

Deliberative Distortions? Homogenization, Polarization, and Domination
in Small Group Discussions*

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Abstract

Deliberation is widely believed to enhance democracy by helping to refine the “public will,” moving its participants’ policy attitudes closer to their “full-consideration” policy attitudes—those they would hypothetically hold with unlimited information, to which they gave unlimited reflection. Yet there have also been claims that the social dynamics involved generally “homogenize” attitudes (decreasing their variance), “polarize” them (moving their means closer to the nearer extreme), or engender “domination” (moving their overall means toward those of the attitudes held by the socially advantaged). These are attitude changes that may often be *away* from the participants’ full-consideration attitudes—and may thus distort rather than refine the public will. This paper uses 2,601 group-issue pairs in 21 Deliberative Polls to examine these claims. Reassuringly, the results show no routine or strong homogenization, polarization, or domination. What little pattern there is suggests some faint homogenization, but also some faint *moderation* (as opposed to polarization) and *opposition* (as opposed to domination)—as, we argue, is to be expected when the outside-world forces shaping pre-deliberation attitudes are slightly more centrifugal than centripetal. We take pains to lay out a theoretical basis for these interpretations and to probe our results, highlighting, among other things, deliberation’s role in undoing outside-world effects on pre-deliberation attitudes and the observed homogenization’s, polarization’s, and domination’s dependence on deliberative design.

Deliberation, in the sense of elevated discussion (roughly, an open-minded weighing of the arguments and evidence for and against competing alternatives), is generally seen as enhancing democracy (Fishkin 1991, Bohman and Rehg 1997, Elster 1998, Dryzek 2002)—perhaps most centrally, by refining the “public will” that democracy translates into policy choices. The participants acquire a better sense of what policies they *should* favor, in light of their own values and interests, moving their policy attitudes toward those they would hold with the benefit of unlimited information and thought.¹ This effect stems from deliberation’s defining properties, those making it more than just any discussion.

But discussions also have non-deliberative effects, products of their social dynamics. These may plausibly lead a deliberating group’s participants to: (1) converge on the same attitude (what we shall term *homogenization*), (2) adopt more extreme attitudes on whichever side of the issue the group started on (commonly termed *polarization*), or (3) adopt attitudes closer to those of their more socially advantaged (male, better-educated, more affluent) co-deliberators (to be termed, more hesitantly, *domination*). These are all varieties of group-level attitude change—as distinct from their sources and consequences, a point particularly worth stressing for “domination,” which in other, nearby usage (e.g., Squires 2008) denotes underlying dialogic inequalities. Here it simply means attitude change toward the attitudes of the advantaged.

A widely held, if not always fully articulated concern about these particular attitude changes is that they may be mostly *away* from the attitudes the participants would hold with the benefit of unlimited information and thought.² They are, in that case, our title’s “distortions.” Discussions routinely producing them would be warping rather than refining the public will. But, as the title’s punctuation suggests, this leaves some questions. To what extent do these putative distortions actually prevail? And to what extent is it the deliberation in the discussion

that produces them—to what extent are they *deliberative* distortions?

Here we tackle these questions with data from 21 Deliberative Polls (DPs), on various issues, in various contexts, encompassing 2,601 group-issue pairs. The core empirical analysis addresses the first question directly and affords inferences addressing the second. For these purposes, size (the dataset's) matters. Any one group, discussing any one issue, in any one context, may or may not exhibit homogenization, polarization, or domination, no matter what the discussion is like. It is the distributions across groups, issues, and contexts that are revealing. We preface this analysis by laying out the underlying concepts and theory, and follow it by considering nuances, possible objections, and implications for deliberative design.

The Conceptual Terrain

To be maximally clear, let us first sketch some key concepts.

Deliberation, Policy Attitudes, and Associated Cognition

Deliberation. What lifts *deliberation* above mere discussion is its being (1) substantive, (2) inclusive, (3) responsive, and (4) open-minded. That is: (1) the participants exchange relevant arguments and information. (2) The arguments and information are wide-ranging in nature and policy implications—not all of one kind, not all on one side. (3) The participants react to each other's arguments and information. And (4) they seriously and even-handedly (re)consider, in light of the discussion, what their policy attitudes should be. In short, deliberation requires that its participants engage in a serious, open-minded, even-handed weighing-of-the-merits.³ It does *not* require consensus-seeking or conscious, collective decision-making (cf. Gutmann and Thompson, 1996, 2004, Cohen 1997). It may or may not arrive at a consensus. It may but need not affect subsequent decision-making by other bodies (as many Deliberative Polls have done). It may even—optionally—involve conscious, collective decision-making, although that may

alter the discussion's effects, in ways we consider below.

Realistically, “deliberation” is not a discrete property—something that does or does not occur—but the high end of a continuum (Fishkin 1991). Some discussions are highly deliberative, others hardly at all. The unattainable top of the range is something like Habermas's (1990) “ideal speech situation”: a thought experiment in which every argument is made and countered, and in which everyone weighs all the arguments and counter-arguments, free of all coercion. The bottom is vacuity: nobody says anything of substance. In these terms, the great majority of naturally occurring discussions fall much nearer the continuum's bottom than its top. By and large, there is little focus on seriously weighing the merits, and the participants have little knowledge to share (Luskin 1987, Bennett et al. 2000, Kinder and Kalmoe 2018), are demographically similar and attitudinally like-minded (Bennett et al. 2000, McPherson, Smith-Lovin, and Cook 2001, Butters and Hare 2020), circumnavigate whatever few areas of disagreement exist (Bennett et al. 2000, Gerber et al. 2102, Cowan and Baldassarri 2018), and discount whatever little counter-attitudinal information may nevertheless poke through (Lodge and Taber 2013). This is a far cry from “deliberation” (Mansbridge 1999).

It would therefore be a mistake to regard studies of naturally occurring discussions (as in, for example, Huckfeldt and Sprague 1995, Beck et al. 2002, Mutz 2006, or Searing et al. 2007) as saying much about deliberation. For that, we need *deliberative designs*: discussions organized to be more much deliberative than the vast majority of those in everyday life. Examples include Consensus Conferences and Citizens' Juries (thumbnailed by Ozanne et al. 2009), as well as Deliberative Polls. In varying ways, and with varying success, these get their participants to talk more about policy issues, to learn and think more about them, and to do so in a more earnest, open-minded way.

Policy Attitudes. We take *policy attitudes* to be evaluations of policy options: how much one favors or opposes X or favors or opposes X over Y .⁴ A policy attitude is thus “positional”—expressible as a point on a numerical continuum (taken here to run from 0 to 1, with .5 representing neutrality). We denote the i th individual’s time- t attitude on the j th issue by A_{ijt} , where $t = 1, 2$ (pre- versus post-deliberation).

Policy-Attitude-Associated Cognition. Assorted *cognitions* (perceptions, beliefs, perspectives) may underpin A_{ijt} . Collectively these may be more or less *complex* (numerous and cognitively interconnected), more or less *factually accurate*, and more or less *balanced* (congenial, in equal or representative proportions, to opposing sides). Note that these cognitive variables—call them C_{ijt} , F_{ijt} , and B_{ijt} —are conceptually distinct from the attitudes they support. The time- t attitude is just A_{ijt} , no matter the C_{ijt} , F_{ijt} , or B_{ijt} behind it. Individuals 1 and 2 may have the same attitude ($A_{1jt} = A_{2jt}$), even if, for example, $C_{1jt} > C_{2jt}$, making 1’s attitude better “developed” or “crystallized” (further from what Converse (1970) called a “non-attitude”). Similarly, the time-1 to time-2 attitude change is just $A_{ij2} - A_{ij1}$, however much or little C_{ijt} , F_{ijt} , or B_{ijt} may have changed.

Full-consideration attitudes. The attitudes people have are not necessarily those they *would* have with the benefit of unlimited information and reflection. Denote the i th individual’s *full-consideration attitude* on the j th issue as A_{ij}^* . Axiomatically, we take this to be the attitude most closely aligned with his or her values and interests. A_{ij}^* is thus close kin to Lau and Redlawsk’s (1997) “correct votes,” Mansbridge’s (1983) “enlightened preferences,” and the “full-information” votes and policy attitudes simulated by Bartels (1996), Delli Carpini and Keeter (1996), and Althaus (2003), among many others. Now, we never *know* A_{ij}^* . Even estimating it can be tricky (Luskin 2003). But here we need it only as a conceptual touchstone, for which we

need only posit its existence.

Appropriateness. In similar vein, we may define an attitude's *appropriateness* (for the individual holding it) as its proximity to its holder's full-consideration attitude: $\alpha_{ijt} \equiv 1 - |A_{ijt} - A_{ij}^*|$. Thus $\alpha_{ijt} = 1$ when $A_{ijt} = A_{ij}^*$ and $= 0$ when $A_{ijt} = 1$ and $A_{ij}^* = 0$, or vice versa.

Homogenization, Polarization, and Domination

Our focal variables are all species of group-level attitude change. It sometimes makes sense to treat them as dichotomies, simply distinguishing cases in which they occur from those in which they do not. More informatively, however, they can be treated as continua centered at 0. The names express the worried-about sides (taken to be numerically positive), but the other sides (taken to be numerically negative) also exist: a group's attitudes may exhibit *homogenization* or *variegation* (decreasing or increasing variance); *polarization* or *moderation* (movement toward or away from the nearer extreme), and *domination* or *opposition* (movement toward or away from the attitudes of the group's socially advantaged members).

To formalize these variables, let A_{ijt} 's time- t mean within the g th group be \bar{A}_{gjt} ; its time- t standard deviation within the g th group be s_{gjt} ; and, assuming some mutually exclusive, exhaustive division into advantaged and disadvantaged, its time- t mean for the g th group's advantaged and disadvantaged members be \bar{A}_{gjt}^a and \bar{A}_{gjt}^d . In these terms:

The *homogenization* of the g th group's attitudes on the j th issue is

$$(1) \quad H_{gj} = s_{gj1} - s_{gj2},^5$$

which > 0 for homogenization, < 0 for variegation, and $= 0$ for neither. Figure 1 illustrates, representing the within-group variation by more or less elongated ellipses. Regardless of what happens to the mean (compare Panels A1a and A2a with Panels A1b and A2b), a decreasing

variance (as in Panels A1a and A2a) is homogenization, an increasing one (as in Panels A1b and A2b) variegation. H_{gj} is at its most positive (.5) when the participants are evenly split between the polar attitudes (half at 0, half at 1) before deliberating but all have exactly the same attitude (whatever it may be) after doing so—changing, i.e., from perfect dissensus ($s_{gj1} = .5$) to perfect consensus ($s_{gj2} = 0$). It is at its most negative (−.5) for the opposite change, from perfect consensus to perfect dissensus. The binary version is $H_{gj}^b = 1$ if $H_{gj} > 0$ and $= 0$ if $H_{gj} \leq 0$. Redundantly, though perhaps usefully for later exposition, the complementary binary variable for variegation can be defined as $V_{gj}^b = 1$ if $H_{gj} < 0$ and $= 0$ if $H_{gj} \geq 0$.⁶

The *polarization* of the g th group's attitudes on the j th issue is

$$(2) \quad P_{gj} = (\bar{A}_{gj2} - \bar{A}_{gj1})S_{gj1},$$

where S_{gj1} indicates the g th group's time-1 side on the j th issue: $S_{gj1} = 1$ for $\bar{A}_{gj1} > .5$ and $= -1$ for $\bar{A}_{gj1} < .5$. The multiplication by S_{gj1} ensures that $P_{gj} > 0$ for polarization, < 0 for moderation, and $= 0$ for neither (no mean attitude change).⁷ Panels B3a and B4a show \bar{A}_{gj1} moving toward the nearer extreme (polarization); Panels B3b, B4b, and B5b show it moving in the opposite direction, toward or beyond the midpoint (moderation).⁸ P_{gj} is at its most positive (just barely under .5) when the mean is either just barely above .5 before deliberation and exactly 1 after or just barely below .5 before deliberation and exactly 0 after. It is at its most negative (just barely above −1) when the mean is just fractionally toward the midpoint from the nearer pole (just barely below 1 or above 0) before deliberating and at the opposite pole (0 or 1) after.⁹ The binary version is $P_{gj}^b = 1$ if $P_{gj} > 0$ and $= 0$ if $P_{gj} \leq 0$. Its complement, for moderation, is $M_{gj}^b = 1$ if $P_{gj} < 0$ and $= 0$ if $P_{gj} \geq 0$.

The *domination* of the g th group's attitudes on the j th issue (with respect to a given dimension of advantage) is

$$(3) \quad D_{gj} = (\bar{A}_{gj2} - \bar{A}_{gj1})R_{gj1},$$

where R_{gj1} indicates the ordinal relation between \bar{A}_{gj1} and \bar{A}_{gj1}^a : $R_{gj1} = 1$ for $\bar{A}_{gj1}^a > \bar{A}_{gj1}$ and $= -1$ for $\bar{A}_{gj1}^a < \bar{A}_{gj1}$. Thus $D_{gj} > 0$ for domination; < 0 for opposition; and $= 0$ for neither (no mean attitude change).¹⁰ In Figure 1, C6a, C7a, and C8a show \bar{A}_{gj1} moving toward or beyond \bar{A}_{gj1}^a (domination), while C6b and C7b show it moving in the opposite direction, away from \bar{A}_{gj1}^a (opposition). D_{gj} is at its most positive (just barely < 1) when the disadvantaged start at 1 or 0, the advantaged start just barely toward the midpoint from that (as therefore does the whole group), and everyone, whether advantaged or disadvantaged, moves all the way to the opposite pole (0 or 1), not only toward but as far as possible beyond \bar{A}_{gj1}^a , and, symmetrically, at its most negative (just barely > -1) when the *advantaged* start at 1 or 0, the *disadvantaged* start just barely toward the midpoint from that, as therefore does the whole group), and everyone moves all the way to the opposite pole (0 or 1), as far as possible away from \bar{A}_{gj1}^a .¹¹ The binary version is $D_{gj}^b = 1$ if $D_{gj} > 0$ and $= 0$ if $D_{gj} \leq 0$. Its complement, for opposition, is $O_{gj}^b = 1$ if $D_{gj} < 0$ and $= 0$ if $D_{gj} \geq 0$.¹²

We shall examine three dimensions of advantage—gender, education, and income—both individually and all three combined.¹³ For gender, a matter simply of socio-demographic group membership, the threshold of advantage (maleness) is relatively clear. For education and income, matters of having more or less of a numerical or ordinal property, it is less clear. But division at each DP's sample median makes sense, for several reasons. First, the sample median varies from sample to sample, tacitly recognizing that what is highly educated or high-income varies

by time and place. Social advantage is relative. Second, the sample median, unlike the small-group median, lets the proportions of advantaged versus disadvantaged vary from group to group. Third, the median, compared to other sample-dependent cut-points, minimizes the proportion of small groups for which the number of either disadvantaged or advantaged members scrapes zero. Fourth, the median is a good guess when we do not know where to draw the line. If the actual proportion of the sample that is disadvantaged has a symmetric (Bayesian) probability distribution centered at .5 (the uniform distribution being a special case), the minimum mean-squared-error guess is .5, corresponding to division at the median.

Theory, Expectations, and Inferences

In broad strokes, our central proposition is that homogenization, polarization, and domination rest and therefore shed light on the deliberative quality of the discussion. It will help in developing the why's and how's to note that the population means of H_{gj} , P_{gj} , and D_{gj} (averaging across all possible group-issue pairs, a sense of “population” about which we say a bit more below) are $E(H_{gj})$, $E(P_{gj})$, $E(D_{gj})$, where $E(\cdot)$ denotes mathematical expectation. Positive values indicate the extent to which, on average, homogenization exceeds variegation, polarization exceeds moderation, and domination exceeds opposition; negative values, the reverse. Similarly, the relative frequencies of homogenization, polarization, and domination are $E(H_{gj}^b)$, $E(P_{gj}^b)$, and $E(D_{gj}^b)$, and those of variegation, moderation, and opposition $E(V_{gj}^b) = 1 - E(H_{gj}^b)$, $E(M_{gj}^b) = 1 - E(P_{gj}^b)$, and $E(O_{gj}^b) = 1 - E(D_{gj}^b)$. It will also help, at points, to take $|\bar{A}_{gjt} - \bar{A}_{gj}^*|$ and $|s_{gjt} - s_{gj}^*|$ —the distances between a group's sample-mean attitude (\bar{A}_{gjt}) and its sample-mean full-consideration attitude (\bar{A}_{gj}^*) and between the sample standard deviations of its members' j th-issue attitudes (s_{gjt}) and of their full-consideration attitudes (s_{gj}^*)—as simple, tractable reflections of group-level

“appropriateness. The smaller these distances, the more appropriate the group’s attitudes.

