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Group and Individual Differences in Deliberative Experience:

A Study of Ideology, Attitude Change, and Deliberation in Small Face-to-Face Groups

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Abstract

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 interrelate with one another and vary depending on individual attributes and the nature of a group's deliberation. The present study extends prior research on these subjects 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 post-discussion questionnaires. Results showed that participant ideology had a clear association with changes on specific discussion-related issues, but participants from every ideological group experienced increased differentiation of ideologically distinct attitudes. It was also found that group-level shifts in opinion were related to self-reported democratic deliberation, though not to observer ratings of deliberation. The conclusion discusses these and other findings in relation to future research and programs designed to promote public deliberation.

Keywords: attitude change, Big Five personality factors, decision making, democracy, deliberation, 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 (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).

But as Mendelberg (2002) notes, "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 exalted status as a foolproof form of political talk. Following the advice of these critical views, we must come to understand more 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 (Delli-Carpini, Cook, and Jacobs, 2004). 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 three 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 post-convention surveys found many noteworthy changes. To some extent, the question on which these observers disagreed was, How much attitude change is enough to warrant such deliberative events?

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, it is possible to explore how different sets of individuals, different deliberative experiences, and different subjective group perceptions might 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), 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.

The 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 miniscule 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) observes 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' (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 will attempt 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 those groups exhibiting a higher level of deliberation will experience greater opinion change and a decrease in overall attitude variance.

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 democratic 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 will 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.

Methods

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 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 more as *simulations* than experimental groups: the groups were designed to produce naturally-occurring variance (e.g., in member personalities, deliberation and other group processes, and decision outcomes). They were not built to test the effects of preset differences produced by an experimental manipulation. The only designed differences were simply to ensure variation in group size (from three to six),

gender composition (varied combinations), and discussion topic (one of three national problems), lest a fixed size, gender balance, or issue create artifactual results specific to only one combination of those factors.

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), but the discussions did not have the gravity of legislative deliberation (Bessette, 1994) or a carefully-organized and publicized citizen jury (Crosby, 1995). 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.

Procedures

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

Following completion of the pre-discussion 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 a majority of groups took at least fifty minutes to do so. All group participants consented to have their discussions videotaped.

Participants were asked to discuss a national problem, come up with a solution to that problem, write down this solution, and 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.”) To study attitude changes across a range of discussion-relevant attitudes, each group was 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.

After finishing the task, each participant completed a post-discussion 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, or strongly conservative.”

Pre-and post-discussion 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 twelve-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”), then the items were combined to form attitude scales. The same items were randomly-

ordered on the post-discussion 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, Hirokawa, Julian, & Leatham, 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 (4 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 the comprehension and consideration of statements made by group members. The resulting democratic deliberation scale (7 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 existed no pre-existing 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 rigorousness 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 both "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, necessitate analysis on the individual level, where the sample consists of 250 individuals. The latter analyses begin at the individual level, comparing ideological groups, but then move to the group level of analysis, where the sample is 57 groups.

Ideology and Schematic Organization

Schematic coherence. As in the Gastil and Dillard (1999) study, 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--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 post-discussion 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 post correlations. For the sample as a whole, none of these comparisons was significant. Correlations did not significantly change between the two conservative beliefs on drugs (pre-discussion $r = .34$, post-discussion $r = .43$), 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 combines the participants within a given ideological group across the three issues, there are still no significant increases (or decreases), except that moderates show a significant overall increase in integration across the three issues. 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 offer a stark contrast to the striking changes in schematic differentiation. Differentiation was measured

as the change in correlations between ideologically dissimilar attitude scales. Increasing differentiation is 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 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 so for moderates. This hypothesis was not supported, as the strong increases in schematic differentiation were present for *all three* ideological subgroups across all three issues.

