

## Ideology, Attitude Change, and Deliberation in Small Face-to-Face Groups

JOHN GASTIL, LAURA BLACK, and KARA MOSCOVITZ

*Previous research has found that face-to-face deliberation can result in aggregate shifts in participants' political views. What is less well known is how such attitude changes vary depending on individual attributes and the nature of a group's deliberation. The present study extends prior research by exploring the relationship between participant ideology and attitude change in small, face-to-face groups. To test a set of hypotheses and research questions, 57 zero-history groups discussed three different public problems for 30–60 minutes, and each participant completed pre- and postdiscussion questionnaires. Participant ideology had a clear association with changes on specific discussion-related issues, but participants from every ideological group experienced increased differentiation between ideologically distinct attitudes. Within-group variance in attitude change was positively correlated with average group scores on self-reported measures of deliberation, extraversion, and conscientiousness. The conclusion discusses these and other findings in relation to future research and public deliberation programs.*

**Keywords** attitude change, Big Five personality factors, decision making, deliberation, democracy, ideology, polarization, public opinion, small group communication

The idea of face-to-face public deliberation has considerable appeal. Given the intensity of many public disputes and the high cost of divisive—even violent—political conflict, the notion that warring factions might sit down together, talk through their disagreements, and arrive at a common understanding is quite attractive. Thus, many proponents of deliberation have identified it as an appropriate means of addressing deep moral conflicts (Cohen, 1989; Gutmann & Thompson, 1996; Pearce & Littlejohn, 1997). Moreover, deliberation holds out the promise of numerous indirect benefits, such as increasing participants' sense of community identity, their habituation toward political dialogue, their civic communication skills, their political knowledge, and their sense of self-efficacy (Burkhalter, Gastil, & Kelshaw, 2002).

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This work was completed with funding from the University of Washington Royalty Research Fund. For assistance with the collection and coding of data used in this study, thanks go to Jeannette Burkett, Tricia Gardinier-Vos, Rick Granados, Todd Kelshaw, Kevin Sager, and Alyssa Warner. Thanks also go to the many graduate and undergraduate students at the University of Washington who assisted with the transcription of the small group discussions described herein. For feedback on an earlier version of this article, thanks go to Joseph Cappella, Vincent Price, and Peter Muhlberger.

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As Mendelberg (2002) notes, however, “Not everyone is taken with deliberative prescriptions to the ills of democracy” (p. 152). Mendelberg and other critics (e.g., Anderson, 1998; Pellizzoni, 2001; Sanders, 1997) have suggested that deliberation must relinquish its status as the most exalted form of political talk. At the very least, such criticism should spur critical reflection and empirical research on precisely what deliberation is, how it works, and what effects it has on participants.

Fortunately, as public deliberation has become a more commonplace political concept, a modest body of empirical work on deliberation has begun to emerge (e.g., Delli Carpini, Cook, & Jacobs, 2004; Gastil & Levine, 2005). The focus of much of this work has been on how deliberation influences the attitudes of participants in deliberative forums, be they face-to-face or online. One of the most widely reported attempts at deliberation, the 1996 National Issues Convention, has received conflicting accounts as to whether participants changed their opinions on the three issue domains discussed at this unusual event, which brought together a large random sample of the American public to discuss pressing national and international issues for 3 days. In an early accounting, Merkle (1996) found relatively little change in aggregate opinions, but Fishkin and Luskin’s (1999) subsequent analysis of the pre- and postconvention surveys found many noteworthy changes. Mixed findings have also come from the British deliberative polls, with one study finding information gains and considerable attitude shift (Luskin, Fishkin, & Jowell, 2002) and another finding little increase in the inter-item consistency of sets of related survey items (Sturgis, Roberts, & Allum, 2005).

Gastil and Dillard (1999) have suggested a different way of looking at such pre- and post-deliberation surveys. Their analysis of ballots distributed before and after National Issues Forums looked not at aggregate change but at the changing organization of individual participants’ beliefs on a given issue. Individual-level changes in attitudes that result from deliberation might be important indicators of deliberation’s impact; however, if these patterns of changes happen to cancel one another out, the stability of aggregate opinions might obscure real and meaningful changes in the structure of participants’ individual attitudes.

The present study complements Gastil and Dillard (1999) and continues to explore how deliberation affects individual-level attitude change. Because Gastil and Dillard used previously collected data, they were unable to measure variations in participants’ ideological leanings. Given the powerful organizing influence of ideological orientation on public opinion (Kerlinger, 1984; Zaller, 1992), this study examines how ideological differences produce varied deliberative experiences. In addition, the present study heeds Mendelberg’s (2002) reminder that not all group discussions are the same. By looking at differences among a large set of discussion groups, we explore how different individuals, deliberative experiences, and perceptions can influence the attitudinal outcomes of small group deliberation.

## **Theory and Hypotheses**

### ***Attitude Change and the Organization of Political Beliefs***

Of the myriad influences that deliberation can have on participants (Burkhalter et al., 2002; Delli Carpini et al., 2004; Mendelberg, 2002), this study focuses on two cognitive outcome variables—group-level attitude change and individual-level changes in political belief structure. The first of these is the most common conception of public opinion. On larger social scales, scholars can debate the “rationality” of the public by looking at the

shifting central tendencies of collective attitudes on national issues (Page & Shapiro, 1992). The mean value of an opinion scale has taken on an almost holy meaning in American politics (Herbst, 1993), though the degree to which public officials heed these figures may be overstated (Jacobs & Shapiro, 2000). Thus, when Fishkin (1995) speaks of the “recommending force” of deliberative polls, like the aforementioned National Issues Convention, he refers to changes in aggregate opinion that result from face-to-face deliberation.

Many important attitude changes, however, take place below the surface of such shifting tides. Gastil and Dillard (1999) focused on such changes, which they grouped together as facets of an individual’s overall political schematic network. An ideologically constrained schematic network, which some call a “politically sophisticated” belief system (Luskin, 1987), is one that organizes “political ideas and issues in terms of abstract or ideological constructs” (Neuman, 1981, p. 1237). Gastil and Dillard (1999) investigated attitudes in terms of their organization along the powerful liberal/conservative axis that distinguishes many sets of views in American politics (Jacoby, 1991, 1995; Jennings, 1992; Kerlinger, 1984). By their definition:

Schematic *coherence* is the internal consistency of a person’s belief on an issue; a single belief is coherent if it is clearly and consistently defined. Sets of individual beliefs are *integrated* and *differentiated* if they are ideologically consistent: if a politically sophisticated person’s schematic network contains liberal beliefs, for example, it will contain other liberal beliefs on the same issue (integration) and will *not* include related conservative beliefs (differentiation). (Gastil & Dillard, 1999, p. 4)

Gastil and Dillard also examined changes in attitudinal uncertainty, but the present study looks only at the first three elements.

### ***Influence of Ideology on Attitude Change***

Gastil and Dillard’s (1999) study of National Issues Forums discussions found that after deliberating on seven different national issues, participants emerged with significant increases in schematic integration and differentiation and reductions in attitudinal uncertainty. Because these changes occurred amidst minuscule aggregate opinion shifts (Gastil, 1994), the authors speculated that these changes probably reflected a polarization between liberal and conservative forum participants. Their study employed ballots designed and collected by the National Issues Forums, however, so it was impossible to test that hypothesis using their data. Free of the constraints of that particular study, we can empirically explore this possibility, but before doing so, it is necessary to clarify the theoretical relationship between ideology and changes in schematic networks.

