A DIFFERENT TAKE ON THE DELIBERATIVE POLL
INFORMATION, DELIBERATION, AND ATTITUDE CONSTRAINT

PATRICK STURGIS
CAROLINE ROBERTS
NICK ALLUM

Abstract  Opinion pollsters, political scientists, and democratic theorists have long been concerned with the normative and methodological implications of nonattitudes (Converse 1964). Of the proposed remedies to the weak and labile attitudinal responses proffered by an uninformed and disinterested public, perhaps the most ambitious to date has been Fishkin’s concept of the deliberative poll (Fishkin 1991, 1995, 1997). Combining probability sampling with information intervention and increased deliberation affords a unique insight into what might be considered the true “voice of the people.” Yet, while deliberative polling draws heavily on the general notion of political sophistication (Luskin 1987), empirical analyses have tended to focus almost entirely on how the process of deliberation impacts on marginal totals of attitude items at both the individual and aggregate level (Fishkin 1997; Luskin, Fishkin, and Jowell 2002; Sturgis 2003). Little attention, in contrast, has been paid to outcomes that relate to other dimensions of opinion quality, such as attitude constraint. Constraint refers to the level of consistency between attitudes within an individual belief system that arises from a combination of logical, social, and psychological factors (Converse 1964). In this article we analyze data from five deliberative polls conducted in the United Kingdom in the 1990s in order to investigate the impact of political information and deliberation on attitude constraint. Across a broad range of issue areas we evaluate the extent to which the deliberative process impacts on statistical associations among attitude items between the first and subsequent waves of the polls. We conclude

PATRICK STURGIS and NICK ALLUM are lecturers in the Department of Sociology, University of Surrey, Guildford, UK. CAROLINE ROBERTS is senior research fellow at the Centre for Comparative Social Surveys, City University, London, UK. The authors wish to thank the funders of the data collection, Channel 4 Television, Granada Television, and the Independent newspaper, and the National Centre for Social Research for providing access to the data.

doi:10.1093/poq/nfi005
© The Author 2005. Published by Oxford University Press on behalf of the American Association for Public Opinion Research. All rights reserved. For permissions, please e-mail: journals.permissions@oupjournals.org.
by discussing the implications of our results for the validity and reliability of survey measures of the attitude and the broader utility of the deliberative polling method as a tool of social scientific inquiry.

Political Sophistication and “Informed” Opinion

If political science as a discipline can claim to have uncovered any scientific “facts” during its relatively brief existence, then the politically unsophisticated electorate is undoubtedly a primary contender. In survey after survey the inability of the public to accurately identify the institutional structures of government, officeholders, and important areas of elite controversy has been repeatedly demonstrated through decades of empirical research (Bennett 1988; Delli Carpini and Keeter 1996; Lupia and McCubbins 1998). Comparative time series of survey data confirm the initial conclusions of the Michigan School, that respondents sometimes offer opinions on nonexistent issues (Bishop, Tuchfarber, and Oldendick 1986); misunderstand and misrepresent abstract, ideological terminology (Butler and Stokes 1969; Campbell et al. 1960; Converse 1964; Erikson and Luttberg 1973); switch from one side to the other of prominent issues in a quasi-random manner over time (Asher 1974; Converse 1964; Iyengar 1973; Sturgis 2002); and demonstrate only weak consistency between issues that elites routinely parcel together (Butler and Stokes 1974; Converse 1964; Converse and Pierce 1985). This body of empirical work has given rise to concerns over the ability of the public to meet the exigencies of normative theories of democracy and the validity and reliability of survey attitude data more generally.

If the responses proffered in the standard survey interview are not always reliable, how can we come to know public opinion? The list of proposed methodological remedies to this question is long and growing. Some of the more straightforward approaches involve only slight modifications to the standard questionnaire format. It is now common practice, for instance, to provide preambles for questions on low salience topics in order to provide respondents with at least some limited frame of reference within which to formulate a response: “you may have heard of issue X, this is ... .” Similarly, although not always recognized as such, the inclusion of “don’t know” and “can’t say” response alternatives is an implicit recognition that not all respondents will have a stance on every issue. Opinion filtering à la Schuman and Presser (1981) is a yet more robust attempt at weeding out the nonattitude holders to provide a “purified” measure of the public will.

Where such filtering approaches fall down, of course, is in assuming—if only implicitly—that the distribution of “true” issue preferences is itself uncorrelated with opinion holding (Delli Carpini and Keeter 1996). For the same reason, the notion of “rationality through aggregation” (Page and Shapiro 1992) has been critiqued for assuming that “the actual signal of net
change can come equiprobably from any stratum of the electorate” (Converse 2000, p. 349; see also Althaus 2003; Krosnick et al. 2002). On the contrary, however, the evidence that the aggregate distribution of opinion on many issues would be different, were people better informed, is compelling (Althaus 1998, 2003; Bartels 1996; Sturgis 2001, 2003). The key problem is not, then, how to identify and remove the nonattitude holders but how to estimate what the public as a whole would think were they better informed about the issues in question.

Clearly, this is a far from straightforward task—the gulf that separates the least sophisticated members of the public from their elite counterparts is so vast that it would, in all reality, take years of dedicated study to even come close to broaching it (see Converse 2000, pp. 333–35, for a vivid discussion of this point). Many attempts at solving the problem of estimating “informed opinion” founder on the problem of response burden that this throws up. In delivering levels of information deemed sufficient for eliciting enlightened preferences, most have had to give up on random selection of samples and, thereby, on representativeness. Under this general umbrella would fall techniques such as focus group discussions (Kreuger 1988), “citizens’ juries” (Coote and Lennhaglan 1997; Wakeford 2003), “planning cells” (Renn et al. 1984), and other methods based on “opt-in” sample designs. Other approaches have retained a probability-based sample design but have implemented only relatively modest “interventions” (Neijens 1987; Van Knippenberg and Daamen 1996) or have relied on statistical modeling of cross-sectional data in preference to quasi-experimental designs (Althaus 1998; Bartels 1996; Delli Carpini and Keeter 1996; Gilens 2001; Sturgis 2001, 2003). We do not further discuss such approaches here but restrict our attention to a consideration of the most ambitious approach to date of estimating informed opinion while retaining the possibility of inference to the population through random selection of samples—Fishkin’s deliberative poll (Fishkin 1991, 1995, 1997; Luskin, Fishkin, and Jowell 2002).

The basic design of a deliberative poll involves interviewing a randomly selected sample of the population on their views on a particular issue or range of issues before they participate in a weekend of (balanced) briefings by experts, discussion among participants, and questioning of experts, politicians, and stakeholders. The sample is then reinterviewed at the end of the period of deliberation (see Fishkin 1997 or Luskin, Fishkin, and Jowell 2002 for a detailed account of the methodology). Fishkin has argued that combining probability-based sampling with the increased information, attention, and deliberation that respondents bring to the “post” survey reveals “the views the entire country would come to if it had the same experience of behaving more like ideal citizens immersed in the issues for an extended period” (Fishkin 1997, p. 162). And, following the successful conduct of nearly twenty deliberative polls in at least seven different countries, there can be little doubt that the method consistently engenders sizable net and gross opinion change across a
Deliberative Polling and Attitude Constraint

range of issues and political contexts (Fishkin 1997; Hansen and Andersen 2004; Luskin, Fishkin, and Jowell 2002; Merkle 1996).

Yet, while we may be impressed by the shifts in marginal totals that undoubtedly accompany the welter of information and increased attention that respondents pay to the topic, can we really be sure that we are uncovering “enlightened preferences”—the attitudes people would have held had they always been as involved in and informed about the issues? Would the same results have been obtained on a different sample? Or, perhaps more to the point, would the same sample have responded differently to a different set of speakers or a slightly modified set of briefing materials? The predominant focus on simple input-output effects means that the complex and interacting causal mechanisms underlying opinion change in the deliberative poll—public and private deliberation, informational influence, group dynamics and persuasion—remain unclear, leaving the deliberative poll as something of an explanatory “black box” (Price and Neijens 1998).

Price and Neijens (1997) have set out a framework for evaluating the “quality” of measures of opinion that links “opinion quality” to notions of democracy and social choice. Such a formulation fits well with Fishkin’s own conceptualization of the deliberative poll as being intended as “more than a social science experiment; it is also meant to contribute to the public dialogue” (Fishkin 1997, p. 189). One of the key outcome-oriented hallmarks of “considered” opinions, from this perspective, is the extent to which attitudes are consistent with beliefs about the implications and consequences of different courses of action (Yankelovich 1991) and with other idea elements within the belief system as a whole. Indeed, Fishkin (1991, p. 83) has himself argued that increased belief system consistency should be apparent after participating in a deliberative poll: “Many . . . nonattitudes and pseudo-opinions would be replaced by views that are better rationalized and supported and perhaps more consistent with other elements in the respondent’s belief system.” The idea of consistency as an indicator of opinion quality draws us, in turn, into the long-standing tradition of political belief systems (PBS) research and Converse’s notion of attitude “constraint.”