There was one finding, however, that was contrary to the overall pattern. In the case of two environmental attitudes--promoting sustainability (liberal) and reliance on market incentives (conservative), correlations between these attitudes rose for liberals (pre-discussion $r = .01$, post-discussion $r = .17$), were unchanged for moderates ($r_s = .09$), and declined dramatically for conservatives ($r_s = .46, -.53$). In other words, discussion had no noticeable 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 polar-opposite ideological groups would underlie a relatively modest shift in overall attitudes.

For the drug issue, Figure 1 demonstrates that the stronger attitude change is clearly evident for liberal and conservative participants. The conservative pattern is as expected, with these individuals rejecting legalization (the highest-rated policy, pre-discussion) 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 increased 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 not consistent 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 adequate sample size, it was necessary to create a measure that transcended the three different discussion issues: The Moveleft index was created by subtracting average liberal scale scores from average conservative scale scores, e.g., $[(L1 + L2)/2 + C1]/2$. Thus, a positive Moveleft score indicated that an individual's views, on balance, moved toward favoring liberal and/or disfavoring conservative policy approaches. In addition, 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 group-ideology score ranging from 1.0 to 7.0 ($M = 3.67$, $sd = 0.63$).

Having created these variables, 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 ideology, the same partial correlations (and their zero-order equivalents) were non-significant for liberal and conservative participants. The zero-order correlation was also non-significant for moderates, who all shared the same score on the ideology measure (making partial correlations unnecessary).

As a post-hoc test, a secondary 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 that 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 left in groups with lower percentages of liberals.

Deliberation. Moving to the group level of analysis, the self-report and observational measures of deliberation were used to examine aggregate attitude shifts in the groups. Two measures of group-level opinion shift were employed for these analyses: Moveleft (averaged across group members) and MoveleftVariance, the variance in Moveleft scores across group members. The latter measure is an illustration of an interesting methodological opportunity afforded by studying groups: It is possible to measure not only the central tendencies of groups but also the individual variation within groups.

We had hypothesized that more deliberative groups would demonstrate greater overall shifts in attitudes and less heterogeneity in the variation in attitude shift across group members. Results showed no significant relationships between the observational measures of deliberation

and either of the attitude measures. There was only one significant finding for these variables: the self-report measure of democratic deliberation correlated significantly with MoveleftVariance in a direction consistent with hypotheses (after controlling for Moveleft itself). Those groups whose members viewed their discussion as relatively deliberative were more likely to have low 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 semi-partial $r = -.41$, conscientiousness semi-partial $r = -.33$; total change in R^2 for the Big Five = .23). In other words, variation across the groups' 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, taking into account participants' ideological orientations and considering the influence of group-level characteristics on individual-level attitude changes. First, these studies 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, owing to the self-selection bias present in civic forums. 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. In fact, the only significant schematic integration was observed for moderate participants, suggesting that unlike in a mass-mediated setting (Zaller, 1992), moderates have no disadvantage in this form of schematic clarification. Moreover, this 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.

As for the group-level findings, there were few associations between the measures of deliberation employed herein and changes in group attitudes or the variance therein. The one exception was the finding that group members associated reduced attitude variance with higher levels of democratic deliberation. Though consistent with our original hypothesis, this finding appeared in the midst of more disheartening results. Not only were the observational measures unrelated to attitude change, they were also unrelated to one another and to the self-report measures. In other words, it appears that the different dimensions of deliberation that can be

observed might be empirically uncorrelated, and they may even diverge from participants' perceptions of deliberation. At this point, such observations are speculative, as there is not sufficient evidence that the measures of deliberation employed herein are sufficiently valid to warrant such inference.

By contrast, the crude Big Five personality measure was a 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 group convergence as a goal of democratic 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 finding 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 fora are unlikely to select participants based on personality traits, nor should they consider doing such a thing, but 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 that 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 a National Issues Forum convener, 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.

One methodological limitation to consider is that the instructions given to participants required them to arrive at a policy solution that would both be 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 attitudes to line up with what they came to believe was politically popular. These data do not permit direct testing of that effect, but it is important to consider for future research how the discussion instructions might shape attitude change in this manner.

