Year (Var #)	Actual Opinion	Simulated Opinion
"Would you favor or oppose a law in your state that would require parental consent before a teenager under 18 can have an abortion?" (percent opposed)	Social	1992 (v3735)	24.5	39.2
"Would your favor or oppose a law in your state that would allow the use of government funds to help pay for the costs of abortion for women who cannot afford them?" (percent opposed)	Social	1992 (v3737)	49.1	46.9
"Would you favor or oppose a law in your state that would require a married woman to notify her husband before she can have an abortion?" (percent opposed)	Social	1992 (v3739)	34.5	48.8
"Do you think government should provide child care assistance to low and middle income working parents, or isn't it the government's responsibility?" (percent saying government is not responsible)	Social	1992 (v3745)	38.8	40.3
"Do you think homosexuals should be allowed to serve in the United States Armed Forces or don't you think so?" (percent saying gays should not be allowed to serve)	Social	1992 (v5925)	41.4	37.2
"Do you think gay or lesbian couples, in other words, homosexual couples, should be legally permitted to adopt children?" (percent opposed)	Social	1992 (v5927)	72.3	59.0
"Do you think the government in Washington should see to it that white and black children go to the same schools, [or that it should] stay out of this area as it is not the government's business?" (percent saying government should stay out)	Social	1992 (v5932)	50.8	59.5
"Some people feel that we should use government funds only to support children who go to public schools, others feel that we should use government funds to support children's schooling regardless of whether their parents choose to send them to a public, private, or parochial school. How do you feel, or haven't you thought much about it?" (percent in favor of funding all schooling)	Social	1992 (v6023)	42.9	33.5
"Do you favor or oppose expanding Medicare to pay for nursing home care and long hospital stays for the elderly?" (percent opposed)	Social	1992 (v6136)	12.0	21.5
"Do you favor a law making English the official language of the United States, meaning government business would be conducted in English only, or do you oppose such a law?" (percent opposed)	Social	1992 (v6233)	30.6	28.7
"Do you think that immigrants who come to the U.S. should be eligible as soon as they come here for government services such as Medicaid, Food Stamps, Welfare, or should they have to be here a year or more?" (percent saying immigrants should wait a year or more)	Social	1992 (v6242)	78.9	70.8

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