The simplest way of distinguishing ideological orientation in American politics is to trichotomize individuals into liberal, moderate, and conservative categories. For example, Zaller’s (1992) reason-accept-sample model of public opinion hypothesizes that politically knowledgeable individuals who have a liberal or conservative ideological bias can effectively filter out messages contrary to their ideology. Moderates and persons lacking political expertise fail to apply such filters and develop views representative of the larger media diet they consume. Zaller’s model works remarkably well, despite the subtle differences among various types of liberals or conservatives, let alone hybrid identities such as libertarian or populist.

Given the power of individuals' ideological moorings, it is hypothesized that in the present study, the aggregate changes that occur during group deliberation will be small relative to the more distinctive shifts within liberal and conservative ideological subgroups of participants: After deliberating in small groups, liberal and conservative participants are likely to move apart from one another attitudinally, with the former more strongly endorsing liberal beliefs and more clearly rejecting conservative ones, and vice versa. In other words, unstructured, simulated face-to-face group discussions are hypothesized to prove rich sources of the same attitudinal cues Zaller (1992) observed in mediated environments. Both of these groups also are hypothesized to experience significant gains in schematic integration and differentiation, though the coherence of individual attitudes may remain unchanged, as it was in the Gastil and Dillard (1999) investigation.

Moderate participants, by contrast, are expected to show relatively little increase in schematic integration and differentiation, owing to the absence of an ideological frame of reference. As for the shifts in moderates' political views, they are the only individuals hypothesized to be subject to group-composition effects. That is, moderates are expected to develop more favorable views of liberal beliefs when in groups that are predominantly liberal, whereas moderates are hypothesized to shift toward conservative views in relatively conservative groups. This is parallel to Xenos's (2003) conception of moderates as the true swing voters in elections—the persons most likely to respond to the ideological composition of the information environment and get beyond partisan cues when “deliberating” on vote choices.

### *Deliberation and Opinion Change*

Moving beyond ideology, there are numerous other factors that may influence the movement of public opinion in small groups. Two influences that may prove significant are the quality of the group deliberation and the personalities of group members. Neither of these has been studied carefully in relation to democratic deliberation, so this aspect of the present study is largely exploratory.

Burkhalter et al. (2002) argue that research on the effects of deliberation has been limited by the inability to define clearly what constitutes deliberation. “Previous studies,” they explain, “have been reduced to operationalizing deliberation as a dichotomous variable that is assumed to be present during any public discussion, issues forum, or town meeting with a format that permits structured interaction among the participants” (p. 399).

The present study attempts to move the literature forward by tentatively operationalizing deliberation along the lines suggested by Burkhalter et al. (2002). In this conception, deliberation has three components: (a) basic decision-making communication functions (Gouran, Hirokawa, Julian, & Leatham, 1993), such as problem analysis, specifying evaluative criteria, solution identification, and the weighing of pros and cons; (b) democratic elements, such as giving one another's arguments due consideration, demonstrating mutual respect, and affording one another adequate opportunities to express different points of view; and (c) the opportunity for dialogue when participants have incommensurate ways of speaking or reasoning. Given the limited design and setting of the present study, only the first two of these are incorporated in the measures presented below.

How might varying degrees of deliberation affect overall attitude change in groups? One distinct possibility is that groups that are more deliberative experience greater attitude change. It is an important principle of deliberation that it need not result in attitude change (Burkhalter et al., 2002), yet such changes are often a signal that deliberation has taken place. Thus, some advocates of democratic deliberation view it as a means of identifying

common ground (Mathews, 1994) or even a “rational consensus” (Cohen, 1989). More precisely, we hypothesize that groups exhibiting a higher level of deliberation will experience greater opinion change and a decrease in overall attitude variance among group members.

### ***Personality and Democratic Deliberation***

It is also useful to contrast groups in terms of their members’ personalities. Personality has long been understood as a key component in group life (Bales, 1950), and has even offered insight into democratic decision making (Lewin, Lippitt, & White, 1939). The study of personality and democratic behavior has fallen out of fashion, but it has a rich history. After the rise and fall of Nazi Germany, concern about the public personality crystallized into the study of the authoritarian personality syndrome (Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950), which was believed to underlie public support for fascist and totalitarian regimes. Looking at the other side of this coin, Almond and Verba (1963) posited that democracy flourishes in the midst of a “civic culture,” and Sniderman (1975) hypothesized that there is a “democratic personality” promoting tolerance, public engagement, and other democratic virtues (see also Binford, 1983). The core ideas in this literature relevant to the present study are that an open, tolerant, self-reflexive, and sociable personality is conducive to constructive participation in public life.

Given the paucity of contemporary theoretical literature linking personality, deliberation, and political attitude change, we simply advance a research question at this point: How does the personality composition of a group influence the direction and degree of attitude change in political discussion groups? To answer that question, we deploy a broad conception (and accompanying operationalization) of personality that permits us to see how general traits connect to democratic deliberation. The Big Five Personality Inventory (McCrae & Costa, 1987) reduces a wide range of personality traits to five factors, and past research has found this measure to be valid and predictive of a wide range of behaviors, including such related phenomena as group decision rule selection (Sager & Gastil, 2002) and organizational citizenship (Organ, 1994). Again, the purpose here is more exploratory than predictive, so no hypotheses are advanced regarding particular factors.

## **Method**

### ***Participants***

The sample for this study consisted of 160 female and 90 male undergraduate students enrolled in undergraduate courses at a large public university in the Pacific Northwest. The majority (72%) of the participants were White, non-Hispanic, with 21% Asian American, 4% Hispanic, and 1% African American. Participants either received extra credit for taking part in the study or volunteered to participate without compensation.

### ***Simulated Group Design***

Before reviewing the procedures of the study, it is helpful to note the design of the group discussions. Each study participant was assigned to a group that discussed an issue for 30–60 minutes. These discussion groups should be conceptualized as *simulations* rather than experimental groups: They were designed to produce naturally occurring variance (e.g., in member personalities, deliberation and other group processes, and decision outcomes), not

test the effects of differences imposed by an experimental manipulation. The only designed differences were included simply to randomize group size (from three to six), gender composition (from 25%–100% female), and discussion topic (one of three national problems), lest the study produce artifactual results specific to only one combination of those factors. (A follow-up analysis confirmed that none of these three factors correlated with each other.)

In addition, it is noteworthy that the groups were unstructured, informal discussions that had tasks but no substantial consequences for the participants. Review of the content of the discussions shows that participants did participate in substantive discussions with varying degrees of focus and rigor (as hoped). Examination of group transcripts revealed lively debates and a serious focus on the task in the overwhelming majority of groups. Most groups used nearly all of their allotted time, and many rushed to finish by the 1-hour deadline. (The median discussion was 50 minutes, with only 10% taking fewer than 30 minutes despite being given no special incentives for longer discussions.)

Nonetheless, the group discussions lacked the gravity of legislative deliberation (Besette, 1994) or carefully organized and publicized citizen deliberation (Gastil & Levine, 2005). This setting was a practical reality of the study's budget and design, but it should also be seen as a limitation on the realism of the discussions relative to high-stakes public deliberation. The most optimistic view would be that these were simulations of pure argumentation free of the push and pull of stakeholders' material interests and public partisan/institutional commitments. It is not quite an ideal speech situation (Habermas, 1979), but a setting in which natural variation might, indeed, reach relatively high degrees of deliberation.

### ***Procedure***

After consenting to take part in the study, participants completed a prediscussion questionnaire. This questionnaire included a personality inventory, measures of prediscussion attitudes (see below for measurement details), and a single-item measure of ideology.

Following completion of the prediscussion questionnaire, participants were randomly assigned to 57 groups. Each group was escorted to its own classroom, seated in a circle of desks, and directed to read a piece of paper in the center of the circle that described its decision-making task. Groups were allotted 60 minutes to complete the task, and all participants consented to have their discussions videotaped.