The general results of this study contradict 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 (Luskin & Fishkin, 2002). 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 (e.g., Crosby, 1995). This study aids such efforts by further advancing our understanding of how different combinations of participants and different discussion processes can influence deliberation and opinion shifts in small political discussion groups.

Another result along these lines was the variation in the nature of attitude shifts across the three issues used in this study, as was shown in Figures 1-3. Recall that issues were varied to promote external validity. Had any one of those issues been used, the results of the paper would appear to have been influenced by the particular characteristics of that issue (and its framing).

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 B.C. citizens been asked to deliberate on an economic issue, they may not have had the same result.¹

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 with one another.

¹ The Assembly ultimately voted for their final recommendation 146-7, a near-consensus outcome. For full details, see <http://www.citizensassembly.bc.ca/public>.

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Table 1

Schematic integration: Comparison of pre- and post-discussion correlations among ideologically similar attitude scales, broken down by self-reported ideology

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

* $p < .05$. For significance testing with *q* scores, see Cohen (1988).

Table 2

Schematic differentiation: Comparison of pre- and post-discussion correlations among ideologically dissimilar attitude scales

Issues Correlated	<i>n</i>	Pre- Discussion <i>r</i>	Post- Discussion <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*

* $p < .05$. For significance testing with *q* scores, see Cohen (1988).

Figure 1

Changes in attitudes on drug-related violent crime, broken down by ideological group