Attitude Constraint

The concept of attitude constraint derives from the idea that attitudes toward specific areas of government policy are structured by more abstract value dimension(s) farther back in a hierarchical system of belief (Converse 1964; Peffley and Hurwitz 1985). Thus, we should expect a degree of correspondence between the position an individual takes on issue A and the position he or she takes on issue B, to the extent that both positions articulate with higher-order values and beliefs. Converse invokes the analogy of “glue” to convey his idea of attitudinal constraint, a cognitive binding agent that, both vertically
and horizontally, integrates idea elements into a coherent and, in some senses, unitary cognitive entity. The idea that a particular belief “goes with” another should not, however, be seen as syllogistically proscriptive but as reflective of the historical and cultural influences brought to bear on the social and political fabric of a given society at a particular point in time—together with the “idiosyncratic twist” engendered by the individual’s own experiential history.

More information and greater internal integration of idea elements are typically taken as indicative of greater political sophistication (Luskin 1987). More sophisticated individuals, it is proposed, experience greater political efficacy; ideological organization affords straightforward assimilation and retention of novel information and provides a meaningful framework through which it is possible to assess the optimal course(s) of action to achieve one’s instrumental objectives (Neuman 1981, 1986). Ultimately, organizational structure and parsimony aid individual efficacy by facilitating the development of attitudes and partisan tendencies that are more in line with individual and group interests (Althaus 1998; Bartels 1996; Mansbridge 1983).

The empirical observation that first led Converse to the development of the constraint construct was the steep gradients in correlations between attitude items that emerged across virtually any measure of cognitive elaboration or information capacity (Converse 1964, 1990). The overarching aim of the tradition of research into attitude constraint has, consequently, been to delineate the social and psychological mechanisms underlying such gradients. Revisionist critiques of Converse’s pessimistic model of the public’s political acumen have variously focused attention on measurement error (Achen 1975; Erikson 1979), historical changes in political climate (Nie and Anderson 1974; Nie and Verba 1975; Nie, Verba, and Petrocik 1979), and the application of an inappropriate methodological paradigm (Lane 1962; Rosenberg 1988) to counter the main thrust of Converse’s position. In our view, such responses have failed to decisively overturn Converse’s original conclusions on the causes of gradients in constraint, but space precludes their closer examination here (see Converse 2000; Kinder 1998; and Kinder and Sears 1985 for comprehensive reviews). Instead, we focus our attention on Converse’s original model of ideological constraint, which ties correlational gradients to differences in the level of information and ideological sophistication that individuals bring to attitude questions in surveys.

The Antecedents of Constraint

For Converse, lower interitem correlations among the less politically informed are essentially a result of the combined influence of two main characteristics of the belief systems of this group: the weak, uncognized “nonattitudes” that underpin responses to individual survey items and the lack of coherence with relation to higher-order organizing principles in the belief system as a whole.
The two are undoubtedly strongly and inextricably related, opposite sides of the same coin, if you like. Nonetheless, it is important to distinguish between the distinct mechanisms through which political knowledge impacts on belief system structure, for the effects of these two mechanisms may, in some instances, be confounded.

We turn first to the relation between knowledge and deliberation on the one hand and the reliability of individual items on the other, and how this relation concomitantly impacts on observed levels of association between the items in question. To the extent that nonattitudes are “top-of-the-head” responses to uncognized stimulus objects, we might reasonably expect that increases in information would lead to more considered, stable attitudes that have been arrived at through rational, preference-based judgments. In the language of signal detection theory, we would expect the ratio of signal to noise for individual items to increase with greater political knowledge. In the aggregate, this would reduce the random component in the respective survey items for more knowledgeable groups of respondents, disattenuating the magnitude of correlation (Bollen 1989), holding constant the actual level of association between items.

As a second consequence of increasing knowledge and deliberation, we might also expect that individuals would obtain a better understanding of “what goes with what” (and why) and that this, too, would feed through into stronger interitem associations at the aggregate level. This is perhaps the more common understanding of how knowledge and deliberation impact on statistical associations between attitudes and has also been the source of some objection to the idea that more sophisticated individuals should always have more “consistent” belief systems (Lane 1962; Rosenberg 1988). It is important to note, however, that the general idea being outlined here is not equivalent to stating that greater sophistication will always result in stronger linkage between issue domains. Neuman (1981, 1986) and Tetlock (1983; 1984) give strong theoretical grounds for expecting increased differentiation to be the hallmark of sophistication in certain contexts. Similarly, from a methodological perspective, a reduction in the tendency to adopt “satisficing” response strategies (Krosnick, Narayan, and Smith 1996) should lead us to expect weaker, not stronger, associations between attitude items as individuals become more politically sophisticated (Schuman and Presser 1981). As Luskin (1987) points out, it is a common mistake among public opinion researchers to conflate correlation and consistency when investigating the concept of constraint.

Whether political sophistication leads to integration or differentiation across a particular set of issue preferences is, therefore, an empirical question. While conceding, however, that we should not expect increased consistency to result from greater knowledge and deliberation in every instance, we must pit this against the regularity with which measures of statistical association appear to adopt an upward gradient when stratified cross-sectionally by indicators of political sophistication, including the results we present later in this article.
(Aberbach, Putnam, and Rockman 1981; Bartle 2000; Butler and Stokes 1974; Converse 1964; Converse and Pierce 1985; Delli Carpini and Keeter 1996; Gastil and Dillard 1999; Sinnott 2000; Sturgis 2001).¹

**An Integrative Model**

Zaller and Feldman (1992; see also Zaller 1992) provide an explicit theoretical formalization that integrates measurement error and consistency perspectives on attitude constraint and explains how greater familiarity with political issues impacts on a range of survey response characteristics that have traditionally been taken as indicators of sophistication: context effects (Schuman and Presser 1981), response stability, and interitem association. Zaller and Feldman propose a “simple theory of the survey response,” which conceives of attitudes, not as pre-formed cognitive entities waiting to be recovered from some mental filing cabinet, but as temporary constructions that are both time and context dependent. For Zaller and Feldman the fundamental building blocks in the construction of “revealed preferences” (as they term survey attitude responses) are “considerations” and “predispositions.” While the latter are in many respects akin to the notion of core beliefs and values (Feldman 1988; Rokeach 1973), in that they determine the favorability an individual will accord to a particular proposition or idea, the former are bits of information that, depending on an individual’s predispositions, will incline a respondent to “decide a political issue one way or another” (Zaller 1992, p. 21). People who are more interested and involved in politics will have a deeper pool of considerations from which to infer their attitudes. They will also, according to the Zaller and Feldman model, have less contradictory considerations because they will be better able to recognize information that conflicts with their predispositions and resist its persuasive influence. Finally, when these individuals are called on to provide an attitude response in a survey, they will be averaging over a larger pool of more consistent considerations than the less politically aware, which results in the same response alternative being selected more consistently over time. Their attitudes are also more consistent with one another at any one point in time because members of this group are more likely to seek out and obtain new information and, as their stock of relevant considerations grows, to resist information that conflicts with their predispositions. The net effect is a larger pool of consistent considerations or, in other words, more constrained attitude systems.

While the literature is now replete with cross-sectional confirmations of the deduction from this model that less knowledgeable citizens should exhibit lower statistical associations between attitude items (for recent examples see Bartle 2000; Sinnott 2000), experimental or quasi-experimental investigations

¹ Though see Smith (1989) for a notable exception to this general pattern.
of the hypothesis are rare indeed. This is unfortunate, as cross-sectional data is of limited utility for addressing questions relating to social process and causality, due to its essentially static nature. Showing, with cross-sectional data, that the magnitude of interitem correlation is related to political knowledge is a long way from demonstrating a causal effect. While quasi-experimental data cannot eliminate concerns over such threats to valid causal inference, leverage on questions of causality is much greater because we are able to eliminate a whole raft of potential causal factors. Observed changes in attitude structure in a deliberative poll cannot, for instance, be plausibly attributed to parental social class, education, or occupation.

Gastil and Dillard (1999) provide the only large-scale longitudinal evaluation of the relation between sophistication and belief system structure to date. They analyze before-and-after data across a broad range of issue attitudes from National Issues Forum (NIF) discussions. Using average correlation as their empirical operationalization, they report evidence of weak, but significant, increases in constraint between items in the same scale, and somewhat larger increases in the magnitude of correlations between scale total scores, after participation in NIF discussions. In conceptualizing constraint, Gastil and Dillard distinguish between cognitive integration and differentiation, demonstrating that the effect of deliberation manifests itself both in stronger linkages between related issues and reduced association between unrelated issues. Gastil, Black, and Moscovitz (2002) broadly replicate Gastil and Dillard’s results using student samples, additionally finding changes in constraint to be unrelated to preexisting ideological orientation. While both studies, then, provide support for the idea that deliberation can result in increased ideological sophistication, they are limited by their use of self-selecting samples. Given the tendency for participation in political surveys to be correlated with political sophistication (Brehm 1993), it is questionable whether the results of these studies are generalizable to the population as a whole. In the remainder of the article, therefore, we turn our attention to an evaluation of the evidence, from five U.K. deliberative polls that employed probability sample designs, that increases in knowledge, involvement, and deliberation lead to a subsequent growth in statistical measures of constraint.