Groups were randomly assigned to discuss one of three different national problems: drug-related violent crime, environmental pollution, or the economic prosperity of poor and working-class Americans. Participants were asked to collaborate on the following tasks: (a) discuss the national problem, (b) come up with and write down a solution to that problem, and (c) estimate the percentage of Americans who would support their solution. The latter task was designed to reinforce the instruction to come up with a solution that was not only effective but also likely to be "politically successful." (See Appendix A for details.)

After finishing the task, each participant completed a postdiscussion questionnaire. This instrument contained the same set of attitude items, items assessing participants' perceptions of the group's discussion, and items unrelated to the present study.

### ***Measures***

*Ideology.* A standard single-item measure was employed to operationalize participants' political ideology. The item read, "On a scale of political ideology, individuals can be

arranged from strongly liberal to strongly conservative. Which of the following categories best describes your views?" The seven possible response options were strongly liberal, liberal, slightly liberal, middle of the road, slightly conservative, conservative, and strongly conservative.

*Pre- and Postdiscussion Attitudes.* To measure attitude changes, we employed a method parallel to that used by Gastil and Dillard (1999). Participants completed a randomly ordered battery of questions relevant to the issue their group discussed. Each questionnaire included a 12-item set of statements—three distraction items and a trio of three-item scales, roughly analogous to the kind of choice sets used in National Issues Forums booklets. Participants responded to each statement using a scale ranging from 1 ("strongly disagree") to 7 ("strongly agree"), and then the items were combined to form attitude scales. The same items were randomly ordered on the postdiscussion questionnaire to test changes in participants' attitudes after their discussions. (Participants received questionnaires that included only those issue items that pertained to the issue they were to discuss.)

The complete wording of the questionnaire items is provided in Appendix B, but it is useful to summarize them briefly. For the drug-related violent crime issue, participants were asked to indicate their attitudes toward one liberal policy stance—decriminalization/treatment (e.g., "The U.S. should make comprehensive drug treatment available to all substance abusers" and "The U.S. should eliminate criminal penalties for the personal use of all drugs")—and two conservative views—the "just say no" approach ("American society should stigmatize drug use as an unacceptable, destructive habit") and support for the "war on drugs" ("We should build more prisons to keep more drug dealers behind bars").

Regarding environmental pollution, participants expressed agreement or disagreement with the conservative market-incentive approach ("We must rely less on government regulations and more on the free market"), the liberal sustainability approach ("Americans are too wasteful and must learn to reuse and recycle more of their products"), and the liberal conviction that environmental laws need to be strengthened ("Government must substantially strengthen enforcement of environmental regulations").

Regarding the economy and wages, the three policy beliefs included a conservative commitment to non-intervention/low-taxes "trickle-down" economics ("Government spending should be reduced to the absolute minimum"), a liberal "fair-share" approach ("We should change the federal tax codes so that upper-income earners pay a higher tax rate"), and the liberal policy of equal access to public education ("We should equalize funding for public schools, regardless of the income level of the surrounding community").

*Perceptions of Deliberation.* Group deliberation was operationalized using both self-report and observational data. Following Burkhalter et al.'s (2002) conceptualization of democratic public deliberation, we distinguished between the communication functions served by deliberation and the democratic qualities of a group's talk. Items measuring these two facets of deliberation were randomly interspersed with other, unrelated questionnaire items in the post-discussion questionnaire.

The first set of items measured the central communication functions developed by Dennis Gouran and Randy Hirokawa (Gouran et al., 1993; Hirokawa, 1985). A variety of methods have been employed to measure communication functions, and we employed a set of four straightforward self-report items that measured the degree to which participants perceived their group as having specified the problem, identified a range of alternatives, and weighed the pros and cons of each alternative. The resulting communication functions scale (four

items,  $\alpha = .71$ ) ranged from 1 to 7, with higher scores indicating that participants believed their group had satisfied the requisite functions (see Appendix C for complete item wording).

The second set of items asked participants to evaluate the degree to which their discussion was democratic, using items adapted from Gastil's (1993) definition of small group democracy. These items asked participants to describe their group in terms of opportunities to speak, mutual respect, and comprehension and consideration of statements made by group members. The resulting democratic deliberation scale (seven items,  $\alpha = .76$ ) ranged from 1 to 7, with higher scores indicating the perception of relatively democratic group discussion (see Appendix C for complete item wording).

*Observer Ratings of Deliberation.* To complement these self-report data, an attempt was made to construct observational measures of deliberation. There were no preexisting coding instruments for this task, so the authors developed two distinct measures to explore the potential value of different measures. Both measures relied on third-party coder analysis of the 57 group discussions. Over a period of months, a team of research assistants transcribed approximately 3,000 minutes of group discussion, and these transcripts were used to rate the deliberative qualities of the groups.

The first measure was a global measure of group deliberation, focusing on the rigorosity of the group's analytic process. The three coders were given detailed instructions and training to help them understand the different features of group deliberation. Then, using scales ranging from 1 ("strongly disagree") to 7 ("strongly agree"), the coders rated each of the groups on six items (e.g., "The group members identified a very broad range of solutions to the problem they discussed" and "The group carefully considered what each participant had to say"). Scores on these scales were highly correlated ( $r > .70$ ), and they were combined into a single scale ( $M = 4.7$ ,  $SD = .94$ ) that had low but adequate reliability across the coders ( $\alpha = .65$ ). (Complete coding guidelines, instruments, and other details are available from the first author.)

The second measure was a micro-level analysis of the democratic quality of group member relationships. This measure was adapted from Gastil's (1994) conception of democratic group leadership, which presents relational conceptions parallel to those in Gastil's (1993) definition of small group democracy. The instructions for this coding task were relatively simple: coders recorded "the total number of speaking turns that included a statement that maintains healthy relationships among group members and a positive emotional atmosphere." This included "showing awareness of and responding to group members' emotional states" (e.g., "You seem upset"), "creating/modeling a sense of excitement in the group" (e.g., "We're doing great!"), and "validating other people's ideas" (e.g., "Good idea!"). The counts produced by the coders were highly correlated ( $r = .85$ ), and these scores were averaged and divided by the duration of group discussion to produce a relational affirmation rate for each group ( $M = .20$ ,  $SD = .10$ ). (Complete coding guidelines, instruments, and other details are available from the first author.)

*Personality.* Because broad research questions were advanced regarding personality, a comprehensive instrument was employed. The Big Five Personality Inventory (McCrae & Costa, 1987) reduces a wide range of individual psychological differences to five global personality factors. The simplified version employed in this study produced reliable seven-item scales for each factor: extraversion versus introversion ( $\alpha = .81$ ), agreeableness versus hostility ( $\alpha = .78$ ), conscientiousness ( $\alpha = .76$ ), neuroticism versus emotional stability ( $\alpha = .71$ ), and openness to experience ( $\alpha = .70$ ) (see Appendix D for complete item wording).

## Results

The results of our analyses are broken down into two main sections—those dealing with changes in the organization of individual political beliefs and those concerning aggregate attitude shifts. The former analyses, with one exception, necessitated working on the individual level, where the sample consisted of 250 individuals. The latter analyses began at the individual level to compare ideological groups but then moved to the group level, where the total sample size was 57 groups.

### *Ideology and Schematic Organization*

*Schematic Coherence.* Increases in schematic coherence were considered equivalent to increases in the average correlations among items within a given attitude scale. The findings in this study were no different than in previous research (Gastil & Dillard, 1999; Sturgis et al., 2005)—the pattern across the nine attitude scales was one of increasing schematic coherence, but the increases were small and statistically nonsignificant. This was true not only for the sample taken as a whole but also for each of the ideological subgroups.

