

**Deliberation and internet engagement:
initial findings from a randomised
controlled trial evaluating the impact of
facilitated internet forums¹**

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Abstract

Public authorities are increasingly using information and communication technology (ICT) to engage citizens in the politics, in particular through internet discussion forums. This paper reports findings from a large-scale online randomised controlled trial of 6,009 participants that aims to test the effect of online deliberation on policy preferences. Participants were randomised between four treatment groups and two control groups. All four treatment groups were exposed to the same information and participants were able to post their views. However, in only two of the treatment groups were participants able to read and respond to the postings of others. The analysis uses Compliance Average Causal Effects (CACE) models to show the impact of deliberation. The paper finds that deliberation shifts participants' views on youth anti-social behaviour, but that participation in online deliberation tends to reinforce extant political inequalities.

Amongst both democratic theorists and policy-makers, there is growing interest in democratic innovations – mechanisms that aim to increase and deepen citizen participation in the political decision-making process (Fung 2003; Smith 2009). Providing opportunities for citizens to deliberate about matters of public concern is perceived by policy-makers and reformers as a potential response to widespread disillusionment and disenchantment with the political process (Dalton 2004; Stoker 2006). There are, however, reasonable concerns that – whilst there is a commitment to ensuring political equality – these new avenues for engagement will be dominated by the already politically-interested and engaged, hence reinforcing existing differentials of political power and influence. After all, participation takes time and is just as likely to generate anxieties and fears and a reasonable preference to spend any spare time on other activities. As Mark Warren argues: ‘radical democrats almost without exception hold that democratic participation is attractive activity, one that people would naturally choose if only they had the opportunity. They should dispense with this romantic dogma’ (Warren 1996: 243). Second, even where democratic innovations make use of selection mechanisms that aim to enhance political equality (e.g. random selection in citizens’ juries, deliberative polls, and the like), sceptics (including many policy-makers) are concerned by the relatively small numbers of citizens involved and the extent to which they should have a privileged position in the decision-making process. But at the same time there is also recognition that increasing the size of innovations places a constraint on face-to-face engagement (Dahl, 1998: 110): for effective citizen engagement, small may be beautiful.

In principle, developments in information and communication technology (ICT) usher in new opportunities for citizen engagement that challenge traditional barriers to citizen participation associated with time and space: citizens can engage at their own pace and participation can be ‘scaled-up’. Large numbers can be involved in political deliberations without incurring the costs of physically bringing people together. But our knowledge of what happens when you take political engagement online is limited. There are (at least) two challenges to effective engagement online. First, the depth of engagement – particularly in asynchronous discussion forums which are often utilised by public authorities – will differ between offline and online worlds. In the online world, we lose the intensity associated with paralinguistic phenomena (non-verbal communication) that convey meaning and emotion. We are left with questions about whether under such conditions, online deliberation can lead to changes in policy preferences. Second, in scaling-up numbers, there are dangers that political inequalities are reinforced as the more politically-interested and technologically-savvy dominate forums. To what extent do differences between the offline and online worlds affect engagement and deliberation?

To begin to shed light on these significant gaps in our knowledge, we report on a randomised controlled trial (RCT), designed to allow us to investigate various effects of participation in an online discussion forum. Not only does the design of the experiment allow us to investigate the extent of opinion shifts amongst those participating in the discussion forum, but it also provides a rare opportunity to differentiate between the effect of the provision of information and the effect of interaction between participants. It

also allows us to investigate the extent to which self-selection occurs in the online world. In a single experiment, we cannot hope to investigate all the relevant effects of different types of online engagement – this would require a number of RCTs – but we can offer pertinent insights that will help develop our understanding of the opportunities and challenges of e-democracy.

We begin this paper with a brief review of the policy context of recent innovations in e-democracy, before an explanation of our experimental design, method of analysis, and discussion of findings.

The developing policy and technological context

The pace of change in information and communication technology (ICT) is staggering and with it comes new opportunities for citizen engagement and deliberation. However, public authorities have tended to be rather tentative in integrating new technologies into the political process (Pratchett 2006). While there has been considerable investment in developing new modes of service delivery, less emphasis has been placed on designing new modes of political engagement. E-government has taken priority over e-democracy. Public authorities have tended to view the internet as a 'one way publishing and distribution network rather than as a many-to-many medium' (Sack 2005: 266). As David Schlosberg and his colleagues note: 'The majority of government uses of the internet provide information to citizens without offering the opportunity for interaction and the accountability that follows from such interaction' (Schlosberg et al. 2006: 210). However, we are beginning to witness tentative experimentation with a variety of web-based technologies that might enhance opportunities for deliberation, including blogs,

webforums (both asynchronous) and webchats (synchronous), by government departments, ministers, legislative committees and individual parliamentarians. In the UK such developments have been heavily promoted by the independent, non-partisan Hansard Society (Coleman 2004; 2005; Ferguson 2006).