Data

In collaboration with James Fishkin and Channel 4 Television, the National Centre for Social Research conducted five deliberative polls in the United Kingdom during the 1990s, which form the basis of our analyses in this

2. Note, however, that, while conceptually distinct, Gastil and Dillard’s operationalizations of differentiation and integration are empirically equivalent; a differentiation effect becomes one of integration (and vice versa) by reverse coding either one of the attitude scales under consideration.
### Table 1. Response Rates for Five United Kingdom Deliberative Polls

<table>
<thead>
<tr>
<th>Poll</th>
<th>Date</th>
<th>Initial Sample</th>
<th>Deliberative Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crime</td>
<td>1994</td>
<td>869 (74%)</td>
<td>300 (26%)</td>
</tr>
<tr>
<td>Europe</td>
<td>1995</td>
<td>900 (71%)</td>
<td>224 (18%)</td>
</tr>
<tr>
<td>Monarchy</td>
<td>1996</td>
<td>857 (62%)</td>
<td>258 (19%)</td>
</tr>
<tr>
<td>Election Issues</td>
<td>1997</td>
<td>1,210 (64%)</td>
<td>276 (15%)</td>
</tr>
<tr>
<td>NHS</td>
<td>1998</td>
<td>955 (66%)</td>
<td>228 (16%)</td>
</tr>
</tbody>
</table>

The polls covered attitudes toward crime and criminal justice (1994); European integration (1995); the monarchy (1996); issues around the 1997 general election (1997); and the National Health Service (1998). All five polls had the same basic design—a stratified, multistage probability sample of individuals in Great Britain was drawn from the Electoral Register, with the aim of obtaining approximately 1,000 face-to-face interviews. Respondents to this baseline survey completed a self-administered questionnaire that contained items of relevance to the topic area and a range of standard demographic questions. Respondents to this stage of the study were invited to attend the weekend of “deliberation” at a central location, with all expenses covered and a small monetary incentive. Between the interview and the event itself, participants were sent briefing documents about the issue in question, outlining as impartially as possible the main points of contention. At the weekend event, participants were “immersed” in the issues both in small, moderated groups and in plenary sessions, where specialists who represented different perspectives presented their views and answered questions from participants. Further plenary sessions were presented by prominent politicians, usually secretaries of state and their shadow counterparts. At the end, participants completed the self-administered questionnaire once again. The whole event was televised, in edited form, on Channel 4 on the Sunday evening of the deliberative weekend.

As set out in table 1, response rates to the initial survey were around 60–70 percent, with about a fifth to a third of those responding at this stage eventually participating in the deliberative component of the study. This means that, generally, only around 20 percent of eligible respondents who were drawn for the initial sample actually provided “before” and “after” data. Fishkin and colleagues, however, report that, despite these low rates of response, the deliberative samples matched the baseline samples across a range of important

---

3. The National Centre for Social Research was formerly Social and Community Planning Research (SCPR).
4. These are “overall” unweighted response rates, as defined by Lynn et al. (2001). The formula resembles the American Association for Public Opinion Research response rate 3 (RR3), including partial interviews in the numerator and an estimate of the eligibility of unknown cases in the denominator.
demographic marginals such as sex, age, social class, and party identification. There were also few significant differences between respondents and nonrespondents on attitudinal variables, although all polls slightly overrepresented those who reported being more interested in politics (Fishkin 1997; Luskin, Fishkin, and Jowell 2002; Sturgis 2001).

Method

The self-completion questionnaire from each of the five polls was examined to identify attitude scales with three or more ordinal indicators that were administered at both waves. Given the wide variety of attitude items in the five polls, there were at least two ways in which this process of combining items into scales could be accomplished. First, one might use a primarily deductive approach, following the grouping of items on the questionnaire in distinct "topic blocks." as presumably intended by the original designers of the study. A second, more inductive approach, involves factor analyzing all candidate items and taking the derived component structure as the way to combine items into scales. The analysis presented here uses the former approach, though the latter approach produces substantively identical results. Our review of the questionnaires produced a total of 15 attitude scales to form the basis of the analysis. These were distributed across polls as follows: crime (4); Europe (4); monarchy (3); election issues (1); and National Health Service (3). Exploratory factor analysis (EFA) was used to check that a single common factor model was a reasonable representation of the observed data for each scale. Full wordings for all 15 attitude scales are provided in the appendix. Having identified these 15 attitude scales, the aim of the analysis was then to determine whether there was any evidence for change in the level of constraint among items across the two waves of the polls.

The matter of how constraint should be empirically operationalized has received a good deal of consideration in the PBS research literature. Criticism has been leveled at the use of inappropriate correlational statistics such as Goodman and Kruskal’s gamma (Balch 1979; Luskin 1987; Weisberg 1974). Even correlational measures deemed more appropriate to the task are problematic because they conflate slope and the distribution of points about the regression line. This means that the distributional properties of the variables being correlated can be as much the cause of between-group differences as the actual level of association between the variables in question (Achen 1982; King 1986; Weissberg 1976).

5. Contact the corresponding author for details of these analyses.
6. This was done by examining the elbow of scree plots of eigenvalues rather than selecting an arbitrary cutoff point for eigenvalues. That a single factorial structure underlay each attitude scale was desirable because this is an assumption underlying Cronbach’s alpha, which we use in later analyses.
Furthermore, simply comparing averaged, sign-adjusted correlation coefficients across a matrix of variables suffers from at least two significant problems. First, as this technique usually involves either pairwise or listwise deletion of missing cases, with levels of missing data on these types of attitudinal variables often rising as high as 10–30 percent of eligible cases, the effects of nonrandom item missing data can lead to substantial overestimates of constraint (Bennett et al. 1979). Second, the historical lack of parametric statistical tests for differences in these averaged coefficients means that comparing levels of constraint between groups, while of some descriptive value, gives us no idea of what constitutes a large or a small, let alone a statistically non-zero difference between groups.

Multivariate correlational methods such as EFA have also been used to examine the relatedness of individual issues and dimensionality of belief systems within the general public (Himmelweit, Humphreys, and Jaeger 1985; Jackson and Marcus 1975; Stimson 1975). In terms of political sophistication, the rationale underlying these factor analytic approaches is that, to the extent that belief systems are more constrained, the factorial structure should be simpler and the percentage of variance explained greater, the more sophisticated the individual’s political thinking. While this general hypothesis has, to some extent, accrued empirical support (Delli Carpini and Keeter 1996; Stimson 1975), there is a lack of consensus as to whether more constrained belief systems should always result in simpler factor structures (Luskin 1987; Marcus, Tabb, and Sullivan 1974; Neuman 1981). Furthermore, solutions for exploratory factor analyses are heavily determined by issue content and the number of variables included in the analysis, which makes it difficult to argue that such inductive approaches reflect the true ideological structuring of belief systems in the mass public (Rosenberg 1988).

More recent treatments of constraint have moved away from bivariate correlational measures and EFA and adopted confirmatory factor analysis (CFA) or its extension—structural equation modeling (Joreskog 1973, 1993; Joreskog and Sorbom 1989). Judd and Milburn (1980; see also Judd, Krosnick, and Milburn 1981) have argued that, in conjunction with measures of overall model fit, the pattern of unstandardized factor loadings between each indicator variable and the latent construct it measures may be taken as indicative of the level of belief system constraint in a population. Using the unstandardized coefficients, they argue, avoids the potential problem of unequal variances in the observed variables across groups causing spurious differences in constraint in standardized measures. However, as both Martin (1981) and Converse himself (1980) have argued, unstandardized factor loadings are not particularly useful measures of constraint because they do not represent absolute magnitudes but are meaningful only relative to the factor loading that is fixed.

7. The direction of the bias is toward overestimates, as it is the least politically involved and therefore the least ideologically constrained sample members who are most likely to provide item missing data (Smith 1984).
Deliberative Polling and Attitude Constraint

to unity in order to set the scale of the latent variable. They argue that differences across groups in standardized parameters and measurement errors of the observed variables are more informative indicators of the internal coherence of political belief systems. As is so often the case, then, increasing methodological sophistication has not provided any straightforward resolution to long-standing theoretical debates.

In this study we combine a simple correlational measure of attitude constraint—Cronbach's alpha—with recent innovations in the estimation of sampling variance through the bootstrap (Efron 1979). We choose Cronbach’s alpha as our operationalization of constraint, despite its relative lack of technical sophistication, because such correlational measures have traditionally been and continue to form the basis of empirical research into constraint as a measure of political sophistication. Alpha gives the average, sign-adjusted correlation between items, with an upward correction for each additional item included in the scale (Cronbach 1951). We prefer alpha over other candidate measures such as the average correlation (Gastil and Dillard 1999) because the item total correction makes the scales in our analysis—varying as they do in number of items—more directly comparable. Note, however, that repeating this analysis using average correlation produces an identical pattern of results.8 We make no special claims for the superiority of Cronbach’s alpha as a measure of constraint, as it too is open to the general criticisms of covariance-based measures outlined above. Equally, however, we see nothing in the derivation of this statistic that makes it inferior to other, more technically sophisticated operationalizations of belief system constraint. By applying the bootstrap to estimates of differences in alpha within and between groups, it is possible to perform statistical tests of differences in coefficients, where previous examinations of gradients in such correlational measures have tended to rely on “eyeballing” and intuition. Our simple test of significant difference in all the analyses that follow is whether the bootstrapped 95 percent confidence interval of the difference in alpha crosses zero.