*Integration.* Integration was measured by comparing the pre- and postdiscussion correlations between ideologically similar attitude scales. Each of the three discussion issues had one such pairing, and a  $q$  statistic (Cohen, 1988) was calculated for each pairing to discern any statistically significant differences between the pre- and postcorrelations. For the sample as a whole, none of these comparisons were significant. Correlations did not significantly change between the two conservative beliefs on drugs (prediscussion  $r = .34$ , postdiscussion  $r = .43$ ), the two liberal attitudes on the environment ( $r_s = .79, .76$ ), and the two liberal views on wages ( $r_s = .40, .36$ ).

Table 1 shows these same results broken down into the ideological subsamples. This analysis produced a total of nine comparisons, one for each issue for each ideological group. Only one of these changes was significant: Before discussion, moderates' views on the "just say no" ethic and the drug war were uncorrelated ( $r = .00$ ), but afterward the association rose dramatically ( $r = .71$ ).

It must be acknowledged that when the data are broken down into these subsamples, statistical power is reduced considerably (Cohen, 1988). Nonetheless, even if one combined the participants within a given ideological group across the three issues, only moderates showed a significant overall increase in integration across the three issues, a result driven by the large change on the drug issue. In any case, the pattern of findings is not consistently in the same direction, and the only significant finding was not consistent with this study's hypotheses.

*Differentiation.* The small or nonexistent changes in coherence and integration contrasted sharply with the striking changes in schematic differentiation. Differentiation was measured as the change in correlations between ideologically dissimilar attitude scales; increasing differentiation was indicated by the movement toward a negative correlation between dissimilar attitudes. The design of the questionnaires employed in this study produced two differentiation correlations for each of the three issues.

Table 2 shows the results for the entire sample. For all six sets of correlations, participants began with positive correlations between dissimilar attitudes and moved toward negative correlations. For instance, before discussion, attitudes toward drug

**Table 1**  
Schematic integration: Comparison of pre- and postdiscussion correlations among ideologically similar attitude scales, broken down by self-reported ideology

Group and issues correlated	<i>n</i>	Prediscussion <i>r</i>	Postdiscussion <i>r</i>	<i>q</i> score ( $z_1 - z_2$ )
<b>Liberals</b>				
Drugs (2 conservative attitudes)	31	.58	.31	-.34
Environment (2 liberal attitudes)	31	.75	.82	.18
Wages (2 liberal attitudes)	33	.32	.10	-.23
<b>Moderates</b>				
Drugs (2 conservative attitudes)	20	.00	.71	.89*
Environment (2 liberal attitudes)	31	.50	.40	-.13
Wages (2 liberal attitudes)	21	.40	.65	.35
<b>Conservatives</b>				
Drugs (2 conservative attitudes)	24	.24	.10	-.15
Environment (2 liberal attitudes)	30	.82	.77	-.13
Wages (2 liberal attitudes)	26	.32	.28	-.04

Note. For significance testing with *q* scores, see Cohen (1988).

\**p* < .05.

**Table 2**  
Schematic differentiation: Comparison of pre- and postdiscussion correlations among ideologically dissimilar attitude scales

Issues correlated	<i>n</i>	Prediscussion <i>r</i>	Postdiscussion <i>r</i>	<i>q</i> score ( $z_1 - z_2$ )
Drug pair 1	75	.31	-.35	-.69*
Drug pair 2	75	.49	-.42	-.98*
Environment pair 1	92	.43	-.35	-.83*
Environment pair 2	92	.58	-.41	-1.10*
Wages pair 1	80	.32	-.15	-.48*
Wages pair 2	80	.46	-.09	-.59*

Note. For significance testing with *q* scores, see Cohen (1988).

\**p* < .05.

decriminalization/treatment and the “just say no” approach were positively correlated ( $r = .31$ ), but afterward participant attitudes on these two policy approaches were negatively correlated ( $r = -.35$ ). In other words, before discussion, participants favoring one policy were more likely than others to also favor the ideologically contrasting policy. Afterward, this was reversed, such that the level of support for a conservative policy was inversely related to the level of support for a liberal policy.

When the results in Table 1 were broken down by ideological subgroups, it was hypothesized that differentiation would be present for liberals and conservatives, but not for moderates. This hypothesis was only partially supported, in that strong increases in schematic differentiation were present for *all three* ideological subgroups across all three issues.

There was one finding, however, that ran contrary to the overall pattern. In the case of one pair of ideologically opposing environmental attitudes—promoting sustainability (liberal) and reliance on market incentives (conservative)—correlations rose for liberals (pre-discussion  $r = .01$ , postdiscussion  $r = .17$ ), were unchanged for moderates ( $r = .09$ ), and declined dramatically for conservatives ( $r_s = .46, -.53$ ). In other words, discussion had no significant effect on liberals and moderates, who continued to see these two attitudes as unrelated, but conservatives drew a sharper distinction between them (as did all groups for the other attitude pair on this issue).

### **Aggregate Attitude Change**

*Ideology.* Moving from the relationships among attitude scales to net attitude changes, it was hypothesized that liberal and conservative attitude shifts might take place amidst relatively modest aggregate attitude change for the full sample of participants. In other words, it was expected that a polarization pattern between ideologically opposite groups would underlie a relatively modest shift in overall attitudes—a proverbial storm beneath the calm.

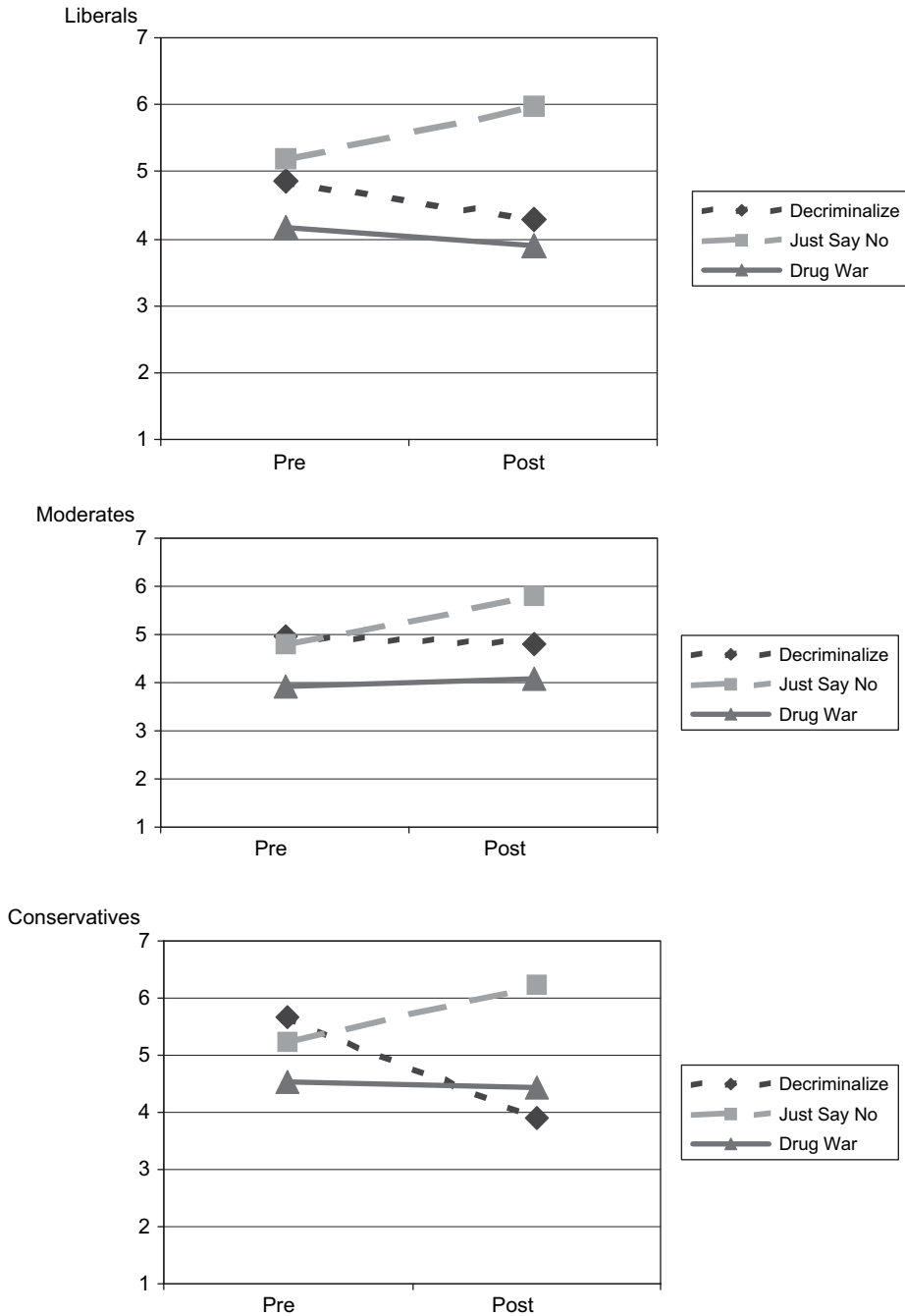
For the drug issue, Figure 1 demonstrates that the stronger attitude change was evident for liberal and conservative participants. Conservatives changed as expected by rejecting legalization (the highest-rated policy prediscussion) in favor of the “just say no” approach, along with a modest increase in support for the war on drugs. What was unexpected was the liberal movement in a similar, though less pronounced direction.