Social Dynamics versus Weighing the Merits

We see two broad mechanisms by which a discussion may change policy attitudes:

Social Dynamics (SD). The first lies in the discussion’s social interactions, the relevant features of which we shall call its social dynamics (*SD*). People commonly seek approval and sidestep disagreement. That should shrink the initial within-group standard deviation s_{gj1} (Huckfeldt and Sprague 1995; Huckfeldt et al. 2004; Cialdini and Goldstein 2004; Mutz 2006; Sunstein 2002, 2009; Gerber et al. 2012; Sunstein and Hastie 2014; Suhay 2015) and pull the initial group mean attitude \bar{A}_{gj1} toward the nearer extreme (Zuber et al. 1992; Sunstein 2002, 2009; Wojcieszak 2011, Sunstein and Hastie 2014, Suhay 2015). In addition, some participants, often concentrated among the socially disadvantaged, will normally be less articulate, less assertive, or less heeded than others. That should move \bar{A}_{gj1} toward \bar{A}_{gj1}^a (Fraser 1993, Sanders 1997, Young 2000, Karpowitz et al. 2012, Karpowitz and Mendelberg 2014). Hence *SD* should produce homogenization, polarization, and domination—not always strongly, nor in every instance, but on average and more often than not. More formally, we should expect $E(H_{gj})$, $E(P_{gj})$, $E(D_{gj})$ all $\gg 0$, and $E(H_{gj}^b)$, $E(P_{gj}^b)$, and $E(D_{gj}^b)$ all $\gg .5$ and, *ipso facto*, $\gg E(V_{gj}^b)$, $E(M_{gj}^b)$, and $E(O_{gj}^b)$.

Weighing the merits (WM). The second mechanism is the participants’ open-minded, even-handed, and earnest weighing-of-the-merits (the arguments and evidence), as they see them—the deliberation in the discussion, call it *WM*. This where Habermas’s (1990, 1996) “unforced force of the better argument” resides. In *WM*, participants can be expected to absorb non-trivial quantities of new information, higher-than-everyday proportions of which are accurate and counter-attitudinal, thus increasing C_{ij1} , F_{ij1} , and B_{ij1} (as the results in Luskin et al. 2002, Barabas

2004, Hansen 2004, and Farrar et al. 2010 suggest). That in turn should allow them to see more clearly how given policies may serve or thwart their values and interests (which they may also come to see more clearly), thus moving A_{ijt} closer to A_{ij}^* ¹⁴ and, at the group level, reducing the distances $|\bar{A}_{gjt} - \bar{A}_{gj}^*|$ and $|s_{gjt} - s_{gj}^*|$. There is no obvious reason to expect these changes to constitute homogenization, polarization, or domination—or their opposites—although ...

A Closer Look at WM's Effects

We can actually reason out some rough expectations about the WM-induced homogenization/variegation, polarization/moderation, and domination/opposition by taking account of the pre-existing homogenization/variegation, polarization/moderation, and domination/opposition (call them H_{gj}^O , P_{gj}^O , and D_{gj}^O) of the outside-world attitudes with which the discussion begins.

These latter can most sensibly be defined as differences between the initial s_{gj1} and \bar{A}_{gj1} and the full-consideration s_{gj}^* and \bar{A}_{gj}^* (in contrast to H_{gj} , P_{gj} , and D_{gj} , which are differences between the initial s_{gj1} and \bar{A}_{gj1} and the post-discussion s_{gj2} and \bar{A}_{gj2}).¹⁵

Figure 2 illustrates the pre-existing H_{gj}^O , P_{gj}^O , and D_{gj}^O alongside the corresponding WM-induced H_{gj} , P_{gj} , and D_{gj} . To avoid redundant mirror-image cases, we assume, without loss of generality, that $\bar{A}_{gj1} > .5$, making 1 the nearer extreme. The lower, solid arrows depict the WM-induced attitude changes, moving s_{gjt} and \bar{A}_{gjt} toward s_{gj}^* and \bar{A}_{gj}^* , and the upper, dashed ones the prior effects of outside-world forces, pulling the initial s_{gj1} and \bar{A}_{gj1} above the full-consideration s_{gj}^* and \bar{A}_{gj}^* in Scenario A and below them in Scenario B. Scenario A consists of pre-existing variegation ($s_{gj1} > s_{gj}^*$), polarization ($\bar{A}_{gj}^* < \bar{A}_{gj1}$), and domination ($\bar{A}_{gj}^* < \bar{A}_{gj1}$, \bar{A}_{gj1}^a or $\bar{A}_{gj}^* < \bar{A}_{gj1}^a$

$< \bar{A}_{gj1}$, given $\bar{A}_{gj}^* < \bar{A}_{gj1}$), Scenario B of pre-existing homogenization ($s_{gj1} < s_{gj}^*$), moderation ($\bar{A}_{gj1} < \bar{A}_{gj}^*$), and opposition ($\bar{A}_{gj1} < \bar{A}_{gj}^* < \bar{A}_{gj1}^a$, given $\bar{A}_{gj1} < \bar{A}_{gj}^*$).¹⁶ We return to the two possibilities for pre-existing domination, in Figure 2's rows 3a and 3b, presently.

Scenarios A and B are alternative legacies of the forces shaping outside-world attitudes. Some of those forces—notably, communications-siloing (residential and other sorting, homophily, selective media consumption) and social inequalities—are *centrifugal*, pulling the initial attitudes away from .5, toward both the nearer extreme and the mean attitude of the advantaged (\bar{A}_{gj1}^a), and thus also (since the nearer extreme is 0 for some but 1 for others) increasing their variance. Other forces—principally, inattention, ignorance, and irreflection—are *centripetal*, keeping the initial attitudes close to .5 and thus also restraining their variance. These latter may be less plainly visible to those of us avidly tracking political debates but greatly affect the attitudes of the less politically engaged—and, on low-salience issues, many of the more politically engaged as well. The centrifugal forces make for Scenario A, the centripetal ones for Scenario B.¹⁷

What Figure 2 makes clear is that *WM* can be expected to “correct” what the outside world has done—producing homogenization, moderation, and opposition that reduce or reverse the pre-existing variegation, polarization, and domination in Scenario A and variegation, polarization, and domination that reduce or reverse the pre-existing homogenization, moderation, and opposition in Scenario B. As drawn, the arrows (shorter from s_{gj1} to s_{gj2} and from \bar{A}_{gj1} to \bar{A}_{gj2} than from s_{gj}^* to s_{gj1} and from \bar{A}_{gj}^* to \bar{A}_{gj1}) depict reductions, which seem likelier than reversals (its being hard for a few days of discussion to completely negate the accumulated effects of a lifetime of prior circumstances and experiences). The reduction or reversal may be slightly smaller for Scenario A's pre-existing domination, which can yield *WM*-induced opposition in 3a

but *WM*-induced domination in 3b, than for Scenario A’s pre-existing variegation or polarization (or anything in Scenario B). But the centrifugal forces pulling \bar{A}_{gj1} above \bar{A}_{gj}^* should also pull the better-educated and better-off, who tend to be more exposed to the information and messaging involved, still further above it ($\bar{A}_{gj1} < \bar{A}_{gj1}^a$), making 3a much more common than 3b.

The lesson for the frequencies of *WM*-induced homogenization/variegation, polarization/moderation, and domination/opposition is that they ultimately depend on the balance between centrifugal and centripetal forces. Absent much reason to see either as greatly stronger than the other, the safest guess, and our expectation, is that they are about equally strong. In this case, *WM* should produce homogenization, polarization, and domination about half the time and variegation, moderation, and opposition about half the time: $E(H_{gj}^b) \cong E(V_{gj}^b) \cong E(P_{gj}^b) \cong E(M_{gj}^b) \cong E(D_{gj}^b) \cong E(O_{gj}^b) \cong .5$. To the extent that these proportions depart from .5, however, we might expect to see slightly more homogenization than variegation but slightly less polarization and domination than moderation and opposition. These are increasingly tribal days (Achen and Bartels 2016), in which the balance of outside-world forces may be tipping slightly toward the centrifugal. Still, we underscore the “slightly.” Inattention, ignorance, and irreflexion remain forever widespread and potent, and should keep $E(H_{gj}^b)$, $E(P_{gj}^b)$, and $E(D_{gj}^b)$ (and $E(V_{gj}^b)$, $E(M_{gj}^b)$, and $E(O_{gj}^b)$) all quite near .5.

Theoretical Asides

Two side notes, important in different ways to our post-analysis reflections below, need sounding.

Motivated Reasoning. The first is that both *WM* and *SD* entail varieties of “motivated reasoning,” a term often simplistically reduced to ways of ignoring, discounting, or reasoning

around counter-attitudinal information. This too-narrow sense is apt enough when the motivations are strictly or mainly “defensive.” In that case, discussion should produce little attitude change. But defensive motivations may be less pervasive than previously thought (Hart et al. 2009, Druckman 2012, Hahn and Harris 2014, Leeper and Slothuus 2014, Arceneaux and Vander Wielen 2017, Mar and Gastil 2019, Druckman and McGrath 2019), and are hardly the only motivations in play (Kunda 1990), not even the only “directional” ones (Hart et al. 2009). In discussions, social approval motivations (to please or favorably impress others) are important to *SD*, and accuracy motivations (to “process information in an objective, open-minded fashion . . .,” Hart et al. 2009, p.558) important to *WM*. Both can be expected to change attitudes—the former in directions tending to yield homogenization, polarization, and domination, the latter toward full-consideration attitudes.

Contextual Factors. The second note concerns the conditions under which the discussion occurs. A discussion involving a serious weighing-of-the-merits is deliberative, but the deliberation may be more or less “effective”—more or less helpful to its participants in considering what their attitudes should be—depending on who is “in the room” and (not unrelatedly) the information readily available to them. The more demographically and attitudinally heterogeneous the discussants, and the more plentiful, balanced, and accurate the information, the harder it is for the discussion and its participants to misconstrue, slight, or ignore relevant information and arguments (see Mercier and Landemore 2012, Tuller et al. 2015). These variables, too, not just greater weighing-of-the-merits, are part of what separates successful deliberative designs from everyday discussions, in which homophily and sorting make the discussants homogeneous, and the information is generally confined to whatever the discussants bring with them, which is, for most of them, in most discussions, sparse, imbalanced and/or inaccurate.¹⁸

In Sum

A discussion's effects on homogenization, polarization, and domination should depend on how deliberative it is—on how much it revolves around *WM*. Everyday discussions, involving much *SD* and little *WM*, can be expected to yield decidedly more homogenization than variation, polarization than moderation, and domination than opposition. The deliberative discussions spawned by successful deliberative designs should not. If anything, they may produce some slight homogenization, but also, if so, some slight *moderation* and *opposition*.

These widely different expectations allow the observed distributions of H_{gj} , P_{gj} , and D_{gj} and H_{gj}^b , P_{gj}^b , and D_{gj}^b form a rough diagnostic. If the sample means \bar{H} , \bar{P} , \bar{D} (estimating $E(H_{gj})$, $E(P_{gj})$, and $E(D_{gj})$) are well above 0, or the sample frequencies \bar{H}^b , \bar{P}^b , and \bar{D}^b (estimating $E(H_{gj}^b)$, $E(P_{gj}^b)$, and $E(D_{gj}^b)$) well above .5, the discussion is probably not very deliberative, involving little beyond *SD*. If instead \bar{H} , \bar{P} , and \bar{D} are all close to 0, and \bar{H}^b , \bar{P}^b , and \bar{D}^b all close to .5, the discussion is probably quite deliberative, involving a healthy dose of *WM*.

Data

We take our data from Deliberative Polling, a well-known deliberative design (described, e.g., in Luskin, Fishkin, and Jowell 2002). Its signal features include randomly sampled participants randomly assigned to small groups; honoraria to help recruit hard-to-get participants, including those unenticed by the prospect of discussing the policy issue; balanced, factually accurate briefing materials provided in advance; lightly moderated small-group discussions alternating with plenary question-and-answer sessions with panels of policy experts; and anonymous questionnaires to gauge policy attitudes and other relevant variables both before and after deliberation. The 21 DPs forming our data are summarized in Table 1. Five were in Britain, eleven in the U.S., two in the E.U., and one each in China, Australia, and Bulgaria. Sixteen were

face-to-face, five online. The topics spanned policy issues from foreign policy to health care. In all, the data encompass 372 small groups (containing, all told, 5,736 participants), 139 policy issues (counting each policy attitude index as tapping a somewhat different issue), and 2,601 group-issue pairs.¹⁹ Appendix A describes the indices and their ingredients in greater detail.

In the fullest accounting, we are sampling time-indexed person-populations (e.g., Great Britain in 1994, which is in our sample, or Paraguay in 2011, which is not), then both the individuals within those time-indexed person-populations and the policy issues facing them (e.g., crime in Bulgaria in 2007, which is in our sample, and climate change in the U.S. in 2009, which is not). The samples of individuals are almost always random draws. The samples of time-indexed person-populations and policy issues are not. Yet we hope they are large and varied enough to afford some hard-to-quantify but nonzero sense that the results are unlikely to be peculiar to just a few places, times, or issues. Although most of the DPs here were in Anglo-American democracies and conducted face-to-face, \bar{H} , \bar{P} , and \bar{D} are only trivially different for the group-issue pairs from other countries and in online mode, as can be seen in Appendix B.

Results

So how much homogenization, polarization, and domination does there appear to be? The short answer is, very little. Figure 3 shows the distributions of the group-issue-level H_{gj} , P_{gj} , and D_{gj} across group-issue pairs. All are packed tightly and symmetrically around near-zero means. Some group-issue pairs exhibit homogenization, some variegation; some exhibit polarization, some moderation; some exhibit domination, some opposition. But often and on average very little.

Table 2 homes in on the means (\bar{H} , \bar{P} , \bar{D}) and relative frequencies (\bar{H}^b , \bar{P}^b , and \bar{D}^b). The top row shows \bar{H} , \bar{P} , \bar{D} , \bar{H}^b , \bar{P}^b , and \bar{D}^b , the lower rows the Huber-White estimates of

the standard errors (White 1980),²⁰ and two-tailed p -values for the null hypotheses that $E(H_{gj}) = E(P_{gj}) = E(D_{gj}) = 0$ and $E(H_{gj}^b) = E(V_{gj}^b) = E(P_{gj}^b) = E(M_{gj}^b) = E(D_{gj}^b) = E(O_{gj}^b) = .5$ —that in the population of all possible group-issue pairs the mean levels of homogenization, polarization, and domination are 0 and that each occurs only as often as its opposite (as would be expected from *WM*, assuming centrifugal and centripetal forces to be equally strong).²¹ The alternative hypotheses are that $E(H_{gj}), E(P_{gj}), E(D_{gj})$ all > 0 and that $E(H_{gj}^b) > .5 > E(V_{gj}^b), E(P_{gj}^b) > .5 > E(M_{gj}^b)$, and $E(D_{gj}^b) > .5 > E(O_{gj}^b)$ —that the mean levels of homogenization, polarization, and domination are all positive and that each occurs more often than its opposite.

In their stronger versions (\bar{H} , \bar{P} , and $\bar{D} \gg 0$ and \bar{H}^b, \bar{P}^b , and $\bar{D}^b \gg .5$), these alternatives are what would be expected from a discussion involving mostly *SD*. But Table 2 shows nothing of the sort. True, six of the table's 10 estimates are “statistically significant” ($p < .05$). In these cases, we can be quite sure that, in the population from which we are sampling, there is *some* homogenization or variegation (depending on the signs of \bar{H} and $\bar{H}^b - .5$), *some* polarization or moderation (depending on the signs of \bar{P} and $\bar{P}^b - .5$), and *some* domination or opposition (depending on the signs of \bar{D} and $\bar{D}^b - .5$). But how much? At a glance, \bar{H}^b, \bar{P}^b , and \bar{D}^b are close to .5, \bar{H}, \bar{P} , and \bar{D} close to 0.

A closer look reinforces that impression. Take homogenization. $\bar{H}^b = .595$, distinctly above but still quite close to .5 (less than 20% of the way to 1). This is far from “routine.” On average, moreover, it is weak. To see this, imagine a group of 20 participants, with 4 group members having an initial attitude at .6 and 2 each at every other integer multiple of .1 from .2 to 1. This initial distribution has a mean of .6 and a middling standard deviation of .245, close to halfway between s_{git} 's maximum of .5 and minimum of 0. Now let one of the participants

initially at .2 move to .3 and one of those initially at 1 move to .9—in each case, .1 closer to the mean. This is not much homogenization: the distribution is almost completely unaltered. The mean remains .6, while the standard deviation shrinks from .245 to .230. This unimposing scenario thus yields $H_{gj} = .015$, but the observed $\bar{H} = .013$ is still lower.