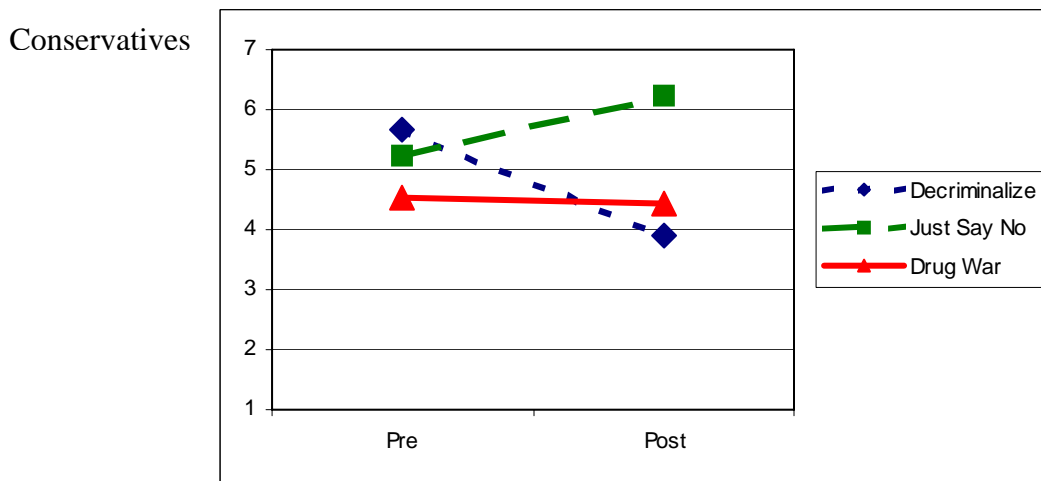
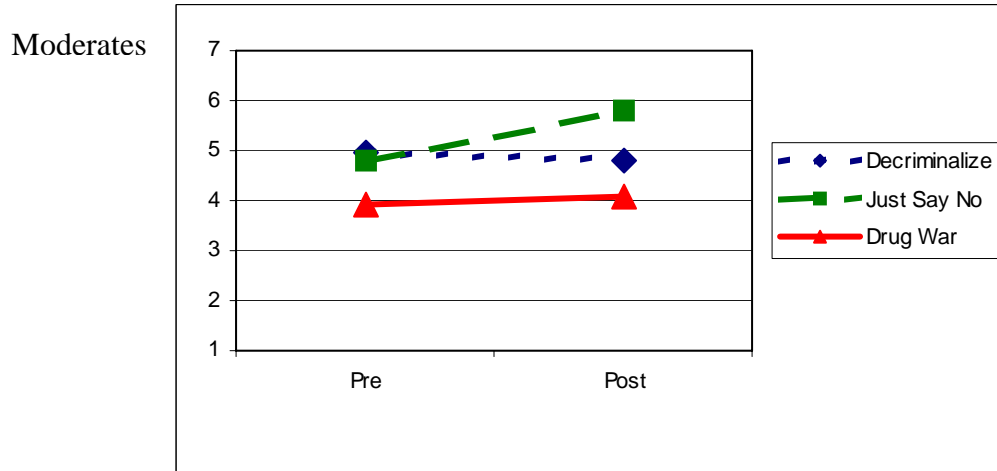
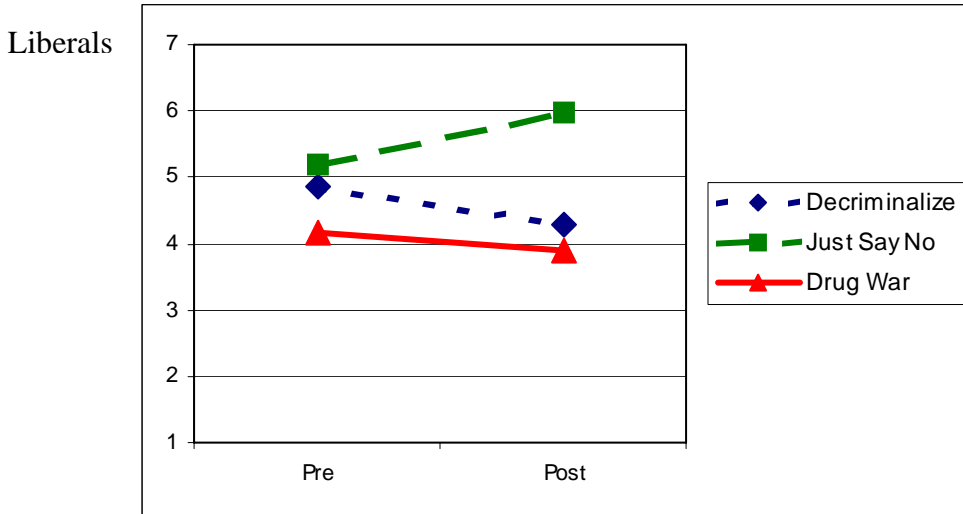
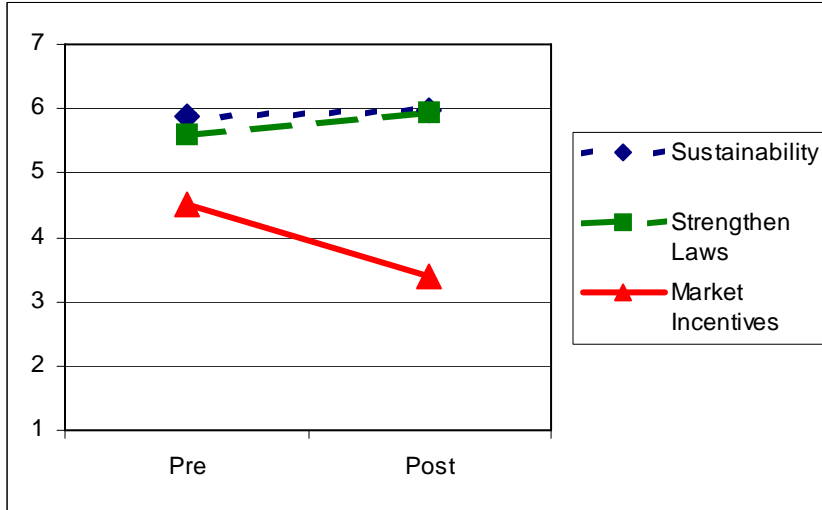