While there is a lack of systematic analysis of emerging practices, ICT-based engagement raises at least four challenges for democrats: the emergence of a digital divide; dominance by the already politically interested; fragmentation; and incivility. The 'digital divide' has two characteristics that can have a major impact on political equality: access to and proficiency in ICT. A significant proportion of citizens in advanced industrial democracies, let alone less-industrialised nations, do not own the relevant equipment and/or have the knowledge and confidence to use electronic media such as the internet (Norris 2001). Whilst access to the internet may be on the rise, it is far from universal.² Differential access to ICT may lead to the emergence of new forms of inequality and social exclusion (Cederman and Kraus 2005: 297), but it tends to reinforce existing political inequalities between social groups. As Benjamin Barber argues: 'The age of information can reinforce extant inequalities... making the resource- and income-poor the information poor as well.' (Barber 1998: 587; see also Norris 2001).

² Globally, according to 2007 figures, Internet penetration stands at only 19%, with Northern America achieving access levels of 70% of the population compared to Africa's 5%. See <http://www.Internetworldstats.com/stats.htm> (accessed 1 November 2007). Across Europe Internet penetration is increasing, it still only stands at 42%. See <http://www.Internetworldstats.com/stats4.htm> (accessed 1 November 2007). This figure hides a high level of variation in access between nations, from a high of 86% in Iceland to a low of only 6% of the population in Albania.

Second, the citizens who are attracted to electronic discussions on politics are predominantly those with an extant political interest. Where web-based consultations are employed there is generally an increase in submissions, but in large part they remain from organised interests: most citizens are typically unaware of (and generally uninterested in) these new opportunities to participate. For most citizens, the internet is not viewed as a medium with which to engage in political discussions or other political activities (EOS Gallop Europe 2002). So, just as access and proficiency affect engagement in electronic life more generally, patterns of use tend to reinforce existing variations in political engagement. A third and related challenge is that even amongst those who do engage in political conversation in forums, webchats and blogs, there is a tendency to be attracted to sites and discussions that reinforce already established viewpoints and prejudices. Hence we find a widespread concern that cyberspace reinforces the fragmentation of the public sphere and undermines concern for the public good (Sunstein 2001).

Finally, research into online public discussions suggests that certain formats, for example chat rooms and Usenet groups, lack civility between participants. As Stephen Coleman notes: 'In Usenet political discussions, people talk past one another, when they are not verbally attacking each other. The emphasis is not problem solving, but discussion dominance' (Coleman 2004: 6; see also Sack 2005: 268). There is widespread concern that political discussions – particularly on controversial issues – can degenerate with excessive 'flaming' (offensive contributions) and other forms of incivility undermining more widespread participation (e.g. Docter and Dutton 1998).

Recent work on e-forums suggests that institutional design is crucial in structuring engagement: generalisations about online behaviour often fail to recognise the particular characteristics of different online environments. As Coleman argues:

The environment and structure of communication has a significant effect upon its content; synchronous chat rooms and peer-generated Usenet groups are no more indicative of the scope for online public deliberation than loud, prejudiced and banal political arguments in crowded pubs are indicative of the breadth of offline political discussion. (Coleman 2004: 6)

Scott Wright and John Street concur with this viewpoint, arguing that 'the democratic possibilities opened up (or closed off) by websites are not a product of the technology as such, but of the ways in which it is constructed, by the way it is designed' (Wright and Street 2007: 850). In analysing developments in online forums, Davy Janssen and Raphaël Kies highlight two design characteristics that have significant impact on the form of interaction between citizens. The first is the 'technical architecture', in particular whether the online discussion space is real-time (chat-rooms) or asynchronous (email list; newsgroups; Bulletin boards; forums). They argue: 'It is generally recognized that the former are spaces that attract 'small talk' and jokes, while the latter constitute a more favourable place for the appearance of some form of rational-critical form of debate.' (Janssen and Kies 2004: 4). The second characteristic is the manner in which online discussion spaces are organised.

They offer a non-exhaustive list of variables that are likely to have an effect on the quality of engagement: whether or not participants are required to identify themselves; limits to openness and freedom of speech; the existence and form of moderation; and the extent to which participants are able to set the agenda for debate (ibid: 5).

To summarise, critics of online engagement are concerned that participants in online forums tend to be self-selecting; talk past each other; engage only with those who reinforce their views; and at times lack civility in their interactions. And evidence suggests that these characteristics of the online world can be tempered or reinforced by institutional design.