Next take polarization. $\bar{P}^b =$ only .454, meaning that slightly *fewer* than half the group-issue pairs polarize (more than half moderate), and $\bar{P} = -.022$, meaning that, on average, their mean attitudes move slightly *toward*, not away from, the midpoint, likewise representing moderation. To contextualize this \bar{P} , take again a group of 20 with an initial mean attitude \bar{A}_{gj1} of .6. If just 5 of 20 members decrease their scores, from whatever starting-points, by just .1 apiece (a scenario involving a bit more attitude change than that yielding $\bar{H} = .013$, but still not much), $\bar{P} = -.025$. The observed magnitude ($\bar{P} = -.022$) is still smaller.

Finally, domination. Across our four dimensions of advantage, \bar{D}^b runs only from .447 to .485. No matter what the dimension, *fewer* than 50% of the group-issue pairs move toward the initial mean attitude of the advantaged (meaning that more than 50% move *away* from it). This is (weak) opposition, not domination. The \bar{D} 's tell much the same tale. $\bar{D} = .008$ for gender, $= -.013$ for education, $< .0005$ for income, and $= -.015$ for three-fold advantage. Take yet again a group of 20 members. Let $\bar{A}_{gj1} = .6$ and $\bar{A}_{gj1}^a = .8$. If just three of 20 participants decrease their scores by just .1 apiece, $D_{gj} = -.015$. If just two do so, $D_{gj} = -.10$. These scenarios do not involve much attitude change, but their D_{gj} 's bracket the negative \bar{D} 's for education and three-fold advantage. The positive \bar{D} 's for gender are still smaller. There is more opposition than domination, but not much of either.

The principal lesson is clear. The homogenization, polarization, and domination here are much too modest to suggest attitude changes stemming heavily from *SD* but are consistent with

attitude changes stemming heavily from *WM*. A further suggestion, too faint and uncertain to be a “lesson,” lies in the signs of \bar{H} , \bar{P} , and \bar{D} and of \bar{H}^b ’s, \bar{P}^b ’s, and \bar{D}^b ’s departures from .5. These show some slight homogenization, moderation, and opposition, a combination suggesting that the deliberation may be redressing outside-world variegation, polarization, and domination.

Elaborations and Reflections

By way of follow-up, it may help to say a bit more about what “domination,” the most polyglot of our terms, does and does not mean; to elaborate on and probe our findings regarding it; to consider motivated reasoning’s implications for our rough diagnostic; and to suggest some of the likeliest reasons for which our results differ from some others.

***D_{gj}* and the Meaning of Domination**

“Domination,” here, is simply attitude change—specifically, the group’s mean attitude change toward the initial mean attitudes of its advantaged members, distilled in D_{gj} . It is not itself a matter of dialogic inequalities or other asymmetries in the discussion’s social interactions, although they presumably affect it. Equivalently, D_{gj} is also the weighted mean of \bar{A}_{gj1}^d ’s movement toward \bar{A}_{gj1}^a and \bar{A}_{gj1}^a ’s movement toward \bar{A}_{gj1}^d :

$$(4) \quad D_{gj} = d_g M_{gj}^d + (1 - d_g) M_{gj}^a,$$

where $M_{gj}^d = (\bar{A}_{gj2}^d - \bar{A}_{gj1}^d)$, $M_{gj}^a = (\bar{A}_{gj2}^a - \bar{A}_{gj1}^a)$, and $d_g \neq 0$ is the proportion of the g th group who are disadvantaged. Note that both $M_{gj}^d > 0$ and $M_{gj}^a > 0$ represent movement toward the advantaged or, equivalently, away from the advantaged (assuming, without loss of generality, that $\bar{A}_{gj1} > .5$ and $\bar{A}_{gj1} < \bar{A}_{gj1}^a$, implying $\bar{A}_{gj1}^d < \bar{A}_{gj1}$).

But this is not the only possible way of looking at domination qua attitude change, and it

may thus be clarifying to contrast D_{gj} with a couple of alternatives. One is the unweighted mean:

$$D'_{gj} = 1/2(M_{gj}^d + M_{gj}^a),$$

the special case of D_{gj} for which $d_g = 1/2$ for all g . Removing D_{gj} 's dependence on d_g does more to contrast M_{gj}^d and M_{gj}^a . D'_{gj} shares D_{gj} 's sign when \bar{A}_{gj1}^d and \bar{A}_{gj1}^a move in the same direction but can have the opposite sign when they move in opposite directions ($M_{gj}^d > 0$ and $M_{gj}^a < 0$ or vice versa). If, for example, $M_{gj}^d = .4$ and $M_{gj}^a = -.2$, D_{gj} can be negative when the disadvantaged are sufficiently few in relation to the advantaged ($D_{gj} = -.08$ for $d_g = .2$), but D'_{gj} is always positive (in this case, $D'_{gj} = .1$), because the disadvantaged are moving further toward the advantaged than the advantaged toward the disadvantaged.

A second alternative, doing still more to contrast M_{gj}^d and M_{gj}^a , is:

$$D''_{gj} = 1/2(|M_{gj}^d| - |M_{gj}^a|)Q_{gj},$$

where $Q_{gj} = 1$ for $M_{gj}^d > 0$ and $= -1$ for $M_{gj}^d < 0$. $D''_{gj} > 0$ when the disadvantaged move further toward the advantaged than the advantaged move in that same direction, and < 0 when the disadvantaged move further *away* from the advantaged than the advantaged move in *that* same direction. For example, if $M_{gj}^d = .2$, and $M_{gj}^a = .4$, D_{gj} and D'_{gj} ($= .3$) both > 0 , because the disadvantaged, the advantaged, and ergo the whole group are moving toward the advantaged, but $D''_{gj} = -.1$, because the disadvantaged are moving less in that direction than the advantaged, whereas if $M_{gj}^d = -.2$, and $M_{gj}^a = -.4$, both D_{gj} and D'_{gj} ($= -.3$) < 0 , because the disadvantaged, the advantaged, and ergo the whole group are moving away from the advantaged, but $D''_{gj} = .1$,

because the disadvantaged are moving less in that direction than the advantaged. Appendix C supplies a fuller account.

These alternatives would make sense for more sociometric notions of “domination,” comparing subgroup A’s influence on subgroup B with B’s influence on A. But what we are studying here—what is most relevant to deliberative democracy—is the bottom-line effects on the whole group’s attitudes. And, for that, D_{gj} (like H_{gj} and P_{gj}) is the best fit—and would be, whether we call it “domination” or something else. (Juliet was right about names.)

Parsing D_{gj}

It is nevertheless interesting to separate M_{gj}^d ’s and M_{gj}^a ’s contributions to D_{gj} . Given Eq. (4), $D_{gj} > 0$ may stem from $M_{gj}^d > 0$, $M_{gj}^a > 0$, or both; $D_{gj} < 0$ from $M_{gj}^d < 0$, $M_{gj}^a < 0$, or both. The separate means and relative frequencies, in Table 3, evince two interesting patterns. First, the disadvantaged and advantaged move toward each other, each drawing the other’s attitudes in their direction ($\bar{M}^d > 0$, $\bar{M}^a < 0$). Second, the advantaged move slightly further toward the disadvantaged than vice versa (on all three dimensions, though not quite as far on the three combined), consistent with the slightly negative \bar{D} ’s.

D_{gj} ’s Dependence on d_g

A more extrapolatory question is how far our results might differ for other dimensions of advantage. Let the whole-sample proportion who are disadvantaged be d (which, given random assignment, should be close to the unweighted mean of the of d_g .) For the individual advantages we examine here, $d \cong .5$ —inherently for gender and by virtue of division at the whole-sample median for education and income. As we have argued, these operational thresholds make sense for these advantages. Our results for them are what they are. But what of other advantages, for

which d might be much higher or lower? For home ownership in the U.S., $d < .5$; for having attended private school in the U.S., $d > .5$. Let us therefore consider what \bar{D} might have been if d had been markedly higher or lower.

A simple approach is to estimate a bivariate, linear equation for D_{gj} as a function of d_g . The OLS-estimated slope is small and insignificant, and the $R^2 < .001$, which is already telling. The estimates imply, moreover, that, for $d_g = .2$, $\bar{D} = .012$ for gender, $-.013$ for education, $-.007$ for income, and $-.014$ for all three, while, for $d_g = .8$, $\bar{D} = .002$ for gender, $-.005$ for education, $.013$ for income, and $.003$ for all three.²² That is, \bar{D} would still show a bit more opposition than domination but not much of either if the disadvantaged were only 20% of each group and slightly more domination than opposition, but next-to-none of either if the disadvantaged were an 80% of each group. In fine, \bar{D} does not appear to depend much on d_g .

Motivated Reasoning Redux

Could the near-zero homogenization, polarization, and domination in our DPs be a mere artefact of motivated reasoning? In everyday discussions, defensive and social approval motivations may limit attitude change, thus reducing H_{gj} , P_{gj} , and D_{gj} and (assuming no correlation between signs and reduction in magnitude) \bar{H} , \bar{P} , and \bar{D} . But this is hardly a convincing explanation for our near-zero \bar{H} , \bar{P} , and \bar{D} . DPs are not everyday discussions. Their briefing materials and expert panels afford more information and make uncongenial information harder to ignore. They explicitly cultivate WM , promoting even-handed evaluations, a sense of accountability for one's views, and civic-mindedness, all of which should strengthen accuracy motivations (Bolsen et al. 2014, Lerner and Tetlock 1999, Kam 2007). They also involve direct interactions with more heterogeneous others, strengthening WM 's ability to change attitudes (Mercier and Landemore 2012, Tuller et al. 2015), specifically toward their full-consideration counterparts.

In fact, *D*Ps do produce considerable attitude change (as in, e.g., Luskin et al. 2002).²³ In our present data, the mean absolute net change, $Mean(|Mean(A_{ij2} - A_{ij1})|)$, = .092, and the mean gross change, $Mean(Mean(|A_{ij2} - A_{ij1}|))$, = .203.²⁴ To appreciate these numbers, consider a five-point scale, from “strongly disagree” to “strongly agree,” linearly projected onto the [0, 1] interval as 0, .25, .5, .75, and 1. Let 20% of the sample move from neutrality to agreement, another 20% from neutrality to strong agreement, and 24%, in the opposite direction, from disagreement to strong disagreement. This is quite a lot of movement (64% of the sample changing response, 20% by two response categories), quite preponderantly in one direction: two-thirds again as many people moving toward stronger agreement than toward stronger disagreement, and, on average, by two-thirds again as much. Yet the mean absolute net change is .090, slightly less than what we see, and the mean gross change is .210, only slightly more than what see. The reason that \bar{H} , \bar{P} , and \bar{D} hug 0 is *not* that the participants are simply clinging to their time-1 attitudes.

Deliberative Polling versus Other Deliberative Designs

Other deliberative designs do sometimes yield routine and strong homogenization, polarization, and domination. Although there is not yet much systematic evidence on specific design features’ effects (notably excepting Karpowitz et al. 2012), several features characteristic of *D*Ps but rare among other designs do figure to promote *WM*, inhibit *SD*, and thus reduce homogenization, polarization, domination. Three, in particular, leap out:

(1) The task being set. Are the participants asked to reach a conscious, collective decision? To reach a consensus? Or simply to talk, listen, learn, and think about the issues? When the goal is consensus, homogenization is a demand characteristic. It is hardly surprising or informative when a design seeking consensus approaches it (consistent with research on compliance and conformity, as in, e.g., Cialdini and Goldstein 2004; Carlson and Settle 2016). Striving

to reach a conscious, collective decision, too, may create incentives to indulge emerging pluralities. Voilà, homogenization. More subtly, the pressure to agree may also hinder *WM* and allow *SD* freer rein, thus facilitating polarization and domination as well.²⁵ Designs asking the participants only to decide what they individually think entail no such task-based impetus toward homogenization, polarization, or domination.

(2) The encouragement versus discouragement of interim, public expressions of bottom-line attitudes (“I prefer Policy X”), as opposed to tributary beliefs about likely consequences or valuations thereof (“Policy X would produce more/less of Y, which would be a good/bad thing because ...”). For example, many designs require or encourage publicly tallied votes or shows-of-hands.²⁶ This can be regarded as a subtler version of (1), and it, too, may be a shove toward homogenization, polarization, and domination (consistent with Brauer et al. 2004, Levy and Sakaiya 2020).

(3) The methods by which the participants are sampled, then assigned to groups. The ideal is random sampling, followed by random assignment, making every group a small random sample. Many designs attempt neither. Even designs that (claim to) practice random sampling may not actually come very close. Even those that do come fairly close do so to varying degree. Not everyone who is randomly selected can be reached or interviewed, and not everyone interviewed attends the event. Men, the young, the less well educated, the socially marginal are particularly underrepresented. So, still more relevantly, are the least interested in and knowledgeable about the topic. The magnitudes of these biases depend on details like the number of callbacks, the insistence with anyone besides the designated respondent is excluded, the existence and size of an honorarium, the venue’s being away from home, etc. Random assignment can vary in attainment. Participants sometimes have their own ideas about what group to join.

The randomness of the sampling and assignment matter because random samples should, on average, across hypothetically iterated sampling, be just as demographically and attitudinally heterogeneous as the population from which they are drawn. And the more heterogeneous the groups, the wider-ranging and more balanced the information their members exchanged should be—which, as previously argued, should curtail homogenization, polarization, and domination (see Levendusky 2016 and Strandberg et al. 2017).

In all these respects, DPs stand out. They do not task their participants with reaching any conscious, collective decision,²⁷ nor urge them toward (or away from) consensus; they sternly discourage interim public expressions of bottom-line opinion, including votes and shows of hands; and they employ high-quality random sampling,²⁸ followed by thoroughly random assignment, or the closest possible approximations thereof. The recruitment is well-organized and persistent, the participants are offered honoraria, and their travel and lodging are paid-for. Small wonder, in this light, that DPs tend to produce much less homogenization, polarization and domination than many other deliberative designs.

Closing Remarks

Part of this study's value lies in its data. Scattered analyses of individual DPs and other deliberative events have reported broadly similar results regarding homogenization and polarization (Luskin, Fishkin, and Jowell 2002; Fishkin et al. 2010, Fishkin et al. 2011, Grönlund et al. 2015). In finer grain, Siu (2009) finds that the disadvantaged and advantaged speak about equal numbers of words and for about equal lengths of time, consistent with little domination. But a more convincing test requires a larger number of groups, deliberating on a larger number and wider variety of policy issues, in a larger number and wider variety of contexts. Here we have examined 21 DPs, in multiple countries and at different times, encompassing 372 small groups,

139 policy issues, and 2,601 group-issue pairs.

The results show only irregular and feeble homogenization, polarization, and domination. The means are close to 0, the relative frequencies close to .5. This is *not* simply because the participants' attitudes do not change very much, as might be expected from heavily defensive motivated reasoning. They do change, appreciably, just not in ways regularly constituting homogenization, polarization, or domination. This faintness of pattern suggests a relatively deliberative discussion, involving considerable weighing-of-the-merits, rather than just the social dynamics that would yield routine and strong homogenization, polarization, and domination.

The deliberative quality of the discussion—what makes a discussion a deliberation—matters because of its *effects* (cf. Lindell et al. 2017). Among other things, it should increase the participants' understanding of the issues, respect for others holding different views, and feelings of political efficacy. Still more critically for democracy, and more centrally for this paper, it should move the participants' policy attitudes toward their full-consideration attitudes, refining—not distorting—the public will.

Our results do show slightly more homogenization than variegation, but also slightly more moderation than polarization and opposition than domination: a dash of one of our three worried-about attitude changes but dashes of the opposites of the other two. These inequalities are faint (hence not to be taken too seriously) but contingently plausible (hence not to be swept completely out of mind). They are what we should expect when the centrifugal forces in outside-world communications-siloing and social inequalities slightly outweigh the centripetal ones in outside-world inattention, ignorance, and irreflection. As such, they represent deliberative *corrections* to *outside-world* distortions. We should not ever expect the distortions or therefore the corrections to be overwhelming. It is hard to imagine that the outside world's centrifugal and

centripetal forces, both perennially strong, can ever be too out-of-balance. But the faint homogenization, moderation, and opposition we currently see could grow somewhat stronger, should our outside-world politics continue to wax more centrifugal (perish the thought).