In addition to testing for differences in constraint before and after deliberation for the weekend samples as a whole, we wished to examine whether the effect of information and deliberation on constraint was moderated by extant knowledge levels. All five polls contained short knowledge quiz items in a true/false format about the issue on which the poll focused.9 Raw scores on the knowledge measures were coded into percentiles. The percentile scores were then used to form three, near equal-sized bands to represent “high,” “medium,” and “low” knowledge groups.10 Tests were performed for differences in alpha

8. Contact the authors for details of these analyses.
9. On all five polls the mean score on the knowledge index showed a significant increase between the pre- and postdeliberation measurements ($p < .05$). Details of these analyses may be obtained from the corresponding author on request.
10. Note that, due to small sample sizes in the weekend samples, some of the knowledge groups are not as equal-sized as would be desirable.
within and between knowledge groups to explore the possibility that changes
in constraint might be mediated by level of political knowledge prior to partic-
ipation in the poll. Full wordings, coding details, and reliabilities for the
knowledge measures are given in the appendix.

Missing data on the items that form the basis of our analysis here are poten-
tially problematic, due to the probable positive correlation between nonre-
sponse propensity and opinion constraint. Listwise or pairwise deletion of
missing observations, assuming such a correlation, would militate against
detecting increases in constraint, as the initially least constrained respondents
(and, therefore, those most prone to increases) would be disproportionately
dropped from the analysis. To check for this we imputed all missing data
using the EM algorithm (Dempster, Rubin, and Laird 1977) and repeated the
analysis with the imputed data. However, this resulted in only minor changes
to the unimputed estimates and had no material impact on the substantive con-
clusions we draw here. For the sake of explanatory simplicity, we therefore
present estimates from the unimputed data in the tables that follow.¹¹

Results

Table 2 shows Cronbach’s alpha across knowledge groups for the baseline
sample at wave one and the weekend sample at waves one and two for the
election issues poll. The baseline sample estimates have a base of all respon-
dents to the baseline survey, while the weekend sample estimates are based on
just those respondents who participated in the weekend of deliberation. Tests
for differences in alpha between the baseline and weekend samples are calcu-
lated on the group who did not attend the weekend compared to those who
did. This comparison was made in order to check whether the samples that
provided before-and-after data were systematically different, in terms of atti-
tude constraint, from those who participated in the baseline survey but
decreed to participate in the weekend of deliberation. Such biases in the ana-
lytical samples would likely lead to under- or overestimates of effects.

Table 2 shows the familiar upward gradient in statistical consistency by
level of political knowledge for the baseline sample, though the difference
between the low and medium knowledge groups does not reach statistical sig-
nificance at the 95 percent level of confidence. While still visually apparent
among the weekend sample, only the difference between high and low knowl-
edge groups reaches statistical significance.¹² The alpha coefficient for the

11. Contact the corresponding author for details of the imputed estimates.
12. It is worth noting at this juncture the limited power to detect between- and within-group dif-
fferences in samples sizes typically achieved in deliberative polls (see Sturgis 2001). While effects
of any substantive magnitude should be detectable for inferences to the total population, as soon
as attention focuses on subgroups of interest, sample sizes soon drop to levels where it is quite
likely that meaningful differences and change over time will not be significant at conventional
confidence levels.
Table 2. Cronbach’s Alpha across Waves and Knowledge Groups: Election Poll

<table>
<thead>
<tr>
<th>Attitude</th>
<th>Knowledge Group</th>
<th>Baseline Sample Wave 1</th>
<th>Weekend Sample Wave 1</th>
<th>Difference Weekend-Baseline</th>
<th>Weekend Sample Wave 2</th>
<th>Change t2-t1</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude 1</td>
<td>Low</td>
<td>.52</td>
<td>.51</td>
<td>-.01</td>
<td>.61</td>
<td>.10</td>
<td>61</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>.49</td>
<td>.66</td>
<td>.17</td>
<td>.61</td>
<td>-.05</td>
<td>103</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>.72</td>
<td>.72</td>
<td>0</td>
<td>.77</td>
<td>.05</td>
<td>111</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>.61</td>
<td>.68</td>
<td>.07</td>
<td>.70</td>
<td>.02</td>
<td>275</td>
</tr>
</tbody>
</table>

Note.—M = significantly different from medium knowledge group; H = significantly different from high knowledge group; L = significantly different from low knowledge group.
weekend sample is some 7 points higher than for the baseline sample, though again, this difference is not statistically significant. For the whole weekend sample, alpha increased over the course of the weekend, but only marginally and nonsignificantly. Neither was there any evidence that an effect was moderated by existing knowledge level, with the groups showing any detectable change over the weekend. From the election issues poll, then, there is little evidence of an increase in constraint, albeit that only one attitude scale was amenable to analysis in this data set.

Turning next to the crime poll data, table 3 sets out the same breakdown for the four scales identified in this data set. Two of the scales show a significant upward gradient in coefficients by knowledge group among the baseline respondents, while two show no discernible pattern. The gradient in scales 1 and 2 remains visible among the weekend sample at wave one, although not so consistently and without always reaching statistical significance. On attitude 1, the weekend sample had a significantly higher coefficient than respondents who did not participate in the weekend poll, perhaps reducing the potential for increase over the course of the weekend. On attitudes 3 and 4

<table>
<thead>
<tr>
<th>Table 3.</th>
<th>Cronbach's Alpha across Waves and Knowledge Groups: Crime Poll</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Knowledge Sample Wave 1</td>
</tr>
<tr>
<td>Attitude</td>
<td>Group</td>
</tr>
<tr>
<td>Attitude 1</td>
<td>Low</td>
</tr>
<tr>
<td>High</td>
<td>Medium</td>
</tr>
<tr>
<td>All</td>
<td>.63</td>
</tr>
<tr>
<td>Attitude 2</td>
<td>Low</td>
</tr>
<tr>
<td>High</td>
<td>Medium</td>
</tr>
<tr>
<td>All</td>
<td>.76^H</td>
</tr>
<tr>
<td>Attitude 3</td>
<td>Low</td>
</tr>
<tr>
<td>High</td>
<td>Medium</td>
</tr>
<tr>
<td>All</td>
<td>.75</td>
</tr>
<tr>
<td>Attitude 4</td>
<td>Low</td>
</tr>
<tr>
<td>High</td>
<td>Medium</td>
</tr>
<tr>
<td>All</td>
<td>.68</td>
</tr>
</tbody>
</table>

Note.—M = significantly different from medium knowledge group; H = significantly different from high knowledge group; L = significantly different from low knowledge group; * = significantly different from wave 1; * = significantly different from the non-weekend sample.
there was no upward gradient in coefficients, with attitude 4 exhibiting a significant downward gradient across knowledge groups in the weekend sample.

In terms of change before and after the weekend, table 3 shows a significant increase in alpha for attitude 2, an effect that was significant only within the low knowledge group on these items. Attitudes 1, 3, and 4 showed no overall or within group change. At wave two there were no significant differences in alpha between knowledge groups, perhaps indicating some sort of equalizing effect of information and deliberation upon constraint.

Table 4 shows the results of the analysis on the monarchy poll data. Of the three attitudes studied, only one showed any sign of a gradient in alpha at wave one, in both the baseline and the weekend samples; the medium knowledge group on attitude 3 was significantly lower than both the low and high knowledge groups. None of the attitude scales showed any change in alpha over the weekend, in either an upward or downward direction. Although none of the changes in alpha were significant, seven of the nine within-group effects were in an upward direction.

Results of the analysis on the European integration poll data are shown in table 5. All four attitude scales show a significant upward gradient in alpha coefficients across knowledge groups for the baseline sample. The general pattern is still apparent for the weekend sample, but with some anomalies and without consistently reaching statistical significance, probably because of the reduced power for detecting effects in these smaller groups. Although none of the coefficients are

| Table 4. Cronbach’s Alpha across Waves and Knowledge Groups: Monarchy Poll |
|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
|Attitude | Knowledge group | Baseline Sample | Weekend Sample | Weekend-Baseline | Weekend Sample | Change |
| | Wave 1 | N | Wave 1 | | Wave 2 | t2-t1 | N |
|Attitude 1 | Low | .88 | 299 | .87 | -.01 | .91 | .04 | 80 |
| | Medium | .84 | 195 | .86 | .02 | .85 | -.01 | 52 |
| | High | .88 | 363 | .88 | 0 | .90 | .02 | 126 |
| | All | .87 | 857 | .88 | .01 | .90 | .02 | 258 |
|Attitude 2 | Low | .89 | 299 | .90 | .01 | .91 | .01 | 80 |
| | Medium | .90 | 195 | .87 | -.03 | .90 | .03 | 52 |
| | High | .91 | 363 | .92 | .01 | .93 | .01 | 126 |
| | All | .90 | 857 | .90 | 0 | .92 | .02 | 258 |
|Attitude 3 | Low | .59M | 299 | .63M | .04 | .63 | 0 | 80 |
| | Medium | .42M | 195 | .45M | .03 | .57 | .12 | 52 |
| | High | .61M | 363 | .66M | .05 | .64 | -.02 | 126 |
| | All | .57 | 857 | .59 | .02 | .60 | .01 | 258 |