Figure 2 shows another surprising pattern of attitude changes in the case of the environmental issue. In this case, the liberal participants followed expectations by increasing their support for liberal policies while dramatically reducing their support for the conservative market approach. Though conservatives (and moderates) increased their support for market incentives, both of these groups also joined liberals in increasing their support for liberal environmental approaches.

The wages issue, as shown in Figure 3, had the least striking attitude changes. All three ideological groups maintained relatively steady levels of support for liberal policies. Conservatives modestly reduced their support for a “trickle-down” economic policy, whereas moderates reduced their support for this policy even more and liberals did so the most.

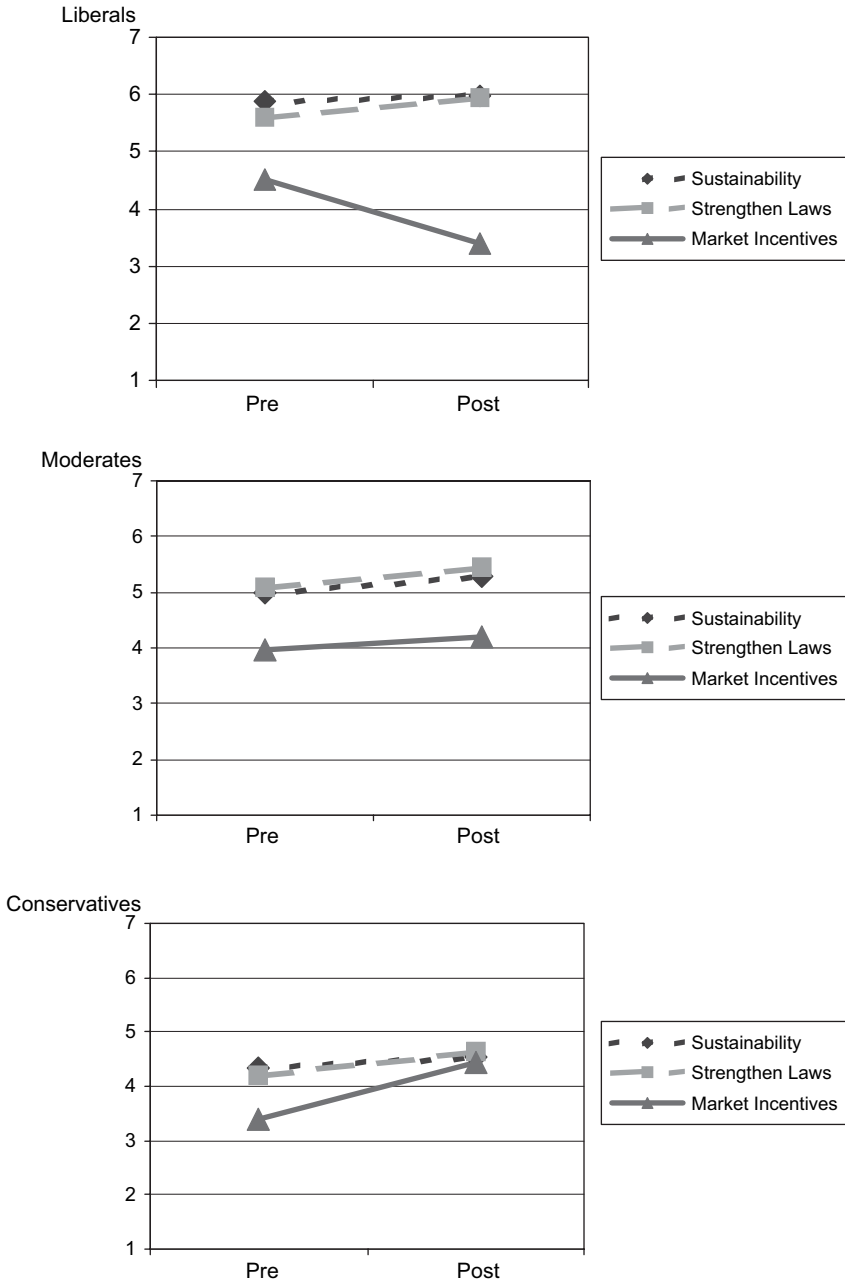
Taken together, these findings are inconsistent with the polarization hypothesis. There were certainly differences between the patterns of attitude change between liberal and conservative groups of participants, but those were not the main findings. On the drug issue, the most striking finding was the movement of all three groups toward the “just say no” policy, with both conservatives and liberals rejecting the decriminalization/treatment approach. On the environment, liberals rejected the conservative policy and increased support for liberal policies, but moderates and conservatives increased support for all three approaches, with conservatives arriving at roughly equal levels of support for each. On the wages issue, the liberal public education policy remained the favorite approach for all three groups, with all three decreasing support for the conservative market approach, though liberals moved away from this approach more than did the others.