This line of reasoning recalls the chasm between deliberation and everyday discussion. Many of the claims that deliberation inevitably produces homogenization, polarization, and domination rest on observations of everyday discussions or results from deliberative designs insufficiently different from them. Indeed, the prevalence and magnitude of homogenization, polarization, and domination suggests itself as a criterion for evaluating deliberative designs. A discussion in which they preponderate and are strong may not be much of a deliberation.

Among the further, beckoning questions are these. What accounts for the variation across groups and issues? Fuller-fledged explanatory models may provide some answers. What about combinations of these phenomena? For example, are polarization and domination (both changes in the mean) more problematic when accompanied by homogenization (shrinking variance)? What about the effects of specific elements of deliberative design? How far do the differences between DPs and other designs stem their being consensus-neutral versus consensus-seeking, on their involving more rigorous random sampling and random assignment, etc.? Experimentally varying such features may permit some estimation. So may analyses of still more meta meta-datasets, encompassing results from multiple designs (not just multiple DPs), varying in such features. But these present results should at least allay the concerns that deliberation intrinsically yields homogenization, polarization, and domination. In deliberative designs sufficiently capturing the deliberative ideal—sufficiently unlike everyday discussions—it does not.

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¹We focus on “attitudes,” but our arguments also apply, with minor tweaks, to “preferences.”

²Construed as agreement on *a course of action*, the homogenization resulting from compromise may be seen as *desirable* (as per Cohen 1989, Gutmann and Thompson 1996, and Habermas 1996). It may minimize post-decision grievance and strife. But the underlying *policy attitudes*—our present concern—need not have converged to achieve compromise. Indeed, the notion of *compromise* presumes that they have not.

³A discussion’s deliberativeness is thus an aggregative property—a function of its participants’ mentation and communication. Solitary deliberation is a degenerate case, in which the group size is 1, and the “dialogue” internal.

⁴Consistent with prevailing definitions and usage (see Bohner and Dickel 2011, Albarracin and Shavitt 2018). Usage has long been in this spirit, sensibly unidimensional. Definitions, which often used to confound “attitude” with cognition and/or behavior, have belatedly caught up.

⁵This preserves the original unit of measurement. The difference or ratio of the variances s_{gj1}^2 and s_{gj2}^2 would yield much the same results.

⁶The redundancy is that $V_{gj}^b = 1 - H_{gj}^b$, except in the rare cases in which $H_{gj} = 0$. The same, in terms defined below, can be said of M_{gj}^b and O_{gj}^b vis-à-vis P_{gj}^b and D_{gj}^b .

⁷ P_{gj} is undefined for $\bar{A}_{gj1} =$ exactly .5, in which case the group’s mean attitude cannot move

toward or way from the nearer extreme, since neither extreme is nearer than the other.

⁸Moderation, therefore, need not mean decreasing extremity. A group that polarizes becomes more extreme, but so may one that moderates (as when $\bar{A}_{gj1} = .6$, and $\bar{A}_{gj2} = .1$).

⁹ P_{gj} can be larger in magnitude at its most negative than at its most positive because its positive values gauge movement on the “short side of the field.” \bar{A}_{gj1} cannot move as far toward the nearer pole. This asymmetry does not tilt the results toward moderation, however. It is no easier to get a P_{gj} of $-.3$ than one of $+.3$, and we virtually never actually see $P_{gj} < -.5$.

¹⁰ D_{gj} is undefined for \bar{A}_{gj1}^a exactly = \bar{A}_{gj1} (implying that both also exactly = \bar{A}_{gj1}^d), in which case \bar{A}_{gj1} cannot move toward \bar{A}_{gj1} . It is already there.

¹¹Domination, therefore, need not mean decreasing distance from \bar{A}_{gj1}^a . A group exhibiting opposition increases its distance from \bar{A}_{gj1}^a , but so may one exhibiting domination (as when $\bar{A}_{gj1}^a = .6$, $\bar{A}_{gj1} = .7$, and $\bar{A}_{gj2} = .3$).

¹²As these formalizations make clear, H_{gj} , P_{gj} , and D_{gj} (and H_{gj}^b , P_{gj}^b , and D_{gj}^b) are conceptually distinct. P_{gj} and D_{gj} are both mean attitude change, though with different points of reference (the nearer extreme versus \bar{A}_{gj1}^a). In magnitude, both are $|\bar{A}_{gj2} - \bar{A}_{gj1}|$, but their signs are as apt to be opposite as the same. H_{gj} is a change not in the mean attitude but in the within-group standard deviation. Sunstein (2002) and Sunstein and Hastie (2014) regard homogenization and polarization as intimately related, finding, in their data, that they largely co-occur. Some positive correlation does seem likely, but not on account of any built-in overlap. Rather, H_{gj} may causally affect P_{gj} , or the two may be “spuriously” correlated, each resting on the same or correlated other

variables. In our *DP* data (described below), the H_{gj} - P_{gj} correlation is only a modest .358, and the H_{gj} - D_{gj} and D_{gj} - P_{gj} correlations range only from $-.062$ to $.105$, averaging only $.012$.

¹³In this last case, \bar{A}_{gj1}^a is the mean initial attitude of those who are male, better-educated, and higher-income.

¹⁴With some exceptions. When A_{ij1} is already close to A_{ij}^* (α_{ij1} close to 1), *WM* may leave the attitude unchanged ($A_{ij2} = A_{ij1}$, $\alpha_{ij2} = \alpha_{ij1}$), just better grounded.

¹⁵More precisely, $H_{gj}^O = s_{gj}^* - s_{gj1}$, $P_{gj}^O = (\bar{A}_{gj1} - \bar{A}_{gj}^*)S_{gj}^0$, and $D_{gj}^O = (\bar{A}_{gj1} - \bar{A}_{gj}^*)R_{gj}$, where $S_{gj}^0 = 1$ for $\bar{A}_{gj}^* > .5$ and $= -1$ for $\bar{A}_{gj}^* < .5$, and $R_{gj}^0 = 1$ for $\bar{A}_{gj1}^a > \bar{A}_{gj}^*$ and $= -1$ for $\bar{A}_{gj1}^a < \bar{A}_{gj}^*$. H_{gj}^O , P_{gj}^O , and D_{gj}^O are pre-existing homogenization, polarization, and domination when > 0 and pre-existing variegation, moderation; and D_{gj}^O opposition when < 0 .

¹⁶The inequalities are strict because we exclude $s_{gj1} = s_{gj}^*$, $\bar{A}_{gj1} = .5$, and $\bar{A}_{gj1} = \bar{A}_{gj1}^a$ as both vanishingly rare and leaving the movements of s_{gj1} toward s_{gj}^* and \bar{A}_{gj1} toward $.5$ and \bar{A}_{gj1}^a undefined (in these cases, s_{gj1} cannot get any closer to s_{gj}^* , nor \bar{A}_{gj1} any closer to $.5$ or \bar{A}_{gj1}^a).

¹⁷The centrifugal-centripetal distinction resembles Leeper's (2014) between "slanted information environments" and "low-importance attitudes."

¹⁸Opposing imbalances in individual-level information could cancel out, but since the discussants tend to be homogenous, the group-level information tends to be imbalanced as well.

¹⁹Not $372 \times 139 = 51,708$, since each index is confined to just one *DP* and its small groups.

²⁰A given group may homogenize, polarize, or exhibit domination similarly across issues, making the group-issue pairs constituting the observations on H_{gj} , P_{gj} , and D_{gj} dependent. The Huber-White estimates cluster by policy index within each *DP* (as in White 1980).

²¹The p -value is a stretch for H_{gj} , a difference of standard deviations, rather than of means.

²²For the three combined, for which the actual d (the whole-sample proportion who are *either* female *or* of below-median education *or* of below-median income) is already a shade over .8, we may also try $d_g = .95$. But that still yields $\bar{D} =$ only .008.

²³As, in some cases, do other deliberative designs (as in, e.g., Barabas 2004; Gastil, Black, and Moscovitz 2008; and Himmelroos and Christensen 2014).

²⁴In both cases, the inner mean is over i , and the outer one over j , then g .

²⁵Collective decision-making may also promote polarization by increasing risk-acceptance (Sunstein and Hastie 2015). Or by increasing homogenization, if the movement toward the group mean is concentrated among group members with weaker, less firmly anchored initial attitudes, presumably including those between .5 and \bar{A}_{gj1} and those held by the disadvantaged.

²⁶Some DPs have had midway measurements, but only via confidential questionnaires. The participants have no way of knowing the results.

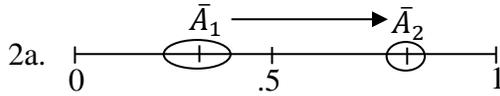
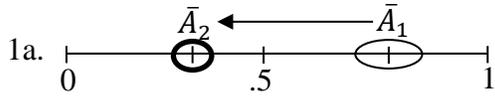
²⁷A number of DPs have had policy consequences, affecting subsequent decision-making by other bodies. But the DPs themselves entailed no conscious, collective decision-making.

²⁸The survey houses have included the National Opinion Research center (NORC) at the University of Chicago; the Survey Research Center (SRC) at UC-Berkeley; Social and Community Planning Research (SCPR), now the National Centre for Social Research (NCSR) in the U.K.; Polimetrix/YouGov; and Knowledge Networks.

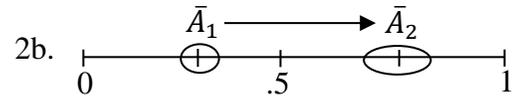
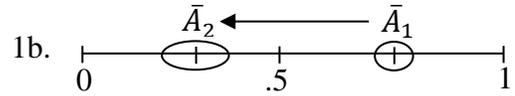
Figure 1: Illustrating the Definitions

A. Homogenization/Variation

$H > 0$ (Homogenization)

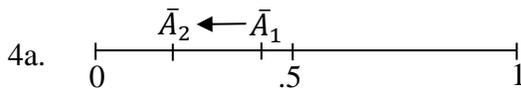
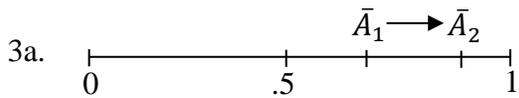


$H < 0$ (Variation)

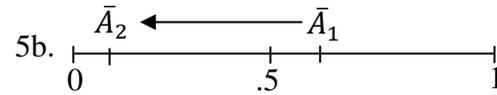
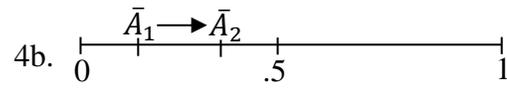
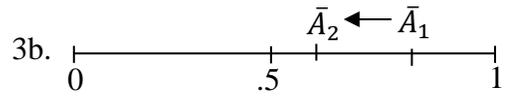


B. Polarization/Moderation

$P > 0$ (Polarization)

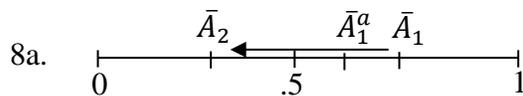
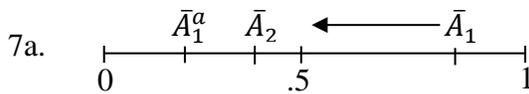
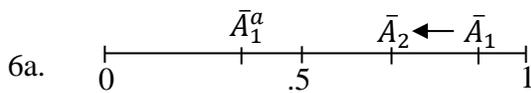


$P < 0$ (Moderation)



C. Domination/Repulsion

$D > 0$ (Domination)



$D < 0$ (Opposition)

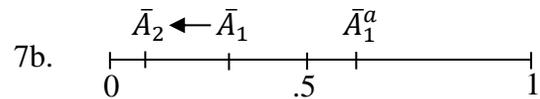
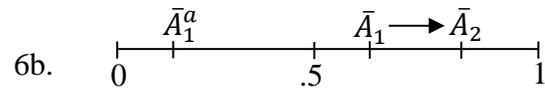
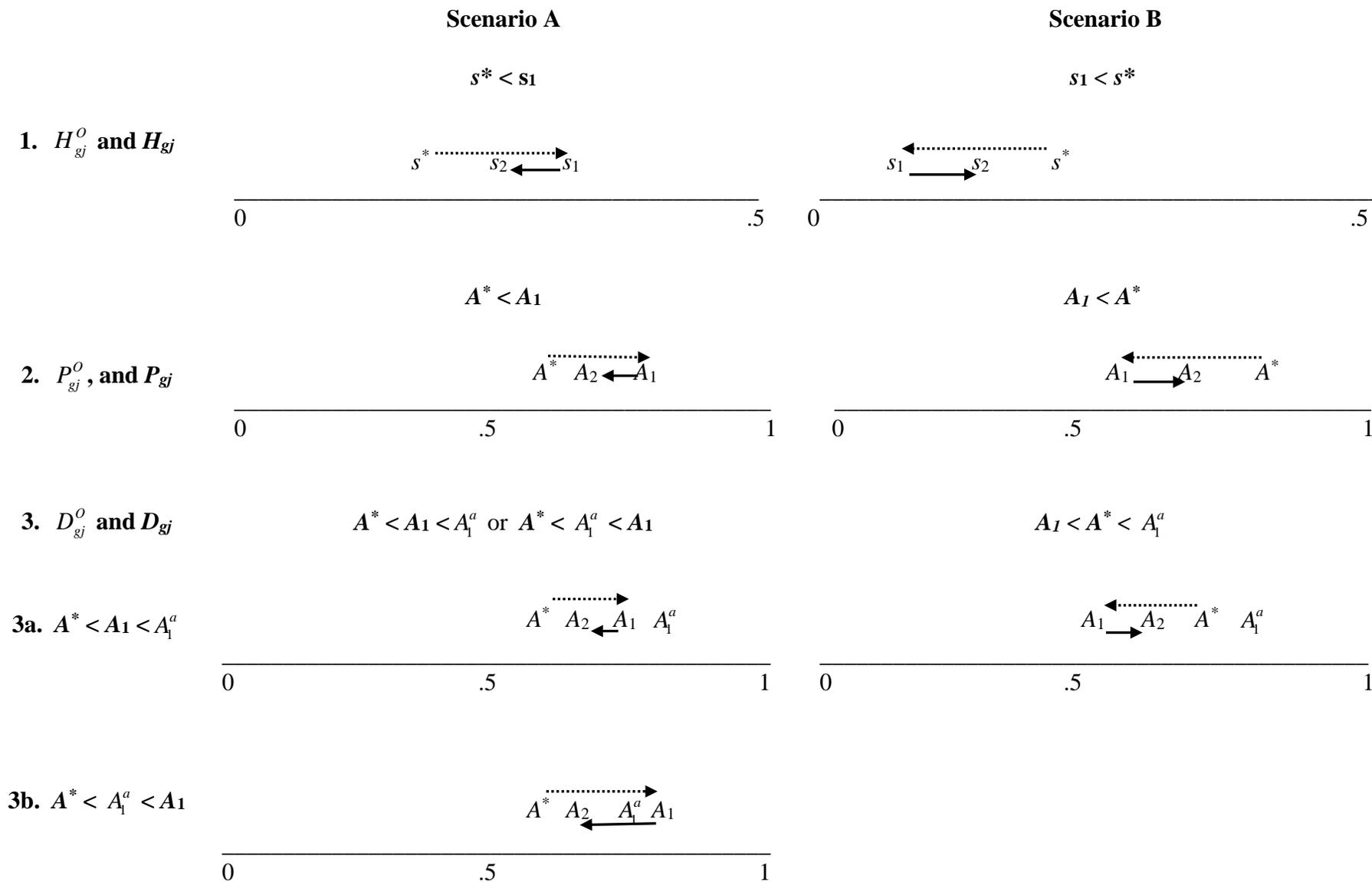


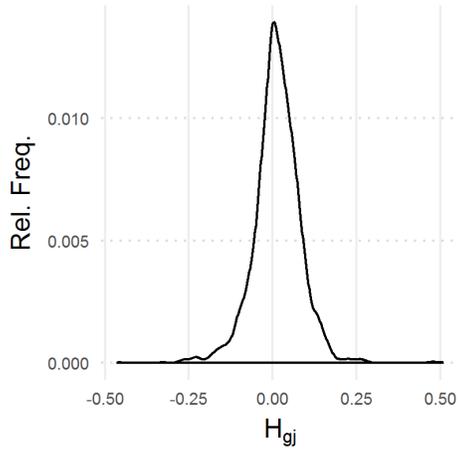
Figure 2: H_{gj}^O , P_{gj}^O , and D_{gj}^O and the Corresponding H_{gj} , P_{gj} , and D_{gj}



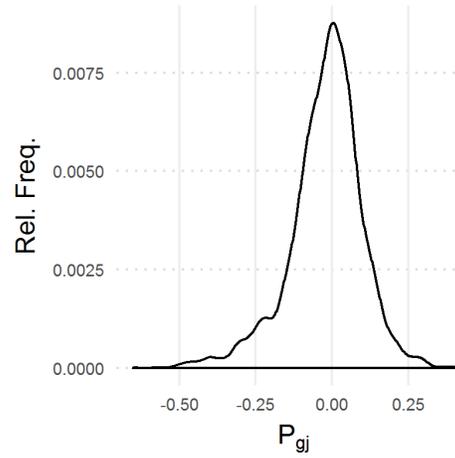
Note: $A_1, A_2, A^*, A_1^a, s_1, s_2,$ and s^* are short for the text's $\bar{A}_{gj1}, \bar{A}_{gj2}, \bar{A}_{gj}^*, \bar{A}_{gj1}^a, s_{gj1}, s_{gj2},$ and s_{gj}^* . We assume, without loss of generality, that $\bar{A}_{gj1} > .5$.