NOTE.—M = significantly different from medium knowledge group; H = significantly different from high knowledge group; L = significantly different from low knowledge group.
**Table 5.** Cronbach’s Alpha across Waves and Knowledge Groups: Europe Poll

<table>
<thead>
<tr>
<th>Attitude</th>
<th>Knowledge Group</th>
<th>Baseline Sample Wave 1</th>
<th>Weekend Sample Wave 1</th>
<th>Difference Weekend Sample Wave 1 - Baseline</th>
<th>Weekend Sample Wave 2</th>
<th>Change t2 – t1</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude 1</td>
<td>Low</td>
<td>.39&lt;sup&gt;MH&lt;/sup&gt; 266</td>
<td>.38&lt;sup&gt;MH&lt;/sup&gt;</td>
<td>-.01</td>
<td>.70&lt;sup&gt;*&lt;/sup&gt;</td>
<td>.32</td>
<td>53</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>.54&lt;sup&gt;LH&lt;/sup&gt; 396</td>
<td>.59&lt;sup&gt;L&lt;/sup&gt;</td>
<td>.05</td>
<td>.61&lt;sup&gt;H&lt;/sup&gt;</td>
<td>.02</td>
<td>103</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>.71&lt;sup&gt;ML&lt;/sup&gt; 238</td>
<td>.72&lt;sup&gt;L&lt;/sup&gt;</td>
<td>.01</td>
<td>.80&lt;sup&gt;M&lt;/sup&gt;</td>
<td>.08</td>
<td>68</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>.59 900 .60</td>
<td>.01</td>
<td>.71&lt;sup&gt;*&lt;/sup&gt;</td>
<td>.11</td>
<td>224</td>
<td></td>
</tr>
<tr>
<td>Attitude 2</td>
<td>Low</td>
<td>.53 266 .67</td>
<td>.14</td>
<td>.68</td>
<td>.01</td>
<td>53</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>.51 396 .54</td>
<td>.03</td>
<td>.55&lt;sup&gt;H&lt;/sup&gt;</td>
<td>.01</td>
<td>103</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>.68&lt;sup&gt;ML&lt;/sup&gt; 238</td>
<td>.60</td>
<td>.08</td>
<td>.72&lt;sup&gt;M&lt;/sup&gt;</td>
<td>.12</td>
<td>68</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>.56 900 .59</td>
<td>.03</td>
<td>.63</td>
<td>.04</td>
<td>224</td>
<td></td>
</tr>
<tr>
<td>Attitude 3</td>
<td>Low</td>
<td>.59&lt;sup&gt;MH&lt;/sup&gt; 266</td>
<td>.73</td>
<td>.14</td>
<td>.74&lt;sup&gt;H&lt;/sup&gt;</td>
<td>.01</td>
<td>53</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>.71&lt;sup&gt;LH&lt;/sup&gt; 396</td>
<td>.63&lt;sup&gt;H&lt;/sup&gt;</td>
<td>-.08</td>
<td>.81&lt;sup&gt;*&lt;/sup&gt;</td>
<td>.18</td>
<td>103</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>.85&lt;sup&gt;ML&lt;/sup&gt; 238</td>
<td>.85&lt;sup&gt;M&lt;/sup&gt;</td>
<td>0</td>
<td>.87&lt;sup&gt;L&lt;/sup&gt;</td>
<td>.02</td>
<td>68</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>.75 900 .75</td>
<td>0</td>
<td>.83&lt;sup&gt;*&lt;/sup&gt;</td>
<td>.08</td>
<td>224</td>
<td></td>
</tr>
<tr>
<td>Attitude 4</td>
<td>Low</td>
<td>.54&lt;sup&gt;MH&lt;/sup&gt; 266</td>
<td>.73</td>
<td>.19</td>
<td>.84</td>
<td>.11</td>
<td>53</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>.68&lt;sup&gt;LH&lt;/sup&gt; 396</td>
<td>.65&lt;sup&gt;H&lt;/sup&gt;</td>
<td>-.03</td>
<td>.73</td>
<td>.08</td>
<td>103</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>.78&lt;sup&gt;ML&lt;/sup&gt; 238</td>
<td>.75&lt;sup&gt;M&lt;/sup&gt;</td>
<td>-.03</td>
<td>.83</td>
<td>.08</td>
<td>68</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>.69 900 .70</td>
<td>.01</td>
<td>.79&lt;sup&gt;*&lt;/sup&gt;</td>
<td>.09</td>
<td>224</td>
<td></td>
</tr>
</tbody>
</table>

**NOTE.**—M = significantly different from medium knowledge group; H = significantly different from high knowledge group; L = significantly different from low knowledge group; * = significantly different from wave 1.

significantly different within knowledge groups between those who did and those who did not attend the weekend at wave one, there are some marked differences in the pattern and magnitude of coefficients between these samples. The low knowledge group on attitudes 2, 3, and 4, for instance, is markedly higher in the weekend sample than among those who did not participate in the deliberations.

In terms of change, the pattern in the European issues poll is more consistent, with three of the four sets of items showing an increase in alpha over the weekend for the sample as a whole. For attitude 1 this increase was predominantly concentrated within the low knowledge group, while for attitude 3 the change was mainly confined to those in the medium knowledge group. For attitude 4, the increase was consistent across groups, though none reached statistical significance at the 95 percent level of confidence. Three significant between-group differences remained at the end of the weekend, with the high knowledge group having significantly the largest alpha on attitudes 1, 2 and 3.

Table 6 shows the results for the fifth and final poll on attitudes toward the National Health Service. In attitudes 1 and 2 there is a gradient in alpha coefficients, but this is in a downward direction, with the low knowledge group
### Table 6. Cronbach’s Alpha across Waves and Knowledge Groups: NHS Poll

<table>
<thead>
<tr>
<th>Attitude</th>
<th>Knowledge Group</th>
<th>Baseline Sample Wave 1</th>
<th>Weekend Sample Wave 2</th>
<th>Difference Weekend - Baseline Sample Wave 2</th>
<th>Change t2 - t1</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude 1</td>
<td>Low</td>
<td>.66&quot;</td>
<td>316</td>
<td>.72&quot;</td>
<td>.06</td>
<td>.55*</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>.54</td>
<td>288</td>
<td>.53</td>
<td>-.01</td>
<td>.50</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>.50*</td>
<td>351</td>
<td>.49*</td>
<td>-.01</td>
<td>.60</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>.58</td>
<td>955</td>
<td>.59</td>
<td>.01</td>
<td>.55</td>
</tr>
<tr>
<td>Attitude 2</td>
<td>Low</td>
<td>.82</td>
<td>316</td>
<td>.84&quot;</td>
<td>.02</td>
<td>.80</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>.76</td>
<td>288</td>
<td>.83</td>
<td>.07</td>
<td>.73*</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>.79</td>
<td>351</td>
<td>.76*</td>
<td>-.03</td>
<td>.79</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>.79</td>
<td>955</td>
<td>.81</td>
<td>.02</td>
<td>.77</td>
</tr>
<tr>
<td>Attitude 3</td>
<td>Low</td>
<td>.61&quot;</td>
<td>316</td>
<td>.52</td>
<td>-.09</td>
<td>.65</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>.69</td>
<td>288</td>
<td>.74</td>
<td>.05</td>
<td>.77</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>.77*</td>
<td>351</td>
<td>.68</td>
<td>.09</td>
<td>.70</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>.70</td>
<td>955</td>
<td>.66</td>
<td>.04</td>
<td>.72</td>
</tr>
</tbody>
</table>

**NOTE.** H = significantly different from high knowledge group; L = significantly different from low knowledge group; * = significantly different from wave 1.

Having the highest coefficient, though this is only statistically significant on the weekend sample for attitude 2. On attitude 3 there is a partial upward gradient, with the high knowledge group showing a significantly higher coefficient than the low knowledge group in the baseline sample but not in the weekend sample.

There were no significant changes in alpha for the overall sample over the course of the weekend, but for attitudes 1 and 2 the low and medium knowledge groups showed a significant decline in scale reliability. By the second wave of measurement, no significant differences remained between groups.

Perhaps the one thing that is immediately apparent from this set of results is that there is no clear or consistent pattern discernible across studies. While the majority of studies exhibited an upward gradient in coefficients by knowledge group among the full wave one sample, a significant minority did not, and several showed a gradient in the opposite direction. The predominant trend, in relation to our main research hypothesis, was no significant change in consistency over the course of the weekend. On the other hand, 4 out of 15 attitude scales did show a significant shift—considerably more than chance alone would predict, and, leaving statistical significance aside, more than two-thirds of the scales examined (11) showed an upward shift in scale reliability over the course of the weekend. Although there was some evidence to support the idea that existing knowledge level mediates the magnitude of change in attitude...
consistency, no clear pattern emerged across the studies examined to show what the functional form of this relationship might be.