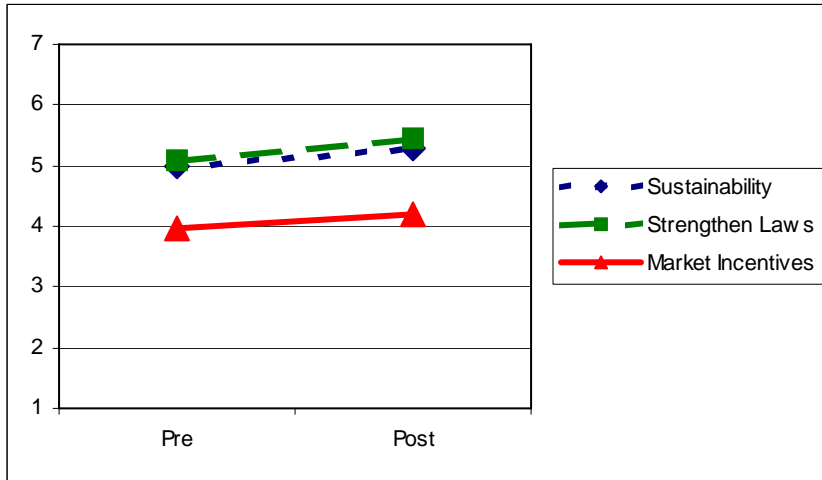
Figure 2

Changes in attitudes on environmental pollution, broken down by ideological group