Figure 3: Distributions of Group-Issue Pairs on H_{gj} , P_{gj} , and D_{gj}

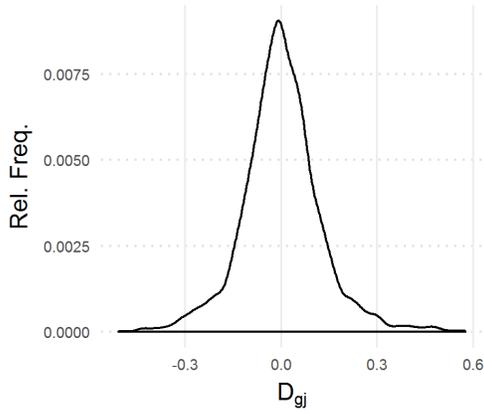
Homogenization



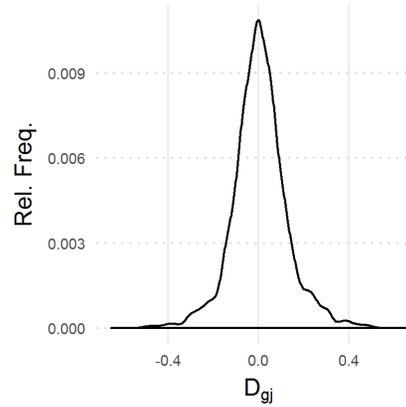
Polarization



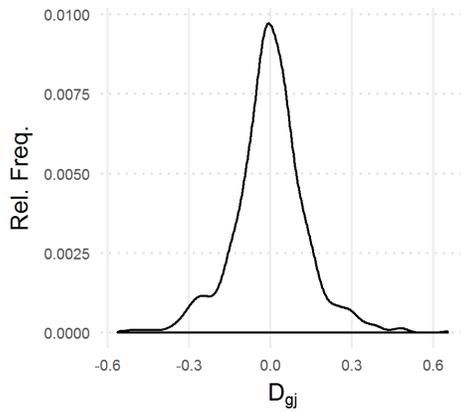
Domination by Better Educated



Domination by Men



Domination by Higher Income



**Domination by Better Educated,
Higher Income, Men**

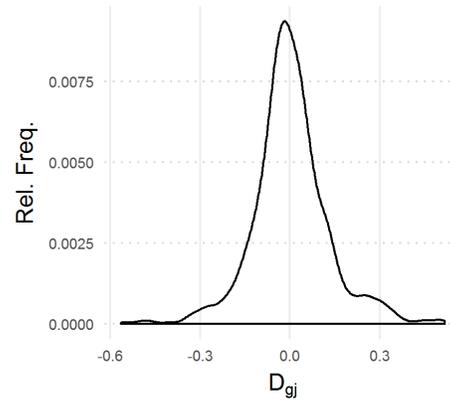


Table 1
DPs Analyzed

Broad Topic(s)	<i>n</i>	Country/ Countries	City/ Region	Year	Mode	Policy Indices	Groups
Britain's Role in the EU	238	U.K.		1995	F2F	4	16
National Health System	230	U.K.		1998	F2F	11	15
British Monarchy	258	U.K.		1996	F2F	4	15
UK General Election	275	U.K.		1997	F2F	4	15
Making Australia a Republic	347	Australia		1999	F2F	5	24
Crime	299	U.K.		1994	F2F	5	20
EU Expansion, Pension Reform, Foreign Policy	344	E.U.*		2007	F2F	7	18
Meeting future electricity needs	216	U.S.	CP&L Service Area [†]	1996	F2F	7	16
Prioritizing public works projects	233	China	Zeguo Township	2005	F2F	9	16
Crime	278	Bulgaria		2007	F2F	5	17
Climate Change, Immigration	348	E.U.*		2009	F2F	2	25
Future of Airport, Revenue-Sharing	132	U.S.	New Haven, CT	2004	F2F	3	16
Foreign policy	340	U.S.		2003	F2F	9	24
Foreign Policy	245	U.S.		2003	OL	9	15
US General Election	246	U.S.		2004	OL	6	15
US Presidential Primaries	434	U.S.		2004	OL	3	16
Housing Policy	239	U.S.	San Mateo, CA	2008	F2F	7	26
Health Care, Education	454	U.S.		2005	OL	11	30
Meeting future electricity needs	230	U.S.	WTU Service Area [†]	1996	F2F	7	14
Crime, the family, foreign policy	466	U.S.		1996	OL	9	30
Meeting future electricity needs	232	U.S.	SEP Service area [†]	1996	F2F	7	14
Total	6084					134	397

*All (then 27) Member-States.

[†]WTU = West Texas Utilities, CP&L = Central Power & Light, SEP = Southwestern Electric Power.

Table 2
Homogenization, Polarization, and Domination: Occurrence and (Signed) Magnitude

	Homogenization		Polarization		Domination							
					Gender		Education		Income		All 3	
	H_{gj}	H_{gj}^b	P_{gj}	P_{gj}^b	D_{gj}	D_{gj}^b	D_{gj}	D_{gj}^b	D_{gj}	D_{gj}^b	D_{gj}	D_{gj}^b
Mean	.013	.595	-.022	.454	.008	.464	-.013	.447	.000	.485	-.015	.466
s.e	.003	.017	.010	.027	.004	.011	.005	.012	.005	.017	.007	.020
p	.000	.000	.032	.088	.031	.002	.008	.000	.951	.425	.029	.102

Note: In the “Mean” row, the entries for H_{gj} , P_{gj} , and D_{gj} are the means of those variables (\bar{H} , \bar{P} , and \bar{D}). Those for H_{gj}^b , P_{gj}^b , and D_{gj}^b (\bar{H}^b , \bar{P}^b , and \bar{D}^b) are the relative frequencies with which $H_{gj} > 0$, $P_{gj} > 0$, and $D_{gj} > 0$.

Table 3
Parsing Domination

A. Domination by Gender

	\bar{D}	\bar{M}^d	\bar{M}^a	\bar{D}^b	\bar{M}^{db}	\bar{M}^{ab}
Mean*	.008	.027	-.033	.464	.495	.440
s.e.	.004	.003	.006	.011	.009	.015
p	.031	.000	.000	.002	.560	.000

B. Domination by Education

	\bar{D}	\bar{M}^d	\bar{M}^a	\bar{D}^b	\bar{M}^{db}	\bar{M}^{ab}
Mean*	-.013	.023	-.057	.447	.523	.412
s.e.	.005	.005	.006	.012	.015	.012
p	.008	.000	.000	.000	.018	.000

C. Domination by Income

	\bar{D}	\bar{M}^d	\bar{M}^a	\bar{D}^b	\bar{M}^{db}	\bar{M}^{ab}
Mean*	.000	.036	-.043	.485	.521	.465
s.e.	.005	.007	.006	.017	.017	.016
p	.951	.000	.000	.425	.203	.033

D. Domination by All Three

	\bar{D}	\bar{M}^d	\bar{M}^a	\bar{D}^b	\bar{M}^{db}	\bar{M}^{ab}
Mean*	-.015	.066	-.031	.466	.495	.455
s.e.	.007	.011	.007	.020	.022	.019
p	.029	.000	.000	.102	.824	.019

NOTE: \bar{D} is the mean domination (D_{gj}), \bar{M}^d the mean movement of the disadvantaged (M_{gj}^d) toward the initial mean attitude of the advantaged, and \bar{M}^a the mean movement of the advantaged (M_{gj}^a) in that same direction. \bar{D}^b , \bar{M}^{db} , and \bar{M}^{ab} are the relative frequencies with which $D_{gj} > 0$, $M_{gj}^d > 0$, and $M_{gj}^a > 0$. \bar{D} does not necessarily = $\frac{1}{2}(\bar{M}^d + \bar{M}^a)$, because d_g varies across groups and is likely correlated with M_{gj}^d and M_{gj}^a .

Appendix A

Policy Attitude Indices

For each index, the number of items is given in brackets beside the name. All are linearly translated to the [0, 1] interval.

Britain's Role in the EU (UK) (4)

- *Further integrating the EU* [2]
 - The EU countries should be more than just a trading bloc – their governments should make joint decisions on other things too. Disagree strongly, Disagree, Neither agree nor disagree, Agree, Agree strongly
 - Passport controls in EU should be removed: Passport controls within the EU should be removed altogether. Disagree strongly, Disagree, Neither Agree Not Disagree, Agree, Agree Strongly
- *Tightening/Loosening Britain's Relations with the EU* [3]
 - As a member state, would you say that Britain's relationship with the European Union should be . . . Much less close, A little less close, About right, A little closer, Much closer.
 - Which of the following do you think Britain's long-term policy should be?— Britain should leave the European Union (EU); Britain should stay in the EU and try to reduce the EU's powers; Things should be left as they are; Britain should stay in the EU and try to increase the EU's powers, Britain should stay in the EU and work towards the formation of a single European government
 - Britain should do all it can to unite fully with the European Union. Definitely not, Probably not, Not sure, Probably, Definitely
- *Expanding into Eastern European* [1]
 - The European Union should expand its membership to include some of the ex-Communist countries of Eastern Europe. Disagree strongly, Disagree, Neither Agree Not Disagree, Agree, Agree Strongly

- *Having a Referendum on Britain's links to the EU* [1]
 - Having a referendum where the British public would vote on whether or not Britain should strengthen its links with the European Union?— Strongly against, Against, CC/Neither in favour, In favour, Strongly in favour

National Health System (9)

- *Government Pay for Healthcare* [1]

Which of these three statements comes closest to your view? Gov. pay for everyone, Gov. pay for the poor, People pay own w/ insurance

- *Prioritizing the Poor* [1]

If the NHS had to choose, priority should be given to treating people who can't afford private medical treatment. Agree strongly, Agree somewhat, Neither agree nor Disagree, somewhat Disagree, Disagree strongly, Don't know
- *Spending on the NHS* [1]

[Should the government] spend less on the NHS, Keep spending on same level, Spend more on the NHS?
- *Having the NHS charge more* [5]
 - One way of getting more money into the NHS is to charge people for certain things. How much would you be in favour of or against introducing charges for visiting your GP? Strongly against, Against, Neither in favour nor against, In favour, Strongly in favour
 - Introducing charges for your GP visiting you at home? Strongly against, Against, Neither in favour nor against, In favour, Strongly in favour
 - Introducing charges for the cost of your hospital meals when you are an inpatient? Strongly against, Against, Neither in favour nor against, In favour, Strongly in favour
 - Introducing charges for the cost of accommodation while you are in hospital? Strongly against, Against, Neither in favour nor against, In favour, Strongly in favour

- Introducing charges for using a non-emergency ambulance? Strongly against, Against, Neither in favour nor against, In favour, Strongly in favour
- *Having the NHS Cut Expensive Treatments* [3]
 - Some people say the NHS should cut down on very expensive treatments or services and use the savings to provide less expensive treatments or services for more people. With this aim, how much would you be in favour of, or against, the NHS cutting down on heart transplants? — Strongly against, Against, Neither in favour nor against, In favour, Strongly in favour
 - The NHS cutting down on long term nursing care of the elderly? — Strongly against, Against, Neither in favour nor against, In favour, Strongly in favour
 - The NHS cutting down on intensive care for very premature babies whose survival is in doubt? — Strongly against, Against, Neither in favour nor against, In favour, Strongly in favour
- *Privatizing Some Treatments* [2]
 - Other people say the NHS should cut down on certain treatments or services that should be provided instead by private medicine or charities. With this aim, how much would you be in favour of, or against, the NHS cutting down on fertility treatment? — Strongly against, Against, Neither in favour nor against, In favour, Strongly in favour
 - The NHS cutting down on hospice care for the terminally ill. Strongly against, Against, Neither in favour nor against, In favour, Strongly in favour
- *Prioritizing by Severity* [2]
 - If the NHS had to choose, the seriousness of [a person's] condition should be the only basis for choosing between patients. Disagree strongly, Disagree, Neither agree nor disagree, Agree, Agree strongly
 - If the NHS had to choose, a person's place in the waiting list for a particular treatment should be the only basis for choosing between patients. — Disagree strongly, Disagree, Neither agree nor disagree, Agree, Agree strongly

- *Prioritizing Prevention* [1]
 - If the NHS had to choose, it should give higher priority to preventing illness than to treating the very ill— Disagree strongly, Disagree, Neither agree nor disagree, Agree, Agree strongly
- *Public and Government Discretion* [2]
 - How much say should the government have in [hypothetical] NHS choices about whom to treat, or the order in which they should be treated? None of the say, Some of the say, All or most of the say.
 - How much say should the public have? None of the say, Some of the say, All or most of the say.

British Monarchy (UK) (4)

- *Support for the Monarchy* [4]
 - Thinking about the monarchy or the royal family in Britain, which of the following do you think should happen? Remain as is, Reformed, Abolished
 - And how long do you personally want the British monarchy to survive in its present form? At least 100 years, 50 years, 20 years, 10 years, 5 years, less than 5 years.
 - What do you think would be best for Britain when the present Queen's reign ends? Continue to have a king/queen, Have an elected president?
 - Should there be a referendum on whether Britain should continue to have a monarchy? Definitely not, Probably, Probably Not, Definitely
- *Rules and limits for the Monarchy* [6]
 - Members of the royal family should mix more with ordinary people. Agree Strongly, Agree, Neither Agree nor Disagree, Disagree, Disagree Strongly
 - Monarchs should retire at the same age as other working people. Agree Strongly, Agree, Neither Agree nor Disagree, Disagree, Disagree Strongly

- A monarch should pay taxes on the same terms as everyone else. Agree Strongly, Agree, Neither Agree nor Disagree, Disagree, Disagree Strongly
- There is no point having a royal family without all their glamour and glitter. Agree Strongly, Agree, Neither Agree nor Disagree, Disagree, Disagree Strongly
- A king or queen who cannot win popular support should not continue in office. Agree Strongly, Agree, Neither Agree nor Disagree, Disagree, Disagree Strongly
- The British public should in future have a say in who becomes the next king or queen. Agree Strongly, Agree, Neither Agree nor Disagree, Disagree, Disagree Strongly
- *Powers of the Monarchy*
 - If after a General Election no party had a majority in the House of Commons, should the Queen should choose the PM, or should there be a different method of choosing?
 - It would be a good thing if Queen had more powers. Agree Strongly, Agree, Neither Agree nor Disagree, Disagree, Disagree Strongly
- *Reforming the House Of Lords*
 - Now thinking about the House of Lords, which of the following do you think should happen? Remain as is, Reformed, Abolished
 - Which of the following two statements comes closer to your own view? Hereditary peers should keep their right to vote in the House of Lords because they bring some independence into politics, or the fact that someone inherits a title should not give them a right to vote in the House of Lords.
 - And which of these two statements? We should continue to have appointed life peers in the House of Lords because they bring experience from outside Parliament into politics, or all members of the House of Lords should be democratically elected.

UK General Election (UK) (4)

- *Redistribution [1]*

- Government should redistribute income from the better-off to those who are less well off. Disagree Strongly, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree
- *Tax Rate* [1]
 - People earning around 50,000 pounds a year or more should pay higher income tax than now. Disagree Strongly, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree
- *Minimum Wage* [1]
 - Where do you stand on the minimum wage? 1. Government should definitely not introduce a minimum wage because too many low paid workers would then lose their jobs....7. Government should definitely introduce a minimum wage so that no employer can pay their workers too little. Or other integers in-between.
- *EU* [1]
 - Where do you stand on the European Union? 1. Britain should do much more to keep its distance from the European Union....7. Britain should do much more to unite fully with the European Union. [Or other integers in-between.]