A Meta-Analysis

In order to provide a more satisfactory summary of these somewhat disparate findings, we conducted a meta-analysis of the 15 attitude scales across all five studies. Meta-analytic techniques see effect sizes estimated from single studies as units drawn from a hypothetical population of possible studies. Relying on single studies for effect size estimates relies on the unlikely event that the single study is representative of all possible studies that could have been sampled from this population (Rosenthal 1991). The basic objective of meta-analysis is, therefore, to provide pooled estimates of effect sizes through a weighted average of the effect sizes of the individual studies (Hall et al. 1994). A key aspect of any meta-analysis is to conduct a thorough search of all extant studies, which should then be included in the pooled estimate (Wolf 1986). In the current instance, this requirement can only be satisfied by extending the scope of the study or by limiting the population of inference to those polls conducted in the United Kingdom, admittedly a somewhat expedient and artificial restriction. Nonetheless, we have no theoretical or empirical reason to believe that the effect sizes in deliberative polls should vary widely across countries, and restricting our leverage in this way allows a convenient summary of what is certainly a rather disparate set of individual study results. In meta-analyzing this data, we must specify effects within studies as independent, an assumption which cannot be directly tested with these data.\textsuperscript{13} Because of the possibility of non-independence of effect sizes within studies, the significance tests in these meta-analyses must be viewed with some caution. Pooled effect size estimates, however, will remain unbiased even if effects within studies cannot be considered strictly independent (Rosenthal 1991).

Effect sizes can be pooled across studies assuming either fixed or random effects. A fixed effects model assumes that the variability in effect sizes across studies is exclusively due to random variation and that, with sufficiently large sample sizes, all studies would provide identical estimates. A random effects model assumes heterogeneity of effects across studies and incorporates this additional source of variation in the pooled effect size estimate. This usually results in wider confidence intervals than a fixed effects model fitted to the same data. In the tables that follow, all estimates are derived from random effects models, making our estimate of variability across studies quite liberal.\textsuperscript{14}

\textsuperscript{13} We are grateful to an anonymous reviewer for highlighting this issue.
\textsuperscript{14} Random effects models are generally preferred when statistical tests indicate that there is significant effect size heterogeneity across studies, which was generally, though not always, the case in the analyses conducted here. Effect size heterogeneity is tested using the $Q$ statistic in the tables that follow (Hunter and Schmidt 1990).
Table 7 shows the pooled effect size for the difference in alpha between those who did and those who did not attend the deliberative weekend. One of the main lines of criticism of the validity of the deliberative poll methodology has been that those who participate in the weekend of deliberation will likely differ in important ways from the general population, despite matching on broader demographic criteria (Mitofsky 1996a, 1996b; Tringali 1996). The nonsignificant difference in alpha between samples, if we can accept this operationalization of the constraint construct, indicates that attitude constraint is not such a variable. It also suggests that the general lack of over-time change is unlikely to be a result of biases in the composition of the samples examined here.

Table 8 shows the pooled effect sizes for differences in alpha between knowledge groups, for the whole baseline sample and the weekend sample at waves one and two. The familiar gradient in coefficients with increasing knowledge is discernible for the baseline sample, although the difference between medium and low knowledge groups does not reach statistical significance. The numbers, in absolute terms, are certainly not large, but the upward pattern is clear. For the weekend sample at wave one, the general pattern remains, although not significantly, and the suggestive difference between medium and low knowledge groups in the baseline sample has disappeared completely. This may well be as much the result of our imposition

**Table 7.** Meta-Analysis of Difference between Baseline and Weekend Samples

<table>
<thead>
<tr>
<th>Weekend-Baseline</th>
<th>95% confidence interval</th>
<th>( Q )</th>
<th>( df )</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pooled Effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.014</td>
<td>-0.002</td>
<td>0.030</td>
<td>9</td>
<td>14</td>
</tr>
</tbody>
</table>

**Table 8.** Meta-Analysis of Differences between Knowledge Groups

<table>
<thead>
<tr>
<th>Knowledge Level</th>
<th>Full Sample Wave 1</th>
<th>Weekend Sample Wave 1</th>
<th>Weekend Sample Wave 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>High-Low</td>
<td>0.103*</td>
<td>0.023</td>
<td>0.036*</td>
</tr>
<tr>
<td>Medium-Low</td>
<td>0.027</td>
<td>-0.014</td>
<td>0.008</td>
</tr>
<tr>
<td>High-Medium</td>
<td>0.072*</td>
<td>0.042</td>
<td>0.046*</td>
</tr>
</tbody>
</table>

*Significantly different from zero.
of too fine a gradation in knowledge groups for a sample of this size, as to actual differences between "groups"; it may be the case that a better characterization of the knowledge gradient for the indexes in question would be between those high and low in knowledge, omitting a "medium" category entirely.

Interestingly, at wave two, the weekend sample returns to the pattern observed among the baseline sample, with the high knowledge group exhibiting significantly greater coefficients than both low and medium knowledge groups, albeit at somewhat diminished magnitudes. This perhaps goes some way to dispelling the notion that the deliberative weekend acts as some kind of "equalizing" force and lends support to the idea that more politically sophisticated individuals process and integrate information more efficiently than their less sophisticated counterparts (Althaus 1998; Delli Carpini and Keeter 1996; Krosnick and Milburn 1990). By providing information in this "avalanche-like" manner, the possibility exists that we may actually be widening the gap we are intending to broach.

Moving now to a consideration of our main research hypothesis, table 9 shows the pooled estimate of the change in alpha between waves one and two, for the weekend sample as a whole and within each of the extant knowledge groups. The 95 percent confidence intervals show that only the pooled estimates for the sample as a whole and the high knowledge group are statistically significant. The average magnitude of the increase across all studies was only 0.022, a difference that would be unlikely to strike the average reader as of particular substantive interest. However, the significant value of $Q$ for the test of heterogeneity of effects across studies indicates that, as we saw in the results of the individual polls, this average figure masks a good deal of variation across issues and studies.

Finally, there is no evidence in table 9 to suggest that the impact of the deliberative process on correlational measures of attitude constraint is somehow moderated by the existing level of knowledge about the issue in question. The pooled effect sizes show moderate increases in coefficients, on the fringes of statistical significance, which are almost identical across the three knowledge groups.

<table>
<thead>
<tr>
<th>Knowledge Level</th>
<th>Change Pooled Effect</th>
<th>95% Confidence Interval</th>
<th>$Q$</th>
<th>df</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>0.012</td>
<td>-0.025</td>
<td>0.048</td>
<td>18</td>
<td>14</td>
</tr>
<tr>
<td>Medium</td>
<td>0.020</td>
<td>-0.015</td>
<td>0.055</td>
<td>21</td>
<td>14</td>
</tr>
<tr>
<td>High</td>
<td>0.016</td>
<td>0.001</td>
<td>0.033</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>All</td>
<td>0.022</td>
<td>0.001</td>
<td>0.044</td>
<td>26</td>
<td>14</td>
</tr>
</tbody>
</table>
Discussion

The aim of this article has been to exploit the unusual features of the deliberative polling methodology to explicitly test the hypothesis with representative sample data that the low interitem correlations commonly observed among the politically less informed members of the public are caused by a lack of information about the objects of their attitudes. This has been the implicit rationale underlying the many studies using cross-sectional data that have demonstrated upward gradients in the magnitude of interitem correlations with increasing political interest, involvement, and knowledge. If this rationale is correct, we should expect to see increases in the magnitude of statistical associations between attitude items following a weekend in which political issues and preferences have formed the focus of deliberation and debate. Such measures of “opinion quality,” in addition to the observation of net and gross attitude change, are also necessary for a proper evaluation of the claims made for deliberative polls as a means of uncovering “enlightened preferences” (Price and Neijens 1997, 1998). Was the significant change in attitude and knowledge after deliberation in these studies (Fishkin 1997; Luskin, Fishkin, and Jowell 2002; Sturgis 2003), then, accompanied by concomitant increases in the internal consistency of respondents’ attitudes?

Before discussing the results of our analyses in the round, it is important to highlight the fact that our conclusions here relate only to the effects of participating in a deliberative poll. We make no special claims to have captured the essence of deliberative negotiation as set out by theorists of deliberative democracy (Barber 1984; Cohen 1989) in the data we have analyzed. Scholars have, of course, questioned the ability of the deliberative poll to simulate true deliberative dialogue (Denver, Hands, and Jones 1995; Hart and Jarvis 1999; Ladd 1996; Merkle 1996; Mitofsky 1996a, 1996b; Smith 1999; Tringali 1996), while others still have questioned the basic premise that deliberation always leads to optimal social outcomes (Mendelberg 2002; Pellizzoni 2001; Sanders 2001). For now, we leave these debates for others to resolve and concern ourselves with the more limited question of how participation in these events per se affects the internal consistency of political belief systems.