Liberals



Moderates



Conservatives

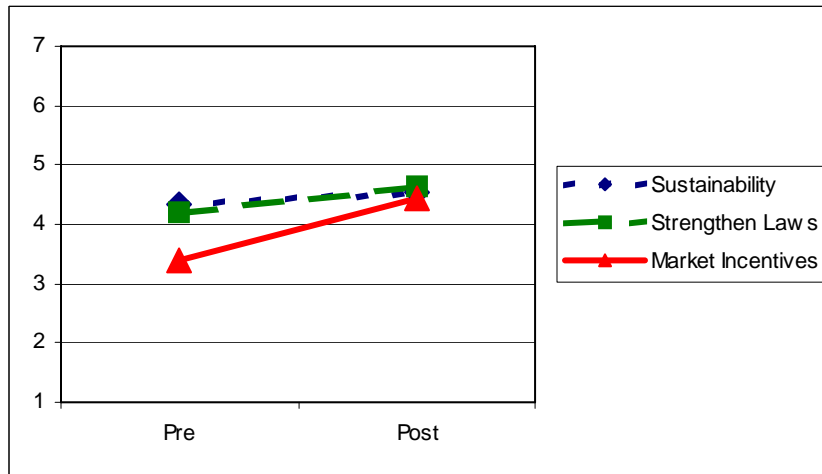
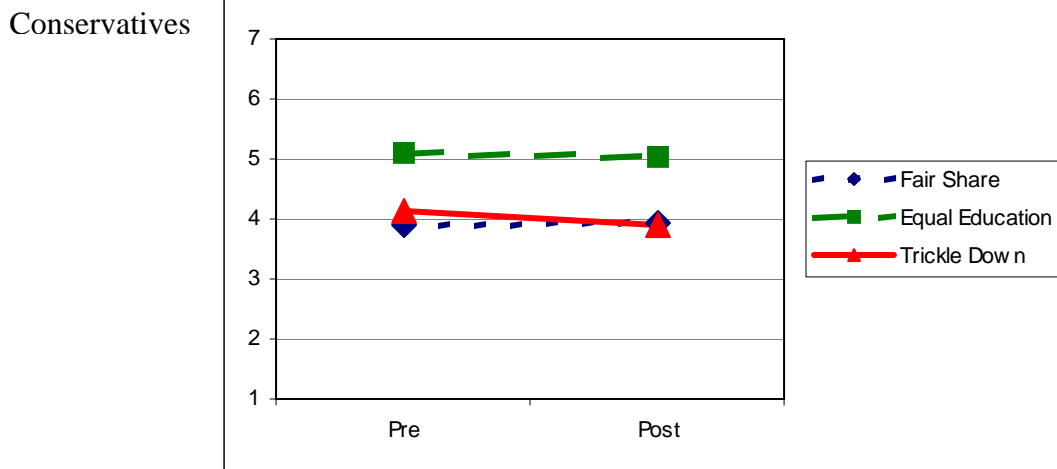
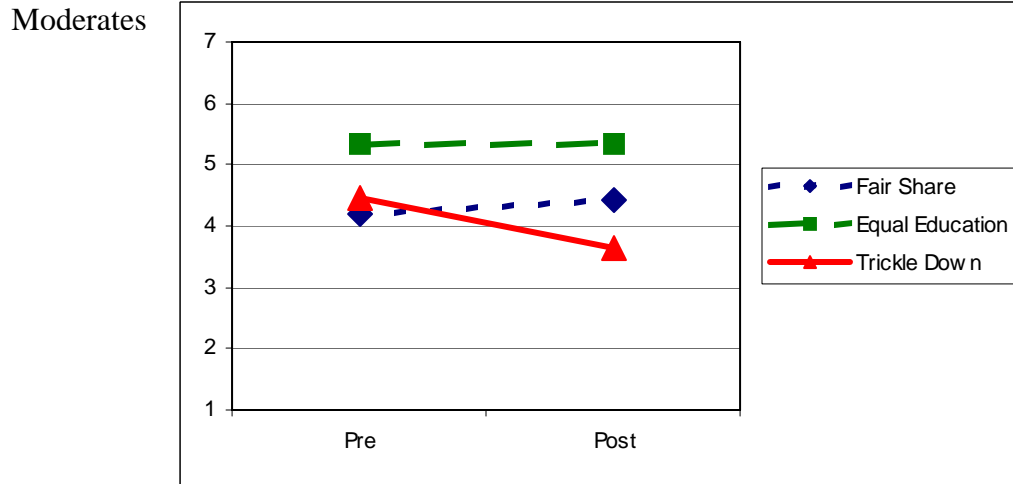
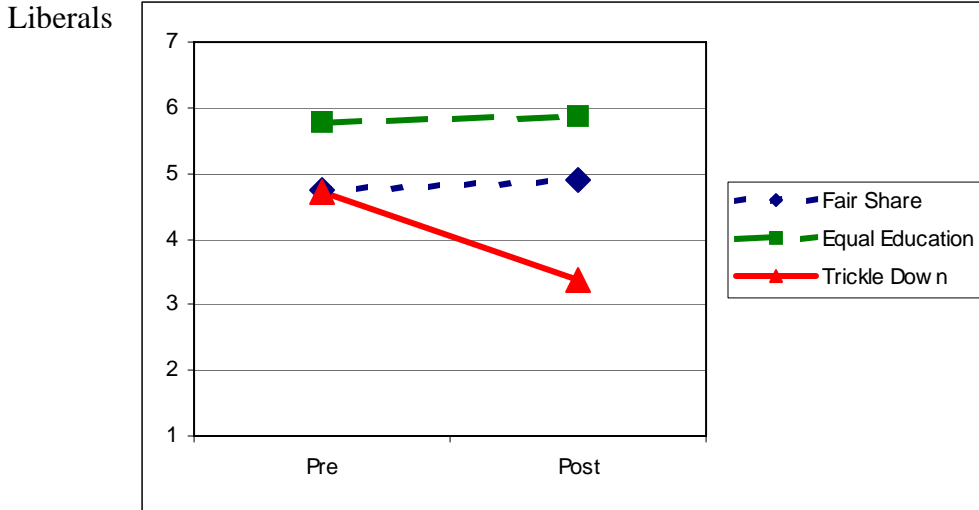


Figure 3

Changes in attitudes on wages and the economy, broken down by ideological group



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.

1. Description of the Recommended Policy [space provided]
2. 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 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 a 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 Items	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