Making Australia a Republic (Australia) (2)

- *Making Australia a Republic* [3]
 - Which of the following possibilities would be your first choice, and which would be your second choice? A President directly elected by the people, A President appointed by Parliament, or Retaining the Queen and the Governor-General. Scored 1 for those ranking “Retaining the Queen and the Governor-General” third, as .5 for those ranking that option second or saying DK, and as 0 for those ranking it first.
 - Australia should keep rather than cut its remaining constitutional ties with Britain. Strongly agree, Agree, Neither agree nor disagree, Disagree, Strongly disagree.
 - Our head of state should be an Australian. Strongly agree, Agree, Neither agree nor disagree, Disagree, Strongly disagree.
- *Popularly Elected vs. Parliamentarily Appointed President* [1]

Scored as 1 for those ranking “A President directly elected by the people” first and “A President appointed by Parliament” third; .75 for those ranking “A President directly elected by the people” first and “A President appointed by Parliament” second or “A President directly elected by the people” second and “A President appointed by Parliament” third; .5 for those not ranking either of those two options or saying DK; .25 for those ranking “A President appointed by Parliament” first and “A President directly elected by the people” second or “A President appointed by Parliament” second and “A President directly elected by the people” third; and 0 for those ranking “A President appointed by Parliament” first and “A President directly elected by the people” third.

Crime (UK) (5)

- *Stiffer Punishment*
 - If the government had to choose between reforming criminals and punishing them, should it definitely reform, probably reform, definitely punish, probably punish, or does it not matter either way?
 - Prisons should try harder to reform prisoners, rather than just punishing them— Strongly disagree, Disagree, Neutral, Agree, Strongly Agree
 - Courts should give tougher sentences to criminals— Strongly disagree, Disagree, Neutral, Agree, Strongly Agree
 - Stiffer sentences and more prisons. Most effective, second most effective, or third most effective way of reducing crime. .
 - Sending more offenders to prison: Most effective, second most effective, or third most effective way of cutting crime
 - Sending fewer people to prison. Strongly disagree, Disagree, Neutral, Agree, Strongly Agree
 - Sending only hardened criminals, or those who are a danger to society, to prison. Strongly disagree, Disagree, Neutral, Agree, Strongly Agree
 - Keeping more offenders who are not a big threat to society out of prison but making them report regularly to probation officers. Strongly disagree, Disagree, Neutral, Agree, Strongly Agree
 - Keeping more offenders who are not a big threat to society out of prison but making them spend a certain number of days helping people in the community. Strongly disagree, Disagree, Neutral, Agree, Strongly Agree

- Keeping more offenders who are not a big threat to society out of prison but making them do military service for a period of time. Strongly disagree, Disagree, Neutral, Agree, Strongly Agree
- Keeping more offenders who are not a big threat to society out of prison but making them get training and counselling. Strongly disagree, Disagree, Neutral, Agree, Strongly Agree
- Making prison life tougher and more unpleasant. Strongly disagree, Disagree, Neutral, Agree, Strongly Agree
- Giving all murderers a life sentence. Strongly disagree, Disagree, Neutral, Agree, Strongly Agree
- Making sure that life sentences mean life— Strongly disagree, Disagree, Neutral, Agree, Strongly Agree
- For some crimes, the death penalty is the most appropriate sentence. Strongly disagree, Disagree, Neutral, Agree, Strongly Agree.
- *Addressing Social Root Causes* [3]
 - Spending more time with children. How effective as a way of cutting crime. Not at all effective, Not very effective, Neither, Effective, Very effective
 - Reducing TV violence and crime: How effective as a way of cutting crime. Not at all effective, Not very effective, Neither, Effective, Very effective
 - Firmer school discipline. How effective as a way of cutting crime. Not at all effective, Not very effective, Neither, Effective, Very effective
- *Policing* [2]
 - Putting more police on the beat. How effective as a way of cutting crime. Not at all effective, Not very effective, Neither, Effective, Very effective
 - Letting on-duty police officers normally carry guns. Strongly disagree, Disagree, Neutral, Agree, Strongly Agree
- *Procedural Rights* [8]
 - Is it definitely worse to convict an innocent person, probably worse to convict an innocent person, definitely worse to let a guilty person go free, probably worse to let a guilty person go free, or does it not matter either way?

- Police should be allowed to bend the rules. Strongly disagree, Disagree, Neutral, Agree, Strongly Agree
 - Having fewer jury trials. Strongly disagree, Disagree, Neutral, Agree, Strongly Agree
 - The rules in court should be less on the side of the accused. Strongly disagree, Disagree, Neutral, Agree, Strongly Agree
 - The courts should no longer treat suspects as innocent until proven guilty. Strongly disagree, Disagree, Neutral, Agree, Strongly Agree
 - If a suspect remains silent under police questioning, this should count against them in court. Strongly disagree, Disagree, Neutral, Agree, Strongly Agree
 - Suspects should have the right to remain silent under police questioning— Strongly disagree, Disagree, Neutral, Agree, Strongly Agree
 - A confession made during police questioning should not on its own be enough to convict someone. Strongly disagree, Disagree, Neutral, Agree, Strongly Agree
- *Increasing Self-Protection* [3]
 - Making property more secure. How effective as a way of cutting crime. Not at all effective, Not very effective, Neither, Effective, Very effective
 - Having more Neighborhood Watch schemes. How effective as a way of cutting crime. Not at all effective, Not very effective, Neither, Effective, Very effective
 - Having the public take a more active role in preventing crime, such as by setting up local "street patrols," as opposed to leaving this to the police. Strongly disagree, Disagree, Neutral, Agree, Strongly Agree

EU Expansion, Pension Reform, Foreign Policy (EU) (7)

- *EU Membership Policy* [1]
 - Some people think that [your country]'s membership in the EU is an extremely bad thing. Suppose these people are at one end of a 0-to-10 scale, at point 0. Other people think that your country's membership in the EU is an extremely good thing. Suppose these people are at the other end of the scale, at point 10. People who are exactly in the middle are at point 5, and of course other people

have opinions at other points between 0 and 10. Where would you place your views on this scale, or do you have any opinion about that?

- *Privatizing pensions* [1]
 - Some people think the government should provide a pension for all retirees. Suppose these people are at one end of a 0-to-10 scale, at point 0. Other people think that individuals should make their own decisions about investing in their pensions. Suppose these people are at the other end of the scale, at point 10. People who are exactly in the middle are at point 5, and of course other people have opinions at other points between 0 and 10. Where would you place your views on this scale, or do you have any opinion about that?

- *Paying for Pensions by increasing the working population vs. retiring late* [4]
 Constructed as the mean of the second two items minus the mean of the first two.
 - How strongly would you favor or oppose making it more attractive to work longer before retiring as a way of paying for pensions? Oppose strongly, Oppose somewhat, Neither favour nor oppose, Favour somewhat, Favour strongly, No Opinion
 - Raising the retirement age? Oppose strongly, Oppose somewhat, Neither favour nor oppose, Favour somewhat, Favour strongly, No Opinion
 - Letting more immigrants enter the labor market? Oppose strongly, Oppose somewhat, Neither favour nor oppose, Favour somewhat, Favour strongly, No Opinion
 - Encouraging people to have more children? Oppose strongly, Oppose somewhat, Neither favour nor oppose, Favour somewhat, Favour strongly, No Opinion

- *Migration* [1]
 - How much would you favor or oppose “Making it easier for workers to move between EU countries” as ways of competing in today’s global economy? Oppose strongly, Oppose somewhat, Neither favour nor oppose, Favour somewhat, Favour strongly, No Opinion

- *Free Trade* [3]. Constructed as the mean of the first and third items minus the second.
 - How much would you favor or oppose lowering barriers to international trade as a way of competing in today’s global economy? Oppose strongly, Oppose

somewhat, Neither favour nor oppose, Favour somewhat, Favour strongly, No Opinion

- Increasing taxes on imported products? Oppose strongly, Oppose somewhat, Neither favour nor oppose, Favour somewhat, Favour strongly, No Opinion
- Some people think that [your country]'s industries should be protected against foreign competition. Other people think that [your country]'s industries should be left to compete freely in the global economy. 0 = protected against foreign competition, 10 = left to compete freely.
- *Support for military action* [6]. Constructed as the mean of the means of the first two and last three items, minus the third.
 - How strongly would you agree or disagree with that [your country] should strengthen its military power? Agree strongly, Agree somewhat, Neither agree nor disagree, Disagree somewhat, Disagree strongly, No opinion
 - That EU countries may sometimes have to use force without a UN mandate? Agree strongly, Agree somewhat, Neither agree nor disagree, Disagree somewhat, Disagree strongly, No opinion
 - That Military action by EU countries is never justifiable? Agree strongly, Agree somewhat, Neither agree nor disagree, Disagree somewhat, Disagree strongly, No opinion
 - How justifiable would you say military intervention by EU countries is to prevent genocide in other countries? 0 = completely unjustifiable, 10 = completely justifiable, 5 is exactly in the middle. Or other integer in-between.
 - To remove the threat of weapons of mass destruction?
 - To defend economic interests?
- *EU Enlargement* [1]
 - How strongly would you agree or disagree that additional countries that meet all the political and economic conditions for membership should be admitted to the EU?
- *Admitting Turkey* [1]
 - How strongly would you agree or disagree that if it meets all the political and economic conditions for membership, Turkey should be admitted to the EU?

- *Admitting Ukraine* [1]
 - How strongly would you agree or disagree that if it meets all the political and economic conditions for membership, Ukraine should be admitted to the EU?

- *Admitting Croatia* [1]
 - How strongly would you agree or disagree that if it meets all the political and economic conditions for membership, Croatia should be admitted to the EU?

- *Level of Decision Making* [9]
 - How much of the decision-making about immigration should be made by the individual member states versus the EU? 0 = the individual member states make all the decisions, 10 = the EU makes all the decisions, 5 = exactly in the middle. Higher numbers mean more coordination between countries, while lower numbers mean more independent decision making by individual countries.
 - About international trade?
 - About employment?
 - About pensions?
 - About military action?
 - About climate change?
 - About foreign aid?
 - About taxation?
 - About energy supply?

- *EU Veto Support* [4]

Some people think all the decisions made at the EU level should require only the agreement of a large majority of member states, representing a large majority of the EU's population. Other people think all the decisions made at the EU level should require the unanimous agreement of all the member states. Where would you place your views on this, when it comes to taxation decisions? 0 = only the agreement of a large majority of member states, representing a large majority of the EU's population, 10 = the unanimous agreement of all the member states, 5 = exactly in-between.

- When it comes to social policy decisions?
- When it comes to foreign policy decisions?
- When it comes to defense decisions?

Meeting future electricity needs (CP&L Service Area, WTU Service Area, and SEP Service Area, Texas, USA) (6 each)

- *Research* [2]
 - How important do you think it is for electric utilities to carry out research to develop better ways of producing and delivering power to customers, even if that means paying higher electric bills? 0 = not at all important, 10 = extremely important, and 5 = average importance. Or other integers in-between.
 - How important do you think it is for the federal government to fund research into a variety of new technologies to produce electricity? 0 = not at all important, 10 = extremely important, and 5 = average importance. Or other integers in-between.
- *Conservation* [2]
 - How important do you think it is for utilities to reduce their use of natural gas and coal by helping their customers use energy more efficiently? 0 = not at all important, 10 = extremely important, and 5 = average importance. Or other integers in-between.
 - How important do you think it is for CPL/WTU/SWP to include services and technologies which reduce the need for additional electric generation facilities in its plans to meet the area's need for electricity? 0 = not at all important, 10 = extremely important, and 5 = average importance. Or other integers in-between.
- *Helping Low Income Customers* [1]
 - How important do you think it is for utilities to tailor rates and energy management programs to make sure that low income customers are treated fairly? 0 = not at all important, 10 = extremely important, and 5 = average importance. Or other integers in-between.
- *Using Renewables* [2]
 - How important is it that your utility consider using renewable resources such as the wind or sun, in deciding how to meet the area's need for electricity. 0 = not at

all important, 10 = extremely important, and 5 = average importance. Or other integers in-between.

- How important is it that CPL/WTU/SWP include generation by technologies such as wind and solar power in its plans for meeting the area's need for electricity. 0 = not at all important, 10 = extremely important, and 5 = average importance. Or other integers in-between.
- *Using Fossil Fuels* [1]
 - How important is it that CPL/WTU/SWP include generation using fuels like natural gas or coal in its plans for meeting the area's need for electricity. 0 = not at all important, 10 = extremely important, and 5 = average importance. Or other integers in-between.
- *Buying/Importing Power* [1]
 - How important is it that CPL include building transmission facilities and purchasing power from outside this area in its plans for meeting the area's need for electricity? 0 = not at all important, 10 = extremely important, and 5 = average importance. Or other integers in-between.

Prioritizing public works projects (Zeguo, China) (9)

The indices are all crafted from a series of questions with the following common stem:

The following 30 projects of Zeguo Township will be constructed one after another in the next few years. It requires funding of RMB 136,920,000.00 for the constructions. Due to the change in policy by the town government for the quota of land in 2005, an estimated RMB 40,000,000.00 may be raised for urban planning, environmental and infrastructure construction. According to investment size of RMB 40,000,000.00, please carefully examine the following projects. Please evaluate the importance of the projects on a 0 to 10 scale. (Where 0 is very unimportant, where 5 is median level, where 10 is the maximum possible importance. And where 98 is for do not know.)

- *Industrial Roads* [3]
 - Tengqiao Road
 - Air compressor industrial zone matching environmental constructions

- Auxiliary environmental construction for Muyu, Lianshu and Shuichang industrial zones
- *Village Roads* [3]
 - First stage of Muchang Main Road
 - Dongcheng Road (first gate)
 - Dongcheng Road (second stage)
- *Main Roads* [6]
 - Reconstruction for Donghe Road
 - Donghe Main Ave
 - Xicheng Road (first stage)
 - Zeguo Main Ave (second stage)
 - Zeguo Main Ave (third stage)
 - Chengqu subroad rebuild
- *Commercial Roads* [2]
 - Shuangchen Road (first gate)
 - Shuangchen Road (second stage)
- *Wenchang Main Avenue* [1]
 - Wenchang Main Ave
- *Other Parks* [3]
 - Wenchang Park (first stage)
 - Danyan hill park
 - Muyu hill park

- *Township Image* [4]
 - Bridge
 - Fuxin Road (east end)
 - Wenchang Park (second stage)
 - Urban environmental constructions
- *Cultural Heritage* [2]
 - Wenchang Park (second stage)
 - Old street reconstruction
- *Sewage Treatment* [4]
 - Urban & countryside environmental projects
 - Sewage Treatment Plan, Muyu
 - Sewage Treatment Plan, Danyan
 - Sewage treatment (earlier stage) entire town

Crime (Bulgaria) (12)

- *Tougher Punishment* [4]
 - How efficient will introducing tougher custody measures for defendants even for smaller crimes, be for combating crime? Very Efficient, Somewhat Efficient, Somewhat Inefficient, Very Inefficient, Can't Say.
 - Restoring the death penalty. Very Efficient, Somewhat Efficient, Somewhat Inefficient, Very Inefficient, Can't Say.
 - Tougher sentences for all offenders. Very Efficient, Somewhat Efficient, Somewhat Inefficient, Very Inefficient, Can't Say.
 - Tougher sentences for juvenile offenders. Very Efficient, Somewhat Efficient, Somewhat Inefficient, Very Inefficient, Can't Say.