Across 5 different deliberative polls and 15 attitude scales, which consisted of 93 individual items, the evidence for such an effect was both patchy and inconsistent. While some polls appeared to show a rather strong and consistent pattern that confirmed the expectation that statistical associations between items would increase after deliberation (the Europe poll), others showed no change at all (the election issues poll), and others still showed a downward movement (the NHS poll). Clearly, then, if it is knowledge, deliberation, and engagement that cause gradients in correlational measures of constraint in cross-sectional surveys—a finding broadly replicated in the data studied here—the deliberative poll would not appear capable of consistently reproducing the direction and magnitude of the effect over the relatively short period involved.
A potential barrier to the acceptance of this conclusion is the issue of whether the before-and-after samples are truly representative of the general population. Perhaps the main feature of deliberative polling, which sets it apart from other “deliberative” methodologies such as citizens’ juries and planning cells, is its probabilistic design and consequent external validity of the achieved sample. Investigations of the representativeness of deliberative poll samples have, thus far, been based primarily on demographic characteristics such as age, sex, education, and social class, variables that appear to match population totals with impressive closeness (Fishkin 1997; Luskin, Fishkin, and Jowell 2002). As with quota sampling, however, such equivalence does not guarantee representativeness across all survey variables. A genuine and plausible concern is that it is the more politically sophisticated individuals from within these demographic groups that tend disproportionately to participate in deliberative polls (Sturgis 2001; Tringali 1996). In the current instance, this might militate against finding evidence of increasing constraint, if the participants are already among the more politically sophisticated and, therefore, ideologically constrained members of the public. The evidence from the analyses presented here do not support this hypothesis; on only 1 of 15 attitude scales was there a significant difference between the baseline and weekend samples in the level of constraint, as we have operationalized it here.

Another possibility, of course, is that flawed operationalizations of constraint and knowledge are failing to detect genuine change in the belief system structure, moderated by preexisting levels of political sophistication. While this contingency cannot be discounted, we consider it unlikely. In addition to the results presented here, we have conducted further analyses using different item combinations, different measures of constraint, and different knowledge bands. We have also examined whether constraint is related to change in knowledge between the pre- and postdeliberation measurements. Whichever way we have looked at the data, correlation-based measures of constraint reveal the same basic pattern of results that we have set out in this article.

Given the disparate nature of the effects across the five studies, a meta-analysis was conducted to determine whether any general pattern could be discerned statistically, as opposed to visually and impressionistically, across studies. This revealed that, taken together, the polls exhibited a modest but statistically significant increase in constraint over the course of the weekend, confirming—if somewhat weakly—the main research hypothesis we set out to evaluate. We note that Gastil and Dillard (1999) came to a similar conclusion about the effects of deliberation on scale reliability, although their study was based on self-selecting samples from the National Issues Forum. There was no evidence to suggest, however, that this effect was differentially related to respondents’ level of knowledge of the issue on which the poll focused prior to the weekend of deliberation, as pooled effects were uniform across the
knowledge groups examined. We were not able to examine whether a more general measure of political knowledge exhibited a stronger moderating effect, however, as no such measures were collected in these polls. In drawing these conclusions, it is important to remember as well that the sample sizes we are dealing with here do not afford a great deal of power to detect systematic effects, a fact that is likely to be partially responsible for some of the apparently contradictory findings we have reported. The pooled effect size estimate of change in alpha over the weekend masked statistically significant heterogeneity across the individual studies. This would seem to offer a fruitful avenue for future research—by incorporating variables that differentiate between polls and attitudes in this type of meta-analysis, it should be possible to begin to explain what it is about particular issues and political contexts that leads to differential effects.

While the results for the whole sample analysis, then, indicate a slight increase in the degree of internal consistency of attitudes over the course of the weekend, this must be placed in the context of findings from similar models fitted to panel surveys with no specific "information intervention" between waves, for what we lack in the analyses conducted here is any form of control group. We are, as a result, unable to disentangle the effect of increased information and deliberation from that engendered by simply participating in two waves of a panel study. Jagodzinski, Kuhnel, and Schmidt (1987), for example, find an average increase in item reliabilities of 19 percent between waves one and two on a four-item scale measuring attitude toward guest workers in West Germany, an effect they attribute to the simple fact that "related or logically interdependent issues appear to stimulate respondents to reflect on the relations between their attitudes, opinions, and behaviour" (Jagodzinski, Kuhnel, and Schmidt 1987, p. 260). On a six-item scale measuring "left-right" political orientation, a 10 percent increase on the same parameter was observed between waves one and two of the British Household Panel Study (Sturgis 2001). If this is the effect of simply being administered a questionnaire, then we should surely expect the effects of attending a deliberative poll to be substantially greater.

Such comparisons lead us to conclude that the evidence we have presented here cannot be taken as showing that participation in deliberative polls leads to increases in constraint, as this construct has traditionally been operationalized. This general conclusion must be qualified, however, by noting that such an effect is certainly a possible, even a probable, outcome of the deliberative polling process for any given issue. The way forward for research in this area would seem, then, to be a careful delineation of the characteristics of issues, sample designs, and political contexts that predict whether increased knowledge and deliberation result in a corresponding growth in the constraint of political belief systems.

Appendix

QUESTION WORDING FOR ATTITUDE SCALES

Election Issues Poll

Attitude 1—Taxation and Spending
1. How much do you agree or disagree that people earning around £50,000 a year or more should pay higher income tax than now? (Response scale = 5-point Likert)
2. Where do you stand on making people’s incomes more equal? Are you in the top box, agreeing completely with the statement alongside it (Government should try much harder to make incomes in Britain more equal)? Or in the bottom box, agreeing completely with that statement (Government should do nothing to make incomes in Britain more equal)? Or in one of the other boxes somewhere in between? (Response scale = 7-point Likert)
3. Where do you stand on taxes and spending? Are you in the top box, agreeing completely with the statement alongside it (Government should spend a lot more on services like education, health, even if it means putting up taxes a lot)? Or in the bottom box, agreeing completely with that statement (Government should spend much less on services like education and health in order to cut taxes)? Or in one of the other boxes somewhere in between? (Response scale = 7-point Likert)
4. Where do you stand on the minimum wage? Are you in the top box, agreeing completely with the statement alongside it (Government should definitely introduce a minimum wage so that no employer can pay their workers too little)? Or in the bottom box, agreeing completely with that statement (Government should definitely not introduce a minimum wage because too many low paid workers would then lose their jobs)? Or in one of the other boxes somewhere in between? (Response scale = 7-point Likert)

Monarchy Poll

Attitude 1—Benefits of a Constitutional Monarchy
Here are some good things that the British monarchy is said to do. Please show how important you think the monarchy’s role is in each of these areas. (All questions answered on 4-point “very important” to “not at all important” response scales.)

1. Attracting tourists to Britain.
2. Gaining international respect for Britain.
3. Preventing any government abusing its power.
4. Attracting trade to Britain.
5. Linking Britain’s present with its past.
6. Uniting people throughout Britain.
7. Keeping Britain a stable democracy.
8. Publicizing and helping “good causes.”
Attitude 2—The Place of the Monarchy in Modern Britain
(All questions answered on 5-point “strongly agree” to “strongly disagree” response scales.)

1. The monarchy is an expensive luxury that Britain cannot any longer afford.
2. The monarchy comes across as too English, rather than representing Britain.
3. The royal family benefits the rich and powerful at the expense of the rest of society.
4. The monarchy props up a snobbish system of giving titles to people in high places.
5. Having a monarchy stops Britain from adapting to the modern world.
6. The monarchy keeps alive divisions between different classes in Britain.
7. The monarchy makes Britain seem a stuck-up and stuffy country.

Attitude 3—The Political Role of the Monarchy
(All questions answered on 5-point “strongly agree” to “strongly disagree” response scales.)

1. The British monarchy would be more acceptable if it did not depend on the taxpayer for so much support.
2. If a head of state is only a figurehead, it doesn’t matter whether they are elected or born into the job.
3. A good thing about monarchs is that they are more likely to stand above politics than are elected heads of state.
4. It would be a good thing if the Queen had more powers.
5. An elected head of state would behave too much like any ordinary politician.
6. Combining a monarch and a prime minister into a single head of state would give a single person too much political power.
7. A good thing about monarchs over elected heads of state is that they usually stay in office longer.

Europe Poll

Attitude 1—Costs and Benefits of European Union (EU) Membership
(All questions answered on 5-point “strongly agree” to “strongly disagree” response scales.)

1. Unless Britain keeps its own currency, it will lose control of its own economic policy.
2. The EU countries should be more than just a trading bloc—their governments should make joint decisions on other things, too.
3. Britain does not get enough out of the EU in comparison to what it puts in.
4. All things considered, Britain is a lot better off in the EU than out of it.
5. Lots of good British traditions will have to be given up if we strengthen ties with the EU.
6. The cost of living in Britain would rise significantly if we left the EU.
7. Peace is much more secure because Britain is a member of the EU.
8. Only the Germans have anything to gain from a single European currency.
Attitude 2—United Kingdom Identity and Sovereignty
(All questions answered on 5-point “strongly agree” to “strongly disagree” response scales.)

1. If we left the EU, Britain would lose its best chance of real progress.
2. In a united Europe the various nations will lose their culture and their individuality.
3. Competition from other countries in the EU is making Britain more modern and efficient.
4. If we stay in the EU, Britain will lose too much control over decisions that affect Britain.
5. There would be serious unemployment in Britain if we left the EU.

Attitude 3—EU Politics and Regulation
(All questions answered on 5-point “strongly agree” to “strongly disagree” response scales.)