The second hypothesis regarding ideology and attitude change was that the shifts in the attitudes of moderates, but not liberals or conservatives, would reflect the ideological balance of the group. To test this claim with an adequate sample size, it was necessary to create a measure that transcended the three different discussion issues: The MoveLeft index was created by subtracting the average conservative scale score from the average



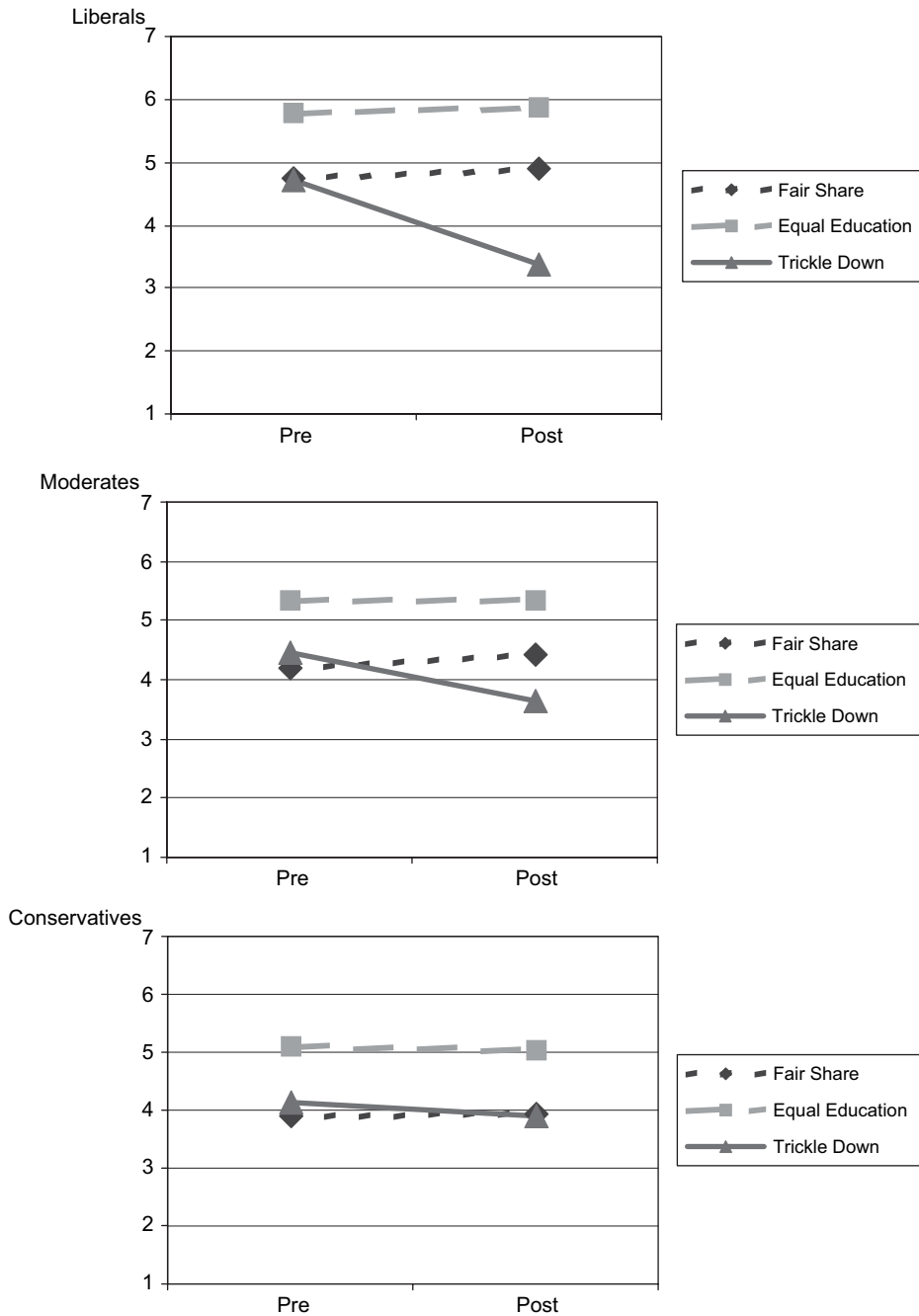
**Figure 1.** Changes in attitudes on drug-related violent crime, broken down by ideological group.

liberal scale score in each survey and then subtracting the prediscussion survey average from the postdiscussion average. Thus, a positive MoveLeft score indicated that an individual's views, on balance, moved toward favoring liberal policy approaches and/or disfavoring conservative ones.



**Figure 2.** Changes in attitudes on environmental pollution, broken down by ideological group.

In addition to measuring group-level averages in MoveLeft, we also examined *within-group variance* in MoveLeft scores (hereafter called MoveLeftVariance). This measure is an illustration of an underutilized methodological opportunity afforded by studying groups: It is possible to measure not only the central tendencies of groups but also the individual-level variation within groups.



**Figure 3.** Changes in attitudes on wages and the economy, broken down by ideological group.

A final variable, average group ideology, was calculated by aggregating individual ideology scores and attaching those to each individual group member, such that each individual record had a corresponding group-ideology score.

Having created these measures, a nonsignificant overall correlation was found between the ideological composition of the group and individual MoveLeft scores, controlling for individual ideology ( $r = -.04$ ). When broken down by ideological group, the same partial correlations (and their zero-order equivalents) were nonsignificant for liberal and conservative participants. The zero-order correlation was also nonsignificant for moderates, who all shared the same score on the ideology measure (making partial correlations unnecessary).

As a post hoc test, an alternative measure of group ideological composition was created. This measure focused on the *balance* of ideological group members, rather than relative scores. Thus, a PercentLiberal measure was created to indicate the percentage of an individual's group members who held liberal views. This variable produced two significant correlations: Moderates had a positive correlation between PercentLiberal and MoveLeft ( $r = .21, p = .045$ ), and conservatives had a negative relationship between the two (partial  $r = -.19, p = .047$ ). In other words, moderate individuals were more likely to drift toward liberal attitudes when in a discussion group with relatively more liberals, and conservatives had a contrasting "repulsion" tendency, being more likely to move to the right in groups with a higher proportion of liberals.

*Deliberation.* Moving squarely to the group level of analysis, the self-report and observational measures of deliberation were used to examine deliberation's effect on aggregate attitude shifts in the groups. We had hypothesized that more deliberative groups would demonstrate greater overall shifts in attitudes and less heterogeneity in the variation of attitude shifts within groups. Results showed no significant relationships between the observational measures of deliberation and either of the attitude measures. The self-report measure of democratic deliberation, however, correlated significantly with MoveLeftVariance in a direction consistent with hypotheses. After controlling for MoveLeft, those groups whose members viewed their discussion as relatively deliberative were more likely to have decreased variance in the direction of their policy views (partial  $r = -.38, p = .006$ ).

*Personality.* Finally, this study explored the connection between personality and the same summary measures of group attitude change. None of the Big Five personality factors, when averaged across group members to form a group score, were associated with the direction of group attitude change (MoveLeft), but there were clear and significant zero-order correlations between the factors and MoveLeftVariance. These associations were sufficiently robust that even after controlling for ideology, group size, issue, group gender balance, and the self-reported measure of democratic deliberation, two of the five factors maintained significant associations with MoveleftVariance (extraversion semipartial  $r = -.41$ , conscientiousness semipartial  $r = -.33$ ; total change in  $R^2$  for the Big Five = .23). In other words, variation across the groups' average member personalities accounted for nearly one quarter of the variance in within-group attitude change (MoveLeftVariance).

## Conclusion

Taken together, these findings underscore the importance of looking beyond aggregate attitude shifts by taking into account participants' ideological orientations and considering the influence of group-level characteristics on individual-level attitude changes. Key findings from this study show the value of moving beyond aggregation, but they also show the need for future research along these lines.

### ***Deliberation, Ideology, and Differentiation***

First, this study replicated the strongest finding in Gastil and Dillard's (1999) study of attitude change in the National Issues Forums: It appears that one common impact of group deliberation is an increase in the differentiation of liberal and conservative attitudes. Using Cohen's (1988) benchmarks, these differences are quite large, with individuals often moving from positive to negative correlations between ideologically dissimilar attitude scales. In the context of the National Issues Forums, these changes occurred after reading an issue booklet and participating in a carefully planned and organized discussion. It is noteworthy that the same findings appeared in this study's zero-history groups, which presumably have lower motivation and expertise. In other words, discussing current issues with groups of strangers for even just 30–60 minutes can have a profound effect on one's ability to differentiate liberal and conservative policy approaches.