- *Rehabilitation* [1]
 - How efficient will programs for re-socialization of prisoners who have served their terms in jail be for combating crime? Very Efficient, Somewhat Efficient, Somewhat Inefficient, Very Inefficient, Can't Say.
- *Addressing Economic Root Causes* [1]
 - How efficient will programs for reducing poverty and unemployment be for combating crime? Very Efficient, Somewhat Efficient, Somewhat Inefficient, Very Inefficient, Can't Say
- *Addressing Social Root Causes* [1]
 - How efficient will showing less violence in the media be for combating crime? Very Efficient, Somewhat Efficient, Somewhat Inefficient, Very Inefficient, Can't Say
- *Institutional Change* [1]
 - Which is closest to your opinion about law enforcement system in Bulgaria? - The system is good, the problem is with the individual people working in it and not performing their duties, People need not be changed. What is necessary is institutional changes in the powers of the different branches in the justice system.
- *Streamlining Trials* [1]
 - How efficient will speedier trials following a simplified procedure be for combating crime? Very Efficient, Somewhat Efficient, Somewhat Inefficient, Very Inefficient, Can't Say
- *Legalizing Drugs* [2]
 - The so called "soft" drugs like cannabis should be legalized and sold at special places. – Strongly agree, Somewhat agree, Somewhat disagree, Strongly disagree, Can't say.
 - Hard drugs like heroin should be legalized and sold at special places. Strongly agree, Somewhat agree, Somewhat disagree, Strongly disagree, Can't say

- *Penalties for Drug Taking* [1]
 - How strongly do you agree or disagree with the following ideas to reduce some crimes? There should be penalties not only for drug dealing, but also for drug taking – Strongly agree, Somewhat agree, Somewhat disagree, Strongly disagree, Can't say

- *Allowing vigilantism* [1]
 - Which of the following two positions do you support? If people are allowed to take the law in their hands that would make the legal system more efficient. Or If people start administering justice themselves, there will be chaos in the country and no one could feel safe.

- *Independence of Investigative Service* [1]
 - In your opinion, is it better if the Investigation service is within the Ministry of Interior so that there is better coordination between the police and the investigation? Or is it better if the Investigation service remains independent to create guarantees for unbiased operation taking into account the interest of both the defendants and the public?

- *Place of Prosecution* [1]
 - Which of the following is closest to your opinion? The Prosecution should be accountable to Parliament, The Prosecution should be part of the executive branch or The Prosecution should remain as it is now – part of the judicial branch

- *Restricting Civil Liberties*
 - In your opinion how efficient will restricting the rights of certain groups exhibiting criminal behavior be for combating crime?– Very Efficient, Somewhat Efficient, Somewhat Inefficient, Very Inefficient, Can't Say
 - To what extent do you agree or disagree with the following ideas for reducing crime? Keep defendants in detention even when they are not proven guilty. – Strongly agree, Somewhat agree, Somewhat disagree, Strongly disagree, Can't say

- The laws and courts should be less on the side of the defendants. Strongly agree, Somewhat agree, Somewhat disagree, Strongly disagree, Can't say
- Defendants should not be treated as innocent until proven guilty. Strongly agree, Somewhat agree, Somewhat disagree, Strongly disagree, Can't say
- How much do you agree or disagree that the police should sometimes be able to resort to violence to get a conviction and punish the suspected criminal. -Strongly agree, Somewhat agree, Somewhat disagree, Strongly disagree, Can't say
- The police should sometimes be able to resort to violence to get a conviction and punish the suspected criminal. -Strongly agree, Somewhat agree, Somewhat disagree, Strongly disagree, Can't say
- Violence is acceptable only if it results in a confession by the offenders. - Strongly agree, Somewhat agree, Somewhat disagree, Strongly disagree, Can't say
- Every citizen, including the offender, has rights and the police has to observe those rights. -Strongly agree, Somewhat agree, Somewhat disagree, Strongly disagree, Can't say
- If someone has broken the law, the police does not have to observe his/her rights. -Strongly agree, Somewhat agree, Somewhat disagree, Strongly disagree, Can't say

Climate Change, Immigration (EU) (2)

- *Combatting Climate Change* [1]
 - On a scale from 0 to 10, where '0' means that we should do everything possible to combat climate change, even if that hurts the economy, '10' means that we should do everything possible to maximize economic growth, even if that hurts efforts to combat climate change and 5 is exactly in the middle, where would you position yourself on this scale, or haven't you thought much about that?
- *Stricter Immigration Control* [1]
 - Reinforcing border controls. Favour strongly, Favour somewhat, Neither favour nor oppose, Oppose somewhat, Oppose strongly, Don't know

Future of Airport, Revenue-Sharing (New Haven, CT, USA) (2)

- *Mandatory vs. Voluntary Revenue Sharing* [4]
 - My town should maintain local control over all of its tax revenues from new businesses and industries—Agree strongly, Agree somewhat, Neither agree nor Disagree, somewhat Disagree, Disagree strongly, Don't know
 - My town should try for a voluntary agreement with other towns in the region to share some of the tax revenues from new businesses and industries—Agree strongly, Agree somewhat, Neither agree nor Disagree, somewhat Disagree, Disagree strongly, Don't know
 - The state should provide incentives for towns in the region to share some tax revenues from new businesses and industries—Agree strongly, Agree somewhat, Neither agree nor Disagree, somewhat Disagree, Disagree strongly, Don't know
 - The state should require towns in the region to share some tax revenues from new businesses and industries—Agree strongly, Agree somewhat, Neither agree nor Disagree, somewhat Disagree, Disagree strongly, Don't know
- *Expanding vs. Ending Airport Service* [3]
 - Commercial passenger service to nearby cities should be maintained but not expanded to serve a larger market—Agree strongly, Agree somewhat, Neither agree nor Disagree, somewhat Disagree, Disagree strongly, Don't know
 - Commercial passenger service should be expanded to provide more flights to more places—Agree strongly, Agree somewhat, Neither agree nor Disagree, somewhat Disagree, Disagree strongly, Don't know
 - Commercial passenger service should be ended, leaving only service for private airplanes—Agree strongly, Agree somewhat, Neither agree nor Disagree, somewhat Disagree, Disagree strongly, Don't know

National Issues Convention II (9)

- *Protecting the Environment* [4]

- How much would you support or oppose requiring higher mileage from automobiles even if that means less powerful automobile engines, as a way of reducing greenhouse gases?
- “Requiring cleaner production of electricity, even if that means higher electricity rates, as a way of reducing greenhouse gases?”
- What priority should be given to “protecting the global environment” as a long range foreign policy goal? 0 = No Priority at all, 10 = Top Priority, 5 = Average Priority
- To what extent “global warming is not really a problem so there is no need to do anything about it” versus “a serious problem [about which] we need to act now? 0 = Doing Nothing, 10 = Acting Now, 5 = Midway Between
- *Fighting Terrorism* [8]
 - How much importance should the U.S. place on encouraging more democracy in Middle East countries like Egypt and Saudi Arabia as a way of reducing future terrorism directed against the U.S.? 0 = No importance at all, 10 = Most Importance, 5 = Average Importance
 - Increased foreign aid to countries that may be breeding grounds for terrorism?
 - Working with other countries to identify and combat terrorism?
 - Building up our intelligence capabilities?
 - What priority should be given to preventing the spread of weapons of mass destruction as a reason for providing foreign aid to other countries? 0 = No Priority at All, 10 = Top Priority, 5 = Average Priority
 - To fighting terrorism?
 - To protecting the U.S. from attack?
 - To discouraging countries from trying to develop nuclear weapons?
- *Increasing Foreign Aid* [1]

Should the amount of money the U.S. is now devoting to foreign aid should be increased, reduced, or kept about the same? 1 = Increased, 3 = Reduced, 5 = Kept about the same

- *Internationalism* [1]

- How much do you agree or disagree that “this country would be better off if we just stayed home and did not concern ourselves with problems in other areas of the world.” 1 = Agree Strongly, 2 = Agree Somewhat, 3 = Neither agree nor disagree, 4 = Disagree Somewhat, 5 = Disagree Strongly

- *Multilateralism* [7]

- How strongly do you support or oppose American military action with United Nations support versus acting alone to prevent mass killings in foreign countries?
- prevent the spread of weapons of mass destruction to countries that might use them.
- How strongly do you agree or disagree that the only way to solve environmental problems like global warming is through international agreements, requiring countries to work together?
- How important it is to work with other countries to identify and combat terrorism?
- Is it best to work with groups of countries through international institutions like the World Trade Organization, to work with other countries one by one to establish agreements, or to leave things as they are in dealing with international trade?
- Who should take the lead in trying to resolve international conflicts? 1 = the U.S. acting by itself, 2 = the U.S. acting with close allies like NATO, 3 = the U.S. & its close allies acting through the United Nations, 4 = the United Nations, 5 = nobody.
- In providing foreign assistance to other countries? 1 = the U.S. acting by itself, 2 = the U.S. acting with close allies like NATO, 3 = the U.S. & its close allies acting through the United Nations, 4 = the United Nations, 5 = nobody.

- *Promoting Democracy* [8]. The average of the first two items and the pre-average of the ensuing six.
 - Whether the respondent agrees more that the U.S. should be promoting democracy in other countries or that how other countries are governed is not our concern. Do you agree with this position strongly or somewhat? 1 Strongly U.S. should be promoting democracy, 2 = Somewhat U.S. should be promoting democracy, 3 = Agree with both about equally, 4 = Somewhat 'not our concern', 5 = Strongly 'not our concern'
 - How much priority should be given to helping newly democratic countries develop their democratic institutions as a reason for providing foreign aid to other countries?
 - How much importance should be placed on help[ing] with building democratic institutions as a way the U.S. might promote democracy outside of the U.S.?
 - On increasing trade?
 - On trade penalties for human rights violations?
 - On foreign aid?
 - On providing U.S. troops to help keep the peace?
 - On increased support for organizations like the Peace Corps that send Americans abroad to help other countries?
- *Fighting Poverty and Suffering* [6]. Constructed as the average of the first two items, the pre-average of the third and fourth, and the pre-average of the fifth and sixth.
 - Priority to providing food and medical help to poor countries as a long range foreign policy goal?
 - To reducing world poverty?
 - The priorities to reducing hunger and disease in poor countries as a reason for providing foreign aid to other countries?
 - To helping poor countries develop their economies?

- Whether the U.S., as a global leader, should spend more money to help fight world hunger in developing countries versus concentrating on dealing with problems at home first?
- To help fight the AIDS epidemic in developing countries versus concentrating on dealing with problems at home first?
- *Human Rights* [1]
 - What priority should be given to “protecting human rights in other countries?”
- *Liberalizing Trade* [1]
 - Whether the U.S. should repeal the North American Free Trade Agreement, called NAFTA, leave NAFTA the way it is, adopt agreements like NAFTA but with more Latin American countries?

US General Election 2004 (6)

- *More services vs. Higher taxes* [1]
 - Some people think the federal government should lower taxes, even if that means providing fewer services like health care and education. Other people think the federal government should provide more services like health care and education, even if even that means raising taxes. Where would you place yourself on this scale, or haven't you thought much about this? 1 = lower taxes, 7 = more services, 4 =
- *Multilateralism* [1]
 - Some people feel the United States should intervene militarily when its interests are threatened without working through international organizations such as the U.N and NATO. Other people feel that we should not intervene without first obtaining international approval and cooperation. 1 = intervene militarily without working through international organizations, 7 = not intervene without first obtaining international approval and cooperation.
- *Free trade vs. Protectionism* [1]

- Some people feel that we should pursue free trade even if that means some current American jobs are lost to companies abroad. Other people feel that we should protect American industries even if that means we lose markets for our goods abroad. 1 = pursue free trade, 7 = protect American industries.
- *Ensuring Constitutional rights vs. finding every potential terrorist [1]*
 - Some people say it is important to ensure people's constitutional rights, even if it means that some suspected terrorists aren't found. Others say it's important to find every potential terrorist, even if some innocent people are falsely accused, interrogated, or imprisoned. 1 = ensure people's constitutional rights, 7 = find every potential terrorist.
- *Govt. vs. Private Health insurance [1]*
 - Some people feel that the federal government should make sure that everyone has adequate health insurance. Other people feel that health insurance should be left up to individuals and their employers. 1 = make sure everyone has adequate health insurance, 7 = leave health insurance up to individuals and their employers
- *Allow gay marriage vs. Constitutional amendment to ban it [1]*
 - Some people believe that two people of the same sex should be able to marry just like anyone else. Other people think there should be a constitutional amendment to prohibit gay marriage. 1 = gays should be able to marry just like anyone else, 7 = constitutional amendment to prohibit gay marriage.

Health Care, Education (US, 2005) (11)

- *Reforming education [1]*
 - To improve public education, some people think the focus should be on reforming the existing public school system. Others believe the focus should be on finding an alternative to it. 0 = Finding an alternative system; 1 = Reforming the existing system.
- *Charter Schools vs. Vouchers [2]*

Do you support or oppose the following proposals for reforming the school system in your community? Please indicate 0 if you strongly oppose, 5 if you neither oppose nor support and 10 if you strongly support.

- Fund more charter schools with money from the public school system (1=Strongly support).
- Provide vouchers to pay some or all of the cost of private schools with money from the public school system (1=Strongly oppose)
- *Increasing Tax Money for the Public Schools* [5]
 - Provide more money for the most troubled public schools even if this means raising taxes (1=Strongly support)
 - Provide more money for public schools to pay for smaller class sizes even if this means raising taxes (1=Strongly support)
 - Provide more money for public schools to pay for new technology even if this means raising taxes (1=Strongly support)
 - Provide more money for public schools to pay teachers even if this means raising taxes (1=Strongly support)
 - How important would you say it is that the nation's schools focus on improving funding (1=Extremely important)
- *Standardized Testing* [2]
 - In your opinion is there too much emphasis on standardized testing in the public schools in your community, about the right amount, or not enough emphasis? (0 = Too much, .5 = About the right amount, 1 = Not enough)
 - Some people think increased use of standardized tests in the public schools is good because it helps evaluate the performance of students and schools. Some people think it is bad because it forces teachers to emphasize only what is measured in the tests. Indicate whether you think it would be bad or good to increase the use of standardized tests in the public schools.
- *Control of Educational Testing: Local Boards vs. States* [1]

- Some people think that tests for student achievement should be set at the state level and applied in the same way to all students in the state. Others think that local school boards should make these decisions in each community. Which do you think? 0 = Decisions about testing should be made at the state level; 1 = Decisions should be made by local school boards in each community.
- *No Child Left Behind* [1]
 - From what you know or have heard about the No Child Left Behind Act, do you approve or disapprove of it or couldn't you say? (5-pt scale; 0 = strongly approve, 1 = strongly disapprove)
- *Paying More for Better Health Coverage* [4]
 - The cost of health insurance (0=completely unimportant; 1=extremely important)
 - The number of Americans without health insurance (0=completely unimportant; 1=extremely important)
 - The cost of prescription drugs (0=completely unimportant; 1=extremely important)
 - Would you be willing to pay more than you do now for health care if this meant that many more Americans would have health insurance coverage? (0 = No; .5 = Yes, at least slightly more; 1 = Yes, significantly more)"
- *Government's Role in Healthcare* [2]
 - The US should adopt a single-payer system, where a government entity accepts all healthcare fees and pays out all healthcare costs for everyone. 1 = strongly agree, 0 = strongly disagree.
 - The US should increase funding for Medicare and Medicaid even if this means increases in taxes. (5-pt scale; 1 = strongly agree, 0 = strongly disagree)
- *Requiring Employers to Provide Health Insurance* [1]
 - The US should require employer coverage of health care, where every employer must provide insurance for all workers. (5-pt scale; 1 = strongly agree, 0 = strongly