1. British seas should only be open to British fishing boats.
2. Britain should sign up to the EU rules for protecting people’s rights at work (the Social Chapter).
3. The EU should expand its membership to include some of the ex-Communist countries of Eastern Europe.
4. The EU has too many petty rules and regulations which affect the way we live.
5. If we signed up to the EU rules for protecting people’s rights at work (the Social Chapter), it would cost Britain jobs.

Attitude 4—Financial Implications of EU Membership
(All questions answered on 5-point “strongly agree” to “strongly disagree” response scales.)

1. Taxpayers all over Europe are paying too much toward the costs of running the European Union.
2. Only businessmen are benefiting from Britain being a member of the EU.
3. If we had a single European currency, British mortgage rates would be more likely to rise.
4. EU rules are fairer to British farmers than to farmers in most other European countries.
5. Passport controls within the EU should be removed altogether.

National Health Service (NHS) Poll

Attitude 1—Service Quality Perceptions
(All questions answered on 4-point “very likely” to “not at all likely” response scales.)

Suppose you had to go into your local NHS hospital for observation and maybe an operation. From what you know or have heard, please say how likely you think it would be that:

1. the hospital doctors would take seriously any complaints you make?
2. you would not be allowed home before you were really well enough to leave?
3. the hospital doctors would take seriously any views you had on the sorts of treatment available?
4. the operation would take place on the day it was booked to take place?

**Attitude 2—NHS Charging**
(All questions answered on 5-point “strongly in favor” to “strongly against” response scales.)
One way of getting more money into the NHS is to charge people for certain things. How much would you be in favor of or against introducing charges for:

1. visiting your GP (general practitioner)?
2. your GP visiting you at home?
3. the cost of your hospital meals when you are an inpatient?
4. the cost of accommodation while you are in hospital?
5. using a non-emergency ambulance?

**Attitude 3—Social Justice**
(All questions answered on 5-point “strongly agree” to “strongly disagree” response scales.)

1. Most people who are very poor have only themselves to blame.
2. We are too concerned nowadays about those who will never succeed in life.
3. Life is never fair, and there is no point in government trying to make it fairer.

**Crime Poll**

**Attitude 1—Balance of Rights in Criminal Justice**
(All questions answered on 5-point “strongly agree” to “strongly disagree” response scales.)
Here are some ideas for changing the legal system and sentencing for criminals. Please tick one box for each idea to show how much you agree or disagree with it.

1. Fewer suspects should have the right to a jury trial.
2. A confession made during police questioning should not on its own be enough to convict someone.
3. The rules in court should be less on the side of the accused.
4. The courts should no longer treat suspects as innocent until proved guilty.
5. Suspects should have the right to remain silent under police questioning.
6. If a suspect remains silent under police questioning, this should count against them in court.
7. On-duty police officers should normally carry guns.
8. Complaints against the police should be investigated by an independent body, not the police themselves.
9. The police should sometimes be able to “bend the rules” to get a conviction.

**Attitude 2—Attitude to Sentencing Policy**
(All questions answered on 5-point “strongly agree” to “strongly disagree” response scales.)
And now, here are some ideas about sending people to prison. How much do you agree or disagree with each one?
1. The courts should send fewer people to prison.
2. Prison life should be made tougher and more unpleasant.
3. Only hardened criminals, or those who are a danger to society, should be sent to prison.
4. All murderers should be given a life sentence.
5. Courts should give tougher sentences to criminals.
6. Life sentences should mean life.
7. Prisons should try harder to reform prisoners, rather than just punishing them.

**Attitude 3—Efficacy of Prison**

1. From what you know, or have heard, do you think that prison life in Britain is much too tough to much too soft (5-point scale)?
2. And how much do you agree or disagree that sending people to prison makes them more, not less, likely to become hardened criminals? And how much do you agree or disagree that more offenders should be:
   3. kept out of prison, but made to report regularly to probation officers.
   4. kept out of prison, but made to spend a certain amount of days helping people in the community.
   5. kept out of prison, but made to do military service for a period of time.
   6. kept out of prison, but made to get training and counseling.

**Attitude 4—Crime Prevention Strategies**

(All questions answered on 5-point “very effective” to “not at all effective” response scales.)

Here are some ideas for helping to prevent crime in Britain. Please tick one box for each idea to show how effective you think it is as a way of cutting crime.

1. Reduce unemployment.
2. Less violence and crime on television.
3. People making their property more secure.
4. Parents spending more time with their children.
5. More schemes like Neighborhood Watch.
6. Teach children the differences between right and wrong.
7. Send more offenders to prison.
10. More police on the beat.

**QUESTION WORDINGS AND CODINGS FOR KNOWLEDGE INDEXES**

**Election Issues Poll**

This knowledge measure combined three true/false items with four issue space items in the following manner:

*Three-Item Knowledge Quiz*

(All questions are true/false.)
1. Prices have been rising by less than 5 percent a year over the past few years (true).
2. Interest rates are decided by the Bank of England (false).
3. Unemployment in Britain is higher than in Germany (false).

Four Issue Space Items
All questions are answered on a 7-point scale, and each item is repeated for each of the three main parties. For the knowledge measure, each item is scored “1” if respondent places the Conservative Party to the right of the Labour Party and the Liberal Democrats, “0” otherwise.

1. Where do the Conservative Party stand on making people’s incomes more equal? Are they in the top box agreeing completely with the statement below? Or in the bottom box disagreeing completely with the statement? Or one of the boxes somewhere in between?
   Government should try much harder to make incomes in Britain more equal.
2. Where do the Conservative Party stand on taxes and spending? Are they in the top box agreeing completely with the statement below? Or in the bottom box disagreeing completely with the statement? Or one of the boxes somewhere in between?
   Government should spend a lot more on services like education and health, even if it means putting up taxes a lot.
3. Where do the Conservative Party stand on the minimum wage? Are they in the top box agreeing completely with the statement below? Or in the bottom box disagreeing completely with the statement? Or one of the boxes somewhere in between?
   Government should definitely introduce a minimum wage so that no employer can pay their workers too little.
4. Where do the Conservative Party stand on the European Union? Are they in the top box agreeing completely with the statement below? Or in the bottom box disagreeing completely with the statement? Or one of the boxes somewhere in between?
   Government should do much more to unite fully with Europe.

The knowledge variable was produced by summing all correct answers, giving a range 0–7. Knowledge groups were created on the following breaks: low knowledge 0–1 correct; medium knowledge 2–3 correct; high knowledge 4–7 correct. Cronbach’s alpha for the index was 0.68.

NHS Poll
(All questions are true/false.)

1. The standard charge for an NHS prescription is £10 (false).
2. The proportion of old people in Britain is getting larger and larger (true).
3. Even with inflation taken into account, government spending on the NHS has doubled over the last twenty years or so (true).
4. Most people nowadays get private medical treatment instead of using the NHS (false).
5. All British women can get free breast cancer screening on the NHS (false).
6. Cosmetic surgery is never available on the NHS (false).
Knowledge variable was produced by summing all correct answers, giving a range 0–6. Knowledge groups were created on the following breaks: low knowledge 0–3 correct; medium knowledge 4 correct; high knowledge 5–6 correct. Cronbach’s alpha for the index was 0.47.

Crime Poll

(All questions are true/false.)

1. British courts are allowed to sentence a murderer to death (false).
2. Britain has a larger prison population than any other country in Western Europe (true).
3. Britain has more people serving life sentences than the rest of the European Community put together (false).
4. It is possible to be tried by a jury in a local magistrate’s court (false).
5. The number of members of Parliament is about 100 (false).
6. The longest time allowed between general elections is four years (false).
7. Britain’s electoral system is based on proportional representation (false).
8. No one is allowed to be on the electoral register in two different places (false).

Knowledge variable was produced by summing all correct answers, giving a range 0–8. Knowledge groups were created on the following breaks: low knowledge 0–2 correct; medium knowledge 3–5 correct; high knowledge 6–8 correct. Cronbach’s alpha for the index was 0.56.

Monarchy Poll

(All questions are true/false.)

1. After Prince Charles, Princess Anne is the next in line to the throne.
2. The prime minister, and not the Queen, is Britain’s head of state.
3. The Queen is still the head of the Commonwealth.
4. It is the Queen’s duty to decide the date of all general elections.
5. No prime minister takes office without being asked to by the Queen.
6. The Queen is the head of the Church of England.
7. The Queen is the head of the Church of Scotland.
8. Britain has an unwritten constitution.

Knowledge variable was produced by summing all correct answers, giving a range 0–8. Knowledge groups were created on the following breaks: Low knowledge 0–5 correct; medium knowledge 6 correct; high knowledge 7–8 correct. Cronbach’s alpha for the index was 0.52.

Europe Poll

(All questions are true/false.)
1. The European Union has recently expanded to 15 members.
2. Switzerland is to join the European Union.
3. Britain’s income tax rates are decided in Brussels.
4. Elections to the European Parliament are held every five years.
5. Of the three major British parties, the Liberal Democrats are the least in favor of the European Union.

Knowledge variable was produced by summing all correct answers, giving a range 0–5. Knowledge groups were created on the following breaks: Low knowledge 0–1 correct; medium knowledge 2–3 correct; high knowledge 4–5 correct. Cronbach’s alpha for the index was 0.62.

References

62 Sturgis, Roberts, and Allum


Deliberative Polling and Attitude Constraint 63