What is equally striking is that this differentiation did not occur just for liberal and conservative participants. Instead, moderates were just as likely to make these attitude distinctions. At the group level, moderates showed some resilience in being unmoved in their attitudes by the average ideological score in their group. They did, however, tend to move left when a higher *proportion* of group members were liberal (and vice versa).

It is also noteworthy that schematic differentiation did not occur amidst a clear pattern of ideological polarization. Though there were some respects in which liberals and conservatives moved further apart in their issue positions, the more common pattern was a mix of attitude change that crossed ideological lines. The one polarization finding at the group level was that conservative members reacted against liberal groups: The greater the proportion of group members who were liberal, the more a conservative group member would shift his or her attitudes to the right. The same "repulsion effect" was not present for liberals.

Though differentiation was strong for all ideological groups, there were no significant changes in schematic coherence and only one isolated increase in schematic integration (out of nine possible). Juxtaposed with similar findings in research conducted in issues forums (Gastil & Dillard, 1999) and deliberative polls (Sturgis et al., 2005), it appears clear that deliberation is better able to help participants distinguish between ideologically dissimilar policy positions than assist them in seeing connections between ideologically similar proposals or among the components of a single proposal. Perhaps the emphasis on "careful weighing" in deliberation (Mathews, 1994) makes it better suited to differentiating than integrating beliefs and preferences.

### ***Deliberation, Personality, and Convergence***

One thing that deliberation did *not* do, in this study at least, was generate consistent aggregate attitude change across groups. All three of the measures we employed were unrelated to directional group attitude change. In retrospect, the blame here may lie with the hypothesis more than the result. Though some deliberative events, like the deliberative polls, have produced clear aggregate attitude changes (e.g., Fishkin & Luskin, 1999), other research has found that civic educational forums like the National Issues Forums, on which this study was modeled, produce only slight aggregate change (Gastil, 1994). A simple difference is that the forums are discrete meetings, and there is no common experience to move participants in separate groups toward the same conclusions. Thus, it may be a mistake to expect more deliberation in such groups to produce more consistent aggregate directional change.

There was, however, one significant association between deliberation and changes in group attitudes: Self-reported deliberation was associated with reduced within-group attitude variance. This finding suggests that participants' subjective sense of deliberating is connected to their sense that the group members moved in similar directions—reducing the variance among their different views. The core notion of deliberation seeking the “common good” or “common ground” may have an intuitive meaning for participants.

The Big Five personality measure was an even more powerful predictor of the amount of variance in attitude change. After controlling for the amount and direction of group attitude change, it was found that the relatively extraverted and conscientious groups had lower levels of variance in members' attitude shifts. Thus, it may be the case that the move toward common ground or consensus is facilitated by a set of participants who are open, expressive, careful, and practical in their discussions. To the extent that one privileges convergence as a goal of deliberation (e.g., to produce the “recommending force” sought by Fishkin, 1995), these personality traits may be more conducive to such deliberation. At a high level of abstraction, this result is consistent with Organ's (1994) finding that conscientiousness is conducive to organizational citizenship behaviors—individual contributions to organizational life “that are neither contractually rewarded nor enforceable by supervision or job requirements” (p. 339).

Designers of deliberative forums are unlikely to select participants based on personality traits, nor should they consider doing such a thing; however, this finding suggests that an effective event organizer might seek to *draw out* the more extraverted and conscientious tendencies in participants. After all, traits such as these exist in people to varying degrees—not in a binary present/absent manner. Moreover, the findings reported herein occurred at the group level, and these traits can be conceptualized as a group resource (e.g., the conscientious member who keeps the whole group on track). Thus, the materials that event organizers put on the walls of meeting rooms and other events might speak to these qualities. When National Issues Forum conveners, for instance, posts “ground rules” for participants, perhaps they are appealing to conscientiousness (National Issues Forums, 1990). In this same way, other signals, such as icebreaker-style activities, might tap into a group's extraversion and promote group convergence.

### ***Limitations and Future Research***

This study was designed to spark a wider range of studies more than resolve the key empirical questions in deliberative theory. Like any single study, this one had limitations that partially offset its unique strengths. First and foremost, this study introduced self-report and observational measures of deliberation that ended up raising difficult questions about how to the concept. There is no logical reason why there must be a strong correlation between observational measures of the rigorousness of a group's analytic process, on the one hand, and the democratic quality of its relationships, on the other. Nevertheless, the lack of such an association complicates the task of measuring deliberation, which has both of these elements. In a similar manner, the lack of an association between both observer ratings and the participants' self-report measures raises questions about the intersubjectivity of deliberator and observer perspectives. Taken together, these results indicate that a great challenge faces those who hope to operationally define deliberation in a way that is meaningful for participants, practitioners, and researchers alike.

A more generic limitation of the present study concerns sample size. Statistical power (Cohen, 1988) was relatively low for group-level analyses of the discussions ( $n = 57$ ) and

for issue-specific breakdowns by ideological group (average  $n = 27$ ). Nonsignificant findings for these analyses only suggest the absence of relatively large effects, but it is entirely possible that small to medium-sized associations went undetected in these instances due to low power.

Another limitation to consider is that the instructions given to participants required them to arrive at a policy solution that would be both effective and *popular*. The latter instruction was designed to promote political realism, but it could have had an unintended conformity effect, with participants changing their personal attitudes to line up with what they came to believe was popular. These data do not permit direct testing of that effect, but it is important to consider for future research how such discussion instructions might shape attitude change in this manner.

More broadly, this study employed a simulated deliberative design using student volunteers and issues that were not of immediate concern to most discussants. The setting was a sterile college classroom, and though many participants mustered an intrinsic motivation, the student discussions lacked the gravity of a more consequential deliberative event. As Crosby (2005) has cautioned, deliberative practitioners should be wary of drawing practical implications from simulations and experiments of this nature, unless they converge with research done in the field with more high-stakes deliberation projects involving engaged citizens.

One finding from this study *does* square with the conventional wisdom among deliberation practitioners: It matters what issue is being discussed. The discussion topic was systematically varied within this study to ensure that findings would not be artifactual—constrained by the use of a particular issue. Recalling the strikingly different patterns shown in Figures 1–3, it appears likely that if a future study employed just one of those issues, it would be a mistake to generalize across all other issues. Our study confirms that deliberation practitioners should remain sensitive to the possibility that the nature of the issue could shape the outcomes of their public events. Thus, for example, the attitudinal convergence of the Citizens Assembly held in 2004–2005 in British Columbia may have depended, in part, on the subject of the discussions: electoral reform. Had a random sample of British Columbia citizens been asked to deliberate on an economic issue, they may not have had the same result. (The Assembly voted for their final recommendation 146–7. For more details, see <http://www.citizensassembly.bc.ca/public>.)

More broadly, researchers and practitioners can read this study as a caution against the most optimistic view of deliberation, which holds that attitude changes are driven largely by information gains independent of more unpredictable variances in group composition, discussion quality, and individual characteristics. Managing those differences is the job of an event organizer or group facilitator, and that is why deliberation practitioners place such a premium on group design and management (Gastil & Levine, 2005). This study shows how different combinations of participant personalities and deliberative processes can influence the degree to which participants' views converge during discussion.

Future research should continue to explore the complex ways in which individual and group attitudes can shift, beyond changes in mean aggregate opinion scores. Researchers should continue to explore the linkages between group characteristics and individual attitude changes. Simply convening a group discussion does not mean that one has begun a deliberative process, and the fruits of such a discussion will likely depend on who is seated, why they are present, and precisely how they interact.