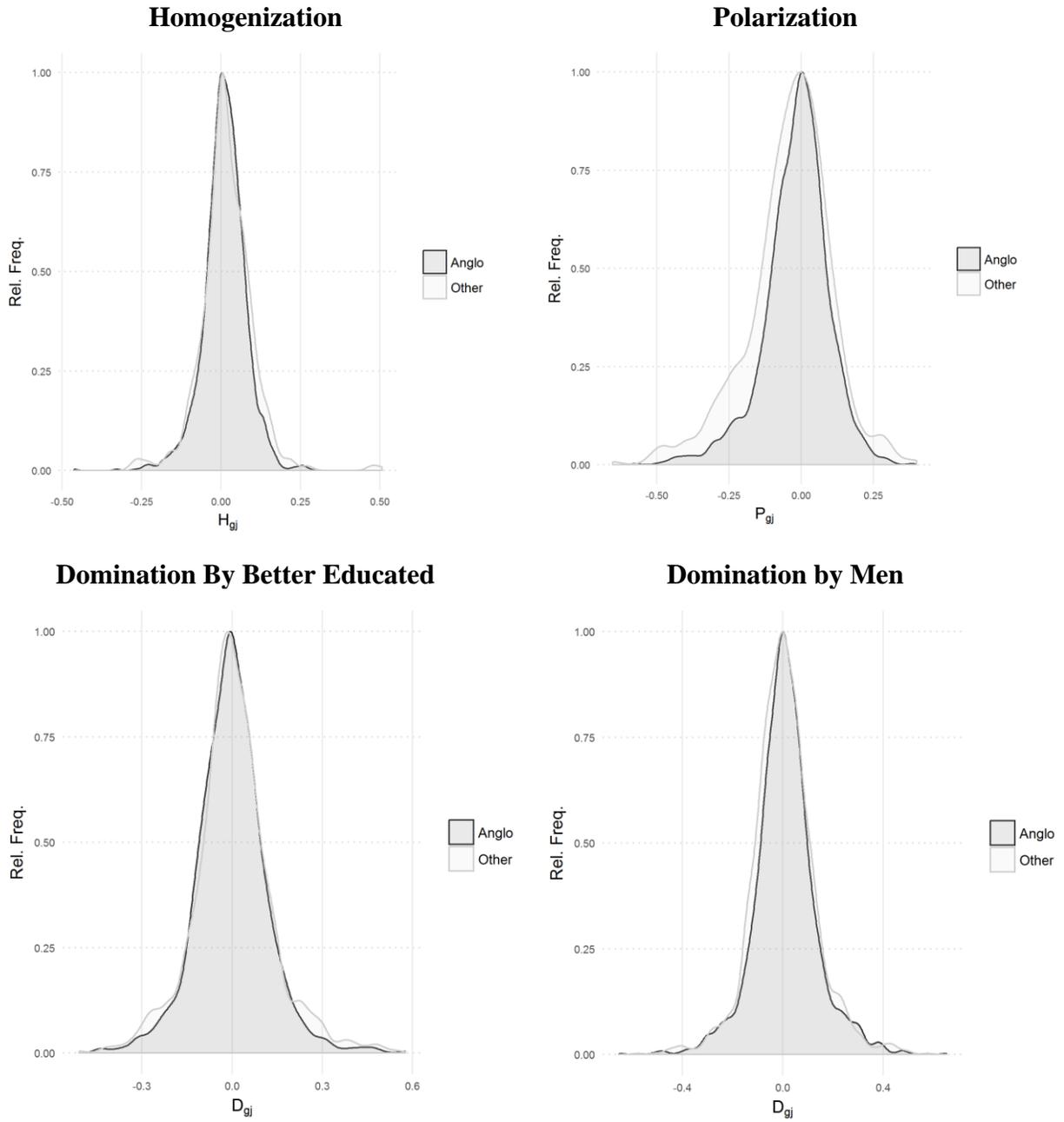
- *Individuals Must Buy Health Insurance* [1]
 - The US should require individual coverage, where individuals must buy minimal coverage, perhaps funded by a tax credit. (5-pt scale; 1 = strongly agree, 0 = strongly disagree)

Housing Policy (San Mateo, CA, USA) (4)

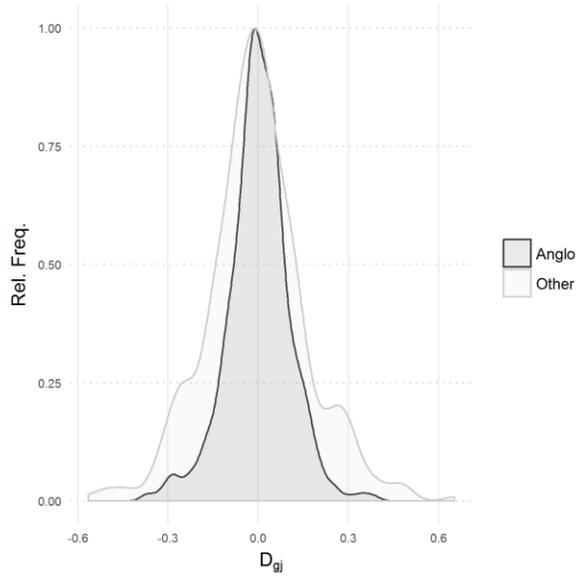
- *Create more housing* [1] Reflected
 - Some people think we should create more housing in the county. Other people think we should restrict housing growth in the county. 1 = create more housing, 7 = restrict housing growth.
- *Require some homes to be sold below market rate* [1] Reflected.
 - Some people think developers should be required to provide a certain portion of their homes at prices below the market rate. Other people think developers should be allowed to sell homes at whatever price the market will support. 1 = requiring developers to provide a certain portion of their homes at prices below the market rate, 7 = letting developers sell homes at whatever price the market will support
- *Rezoning open space areas to allow housing* [1]
 - Some people think that any new housing should be located in already developed areas. Other people think that any new housing should be located in currently protected open space areas rezoned to allow housing developments. 1 = already developed area, 7 = currently protected open space areas.
- *Land use: Local control v. regional coordination within county* [1]
 - Some people think local communities should retain control over land use. Other people think land use policies should be coordinated countywide. 1 = local communities, 7 = countywide coordination.

Appendix B: Distributions of Group-Issue Pairs on H, P, and D by Mode and Country

The face-to-face and online distributions are remarkably similar. So are the distributions for DPs in Anglo democracies versus other countries. Two of the six panels in Figures B1—for D_{gj} for income and three-fold advantage, which includes income)—do show a slightly higher variance in Anglo democracies. The same two of six panels show a slightly higher variance for face-to-face DPs in Figure B2. We suspect this may have something to do with missing data on income, which is not asked about in every DP, and is not disclosed by every respondent when asked about. But those differences are slight; our argument revolves around the means, not the variances; and, in *every* panel in Figures B1 and B2, the means are all but identical.

Figure B1: Anglo-American Countries vs. Other Countries

Domination by Higher Income



Domination by Better Educated, Higher Income, Men

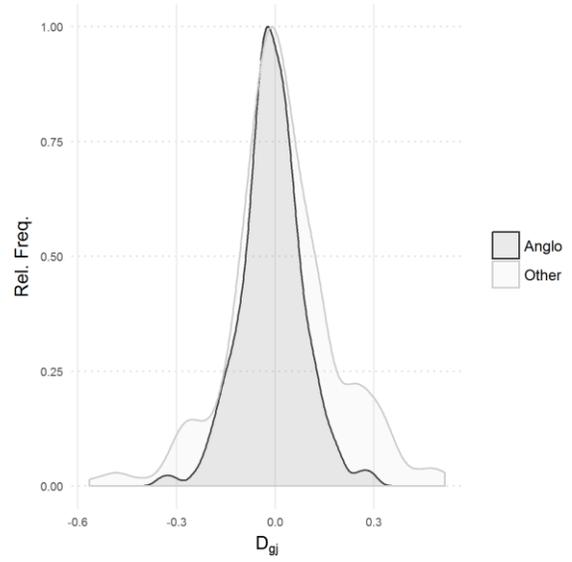
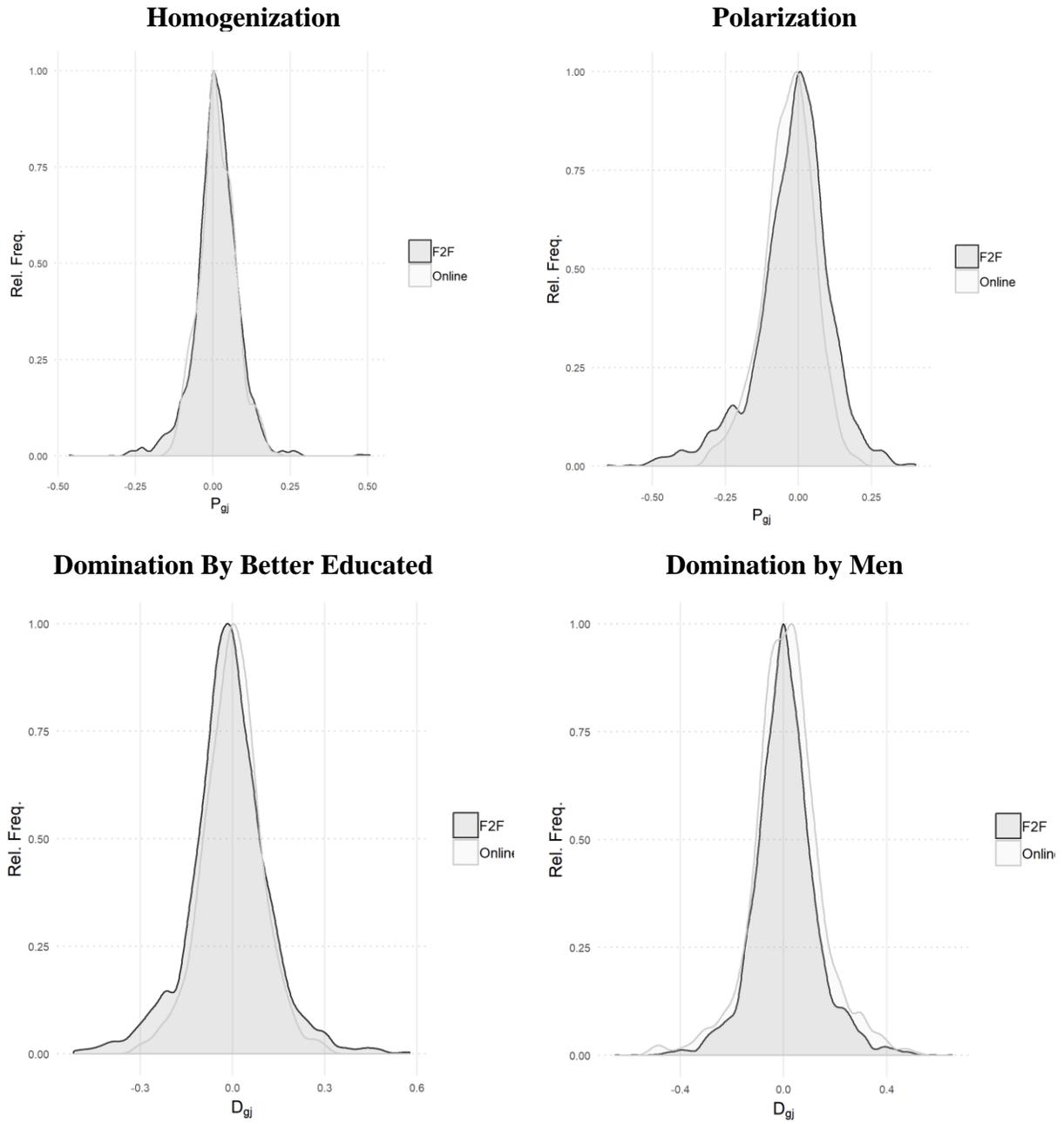
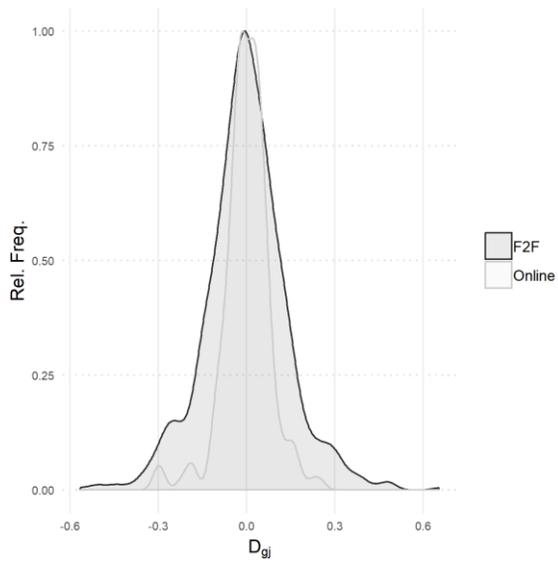
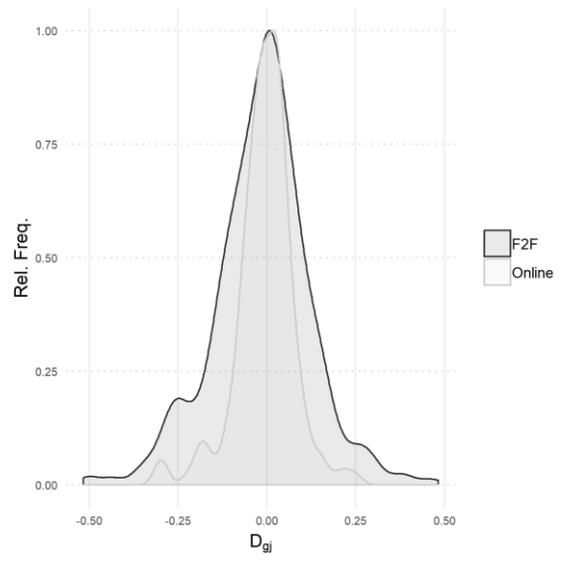


Figure B2: Online vs. Face-to-Face DPs

Domination by Higher Income



Domination by Better Educated, Higher Income, Men



Appendix C: D''_{gj}

Figure C1 illustrates the scenarios under which $D''_{gj} > 0$ versus < 0 . We do so with an eye to distinguishing D''_{gj} , an interesting definition for other purposes, from our definition, D_{gj} .

In Figure C1's somewhat simplified notation, A^d represents the mean attitude of the disadvantaged, A^a represents the mean attitude of the advantaged, and the arrows the directions and magnitudes of their pre- to post-discussion changes. $D''_{gj} > 0$ (in the left-hand column scenarios) when A^d moves: (1) more toward A^a than A^a moves in the same direction ($M^d_{gj} > M^a_{gj} > 0$); (2) less away from A^a than A^a moves in the same direction, toward A^d ($M^a_{gj} < M^d_{gj} < 0$); (3) more toward A^a than A^a moves in the opposite direction, toward A^d ($M^d_{gj} > 0, M^a_{gj} < 0, |M^d_{gj}| > |M^a_{gj}|$), or (4) less away from A^a than A^a moves in the opposite direction, away from A^d ($M^d_{gj} < 0, M^a_{gj} > 0, |M^d_{gj}| < |M^a_{gj}|$). $D''_{gj} < 0$ (in the right-hand column scenarios,) when A^d moves: (5) less toward A^a than A^a moves in the same direction ($M^a_{gj} > M^d_{gj} > 0$); (6) more away from A^a than A^a moves in the same direction, toward A^d ($M^d_{gj} < M^a_{gj} < 0$); (7) less toward A^a than A^a moves in the opposite direction, toward A^d ($M^d_{gj} > 0, M^a_{gj} < 0, |M^d_{gj}| < |M^a_{gj}|$); or (8) more away from A^a than A^a moves in the opposite direction, away from A^d ($M^d_{gj} < 0, M^a_{gj} > 0, |M^d_{gj}| > |M^a_{gj}|$).

Figure C1:

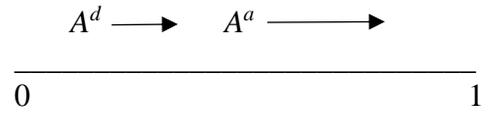
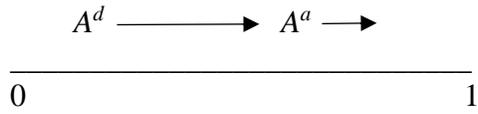
What Does $D''_{gj} > 0$ versus < 0 Say?

$$D''_{gj} > 0$$

$$D''_{gj} < 0$$

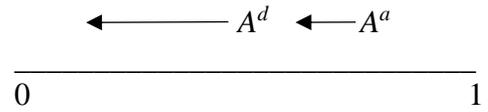
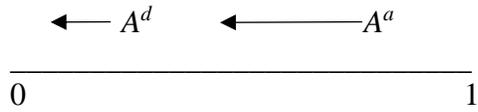
(1) $M^d_{gj}, M^a_{gj} > 0, |M^d_{gj}| > |M^a_{gj}|$

(5) $M^a_{gj}, M^d_{gj} > 0, |M^a_{gj}| > |M^d_{gj}|$



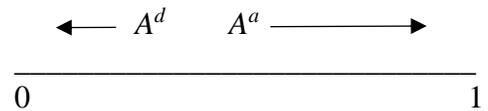
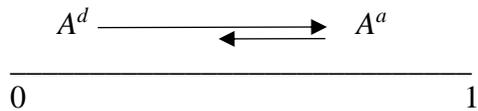
(2) $M^d_{gj}, M^a_{gj} < 0, |M^a_{gj}| > |M^d_{gj}|$

(6) $M^a_{gj}, M^d_{gj} < 0, |M^d_{gj}| > |M^a_{gj}|$



(3) $M^d_{gj} > 0, M^a_{gj} < 0, |M^d_{gj}| > |M^a_{gj}|$

(7) $M^d_{gj} < 0, M^a_{gj} > 0, |M^a_{gj}| > |M^d_{gj}|$



(4) $M^d_{gj} < 0, M^a_{gj} > 0, |M^a_{gj}| > |M^d_{gj}|$

(8) $M^d_{gj} < 0, M^a_{gj} > 0, |M^d_{gj}| > |M^a_{gj}|$