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## Appendix A: Detailed Description of Group Task

Each group wrote (a) a policy recommendation and (b) a rationale for it. These answers have been typed for easy analysis. For the drug-related violent crime issue, the wording of the task was as follows:

Your task is to discuss and suggest a solution for a pressing national problem. One in two Americans has a serious drug problem or knows someone who does, and many Americans are terrified by the random violence associated with drug-related crimes. Frustration with the continuing violence

that stems from the sale and use of illegal drugs has fueled public discussion about the effectiveness of the nation's anti-drug efforts. Your job is to discuss this issue and recommend a politically realistic policy that will help to *reduce the amount of drug-related violent crime* in the United States.

You will have completed your group assignment once you have:

1. written down the *policy* that your group recommends,
2. explained in writing *why* your group thinks the policy will be effective, and
3. written the estimated percentage of Americans that your group believes would *vote for your policy* if a nationwide referendum-election were held on it. (In a referendum-election, people vote for or against a policy proposal that is written on their ballot. In all other respects, referendum-elections are conducted the same way as regular elections for public office.)

*You have exactly 60 minutes to complete your task.* Remember that your task is to recommend a policy that your group thinks would prove to be *politically successful* and *highly effective* if implemented.

4. Description of the Recommended Policy [space provided]
5. Explanation for Why the Policy Will Prove Effective [space provided]

For the environment issue, the opening paragraph read as follows:

Your task is to discuss and suggest a solution for a pressing national problem. Cleaning up the environment is an enormous challenge, especially when resources are limited, environmental science is still evolving, and scientists disagree. Americans have to decide on an approach to environmental protection that is consistent with their own values and views. Your job is to discuss this issue and recommend a politically feasible policy that will help to *reduce environmental pollution* in the United States.

For the wage issue, the paragraph read this way:

Your task is to discuss and suggest a solution for a pressing national problem. Despite overall gains in productivity and record levels of corporate profits, the pay of many American workers has stagnated. For a substantial number, pay has declined. This trend poses fundamental questions about who benefits from economic growth and what should be done to enhance the wages of most Americans. Your job is to discuss this issue and recommend a politically feasible policy for *increasing the real earnings of poor and working-class Americans*.

## Appendix B: Attitude Items

For each of the three issues, items on three different attitude scales were randomly combined with additional attitude items. Below, the items used in this study are sorted by scale for each of the three issue areas. All responses were recorded on a scale from 1 ("strongly disagree") to 7 ("strongly agree").

### ***Drug-Related Violent Crime***

#### *Liberal: Decriminalization and Treatment*

1. The U.S. should make comprehensive drug treatment available to all substance abusers.
2. The U.S. should eliminate criminal penalties for the personal use of all drugs.
3. The medicinal use of marijuana should be legalized throughout the U.S.

#### *Conservative 1: Just Say No*

4. Anti-drug education should be a national priority in our public schools.
5. American society should stigmatize drug use as an unacceptable, destructive habit.
6. We should use every means available to impress upon parents the need for them to talk frequently with their children about the illegal drug problem.

#### *Conservative 2: Drug War*

7. The U.S. should try harder to seal its international borders from illegal drug traffic.
8. We should build more prisons to keep more drug dealers behind bars.
9. Random drug testing should be used in more schools and workplaces.

### ***Environmental Pollution***

#### *Liberal 1: Sustainability*

1. To fall in step with nature, Americans must accept changes in their lifestyle that reduce the strain we put on the environment.
2. We should preserve every species of fish, plant, or insect.
3. Americans are too wasteful and must learn to reuse and recycle more of their products.

#### *Liberal 2: Strengthen Laws*

4. The federal government must enact stricter auto emissions standards.
5. Government must substantially strengthen enforcement of environmental regulations.
6. Government must continue setting standards that seek to reduce pollution to a minimum.

#### *Conservative: Market Incentives*

7. We must rely less on government regulations and more on the free-market.
8. Government must compensate private land owners for economic losses when it restricts their use of the land.
9. Government should put more public land in private hands.

### ***Wages***

#### *Liberal 1: Fair Share*

1. The United States should raise the federal minimum wage.
2. The federal government should give more generous child care payments to low-income families with young children.
3. We should change the federal tax codes so that upper-income earners pay a higher tax rate.

#### *Liberal 2: Equal Education*

4. We should enact federal laws that keep the cost of higher education from becoming an insurmountable obstacle for youths from low- and middle-income families.
5. We should equalize funding for public schools, regardless of the income level of the surrounding community.
6. We should expand national training and apprenticeship programs to propel more non-college-bound graduates into good-paying jobs.

*Conservative: Trickle Down*

7. We should reduce government regulations on business.
8. Government spending should be reduced to the absolute minimum.
9. Wealthy Americans shouldn't have to pay so much in taxes, including capital gains taxes.

**Appendix C: Self-Report Measures of Deliberation**

All responses are on a scale from 1 ("strongly disagree") to 7 ("strongly agree"). Bracketed items in the questionnaire varied in wording depending on whether study participants were discussing the drug issue, the environment, or wages.

*Communication Functions*

1. Our group carefully examined the causes, effects, and extent of [drug-related violent crime].
2. Our group identified a broad range of different policies for addressing [drug-related violent crime].
3. Our group carefully analyzed the negative qualities or "cons" of alternative policies for addressing [drug-related violent crime in the U.S.]
4. Our group carefully analyzed the positive qualities or "pros" of alternative policies for addressing [drug-related violent crime in the U.S.]

*Democratic Deliberation*

1. I felt that the other group members did not accept me as part of the group.
2. I had plenty of chances to speak during our group discussion.
3. I understood almost everything that other group members said during our discussion.
4. I was very mentally alert and involved in our group's discussion.
5. I carefully considered what other group members said during our discussion.
6. The other group members respected my own views on drug-related violent crime.
7. The other group members were rude and impolite towards me.

**Appendix D: Big Five Personality Instrument**

The Big Five instrument began with the following instructions:

Below is a series of pairs of adjectives, with each adjective corresponding to opposite ends of a seven-number scale. For the first question, for example, if you thought of yourself as "very stubborn," you would circle the 7, but if you thought of yourself as "very flexible," you would circle the 1. If you thought you were exactly between the two adjectives, you would circle the 4. Using the scales provided, *rate yourself* on each of these adjective pairs by circling one and only one number for each adjective pair.

The adjective pairs were randomly ordered, but they have been sorted into their respective personality factors below.

*Extraversion*

- Retiring vs. sociable
- Sober vs. fun loving
- Reserved vs. affectionate

Submissive vs. dominant  
Quiet vs. talkative  
Passive vs. active  
Loner vs. joiner

*Agreeableness*

Irritable vs. good natured  
Stingy vs. generous  
Ruthless vs. soft hearted  
Rude vs. courteous  
Callous vs. sympathetic  
Suspicious vs. trusting  
Vengeful vs. forgiving

*Conscientiousness*

Negligent vs. conscientious  
Careless vs. careful  
Lazy vs. hardworking  
Undependable vs. reliable  
Disorganized vs. well organized  
Quitting vs. persevering  
Impractical vs. practical

*Neuroticism*

At ease vs. nervous  
Relaxed vs. high-strung  
Hardy vs. vulnerable  
Secure vs. insecure  
Calm vs. worrying  
Self-satisfied vs. self-pitying  
Comfortable vs. self-conscious

*Openness*

Conventional vs. original  
Down to earth vs. imaginative  
Uncreative vs. creative  
Conforming vs. independent  
Narrow interests vs. broad interests  
Unadventurous vs. daring  
Uncurious vs. curious