In the offline world, it is these very characteristics of political engagement that have led to experimentation with mini-publics: forums constituted by randomly-selected citizens (Smith 2009: 72-110). It is striking that aside from a small number of experiments by James Fishkin and his colleagues who have attempted to transfer the deliberative poll model online (Iyengar et al. 2005; Luskin et al. 2006), there has been no other experimentation with online mini-publics. The results from online deliberative polling (ODP) have been interesting, indicating that policy knowledge and preferences of participants tend to move in the same direction as for participants in offline equivalents, but that 'changes from online deliberation were less pronounced than in the face-to-face version' (Ackerman and Fishkin 2004: 117; for more detail, see Luskin et al. 2006: 17-23).

The design of ODP cleverly exploits the real-time (synchronous), interactive function of the internet: participants (280 in the first ODP) are assigned to small groups which deliberate for between 1 and 2 hours per week over a period of around a month. The groups are led by trained moderators and use voice-operated software to ensure that proficiency in ICT does not affect deliberations. While the structure and results of ODP are worthy of consideration, it is unlikely that such a design would be rolled out by most public authorities since it is time-consuming and requires particular software. It is more realistic to believe that if public authorities are to make widespread use of online mini-publics they are more likely to make use of platforms with which they are already familiar: asynchronous discussion forums being the most likely. ODPs tell us nothing about behaviour and outcomes in such an environment. And the use of asynchronous technology also provides an occasion for public authorities to 'scale-up' engagement: existing mini-publics are often criticised for being too small to be deemed legitimate. But until now there have been no experimental designs that test the efficacy of such an asynchronous online mini-public. It is such an experiment that this paper reports.

The experimental design

The research team worked with Ipsos-MORI to develop a novel internet-based experiment – a randomly-controlled trial (RCT) – to assess the potential of large-scale asynchronous online mini-publics. The experiment involved 6,009 participants, the sample drawn from Ipsos-MORI's survey panel that regularly engage in market research (although none would have been invited to take part in research of this type before).

All 6,009 participants accepted an invitation to take part in a research project in which they would be required to complete three relatively short online surveys over three weeks and then may be asked to undertake other tasks. All participants were offered an incentive to complete the surveys (entry into a prize draw). When they accepted, they were invited to complete the first survey (T1) which included some basic socio-demographic details and a first wave of questions on youth ASB and community cohesion. Quota sampling was employed using early questions on the survey instrument to ensure that the 6,009 selected participants were broadly representative in terms of age, gender, education, geographical location and political interest. Given the nature of the panel, we had to accept that the number of non-white participants would be below the national average and that all participants had some ICT competence; although experience varied widely with many having little or no experience of internet forums. Having selected the sample, it was only at this point that the 6,009 participants were randomly assigned to one of six groups: four treatment and two control groups.

The first two treatment groups are termed the deliberation groups. We use the term 'deliberation' in a relatively broad sense: the conditions were in place for the free and fair exchange of views between all participants, with a moderator ensuring civility in interactions. Participants in these groups were invited to take part in an online forum discussing government social policy: the first group on youth anti-social behaviour (ASB) ('The truth about youth'); the second on community cohesion ('Getting on together'). The forums were hosted on specially commissioned phpBB 3.0.x boards, with engagement

incentivised with additional entries into a prize draw each time participants spent 10 minutes of more online.³ When logging in for the first time, participants were greeted with a video from the then Secretary of State for Communities and Local Government, Hazel Blears, who gave her support for the project and committed herself to consider the issues raised by participants. Every two days new threads (topics) were launched on different issues with accompanying information (a combination of written and video materials), starting with discussions of participants' own experience, through to discussions of government policy and proposals. After 10 days, a second survey was administered (T2) that focused on the topic participants had been discussing. At this point, the threads were closed and the groups switched topic: the youth ASB group moved on to discuss community cohesion and vice versa.⁴ After another 10 days a third survey (T3) was administered based on this second topic. At this point the experiment ended and participants were thanked for their participation.

The third and fourth treatment groups are termed the information-only groups. They were treated in the same manner (including surveys and incentives) with one exception. The phpBB 3.0.x boards were the same, except that while participants were able to post, they were unable to see the postings of other participants. This design feature enables us to investigate the 'added value' of engaging with other participants: the value of online deliberation as compared to only offering information for reflection.

³ It was important to design an incentive that could be used easily by public authorities and did not involve extravagant expense. Mini-publics typically offer an honorarium of around £100 to participants. This would be too much of a cost impediment for such large numbers.

⁴ The rationale of running two groups was to investigate the extent to which participants behaved differently online when initially confronted with a controversial topic where flaming was more likely (i.e. community cohesion). This ordering effect is not discussed in the paper.

Finally, the two control groups (groups five and six) were simply surveyed at the same three points as the deliberation and information-only groups. See Figure 1 for the design of the experiment.

[Figure 1 here]

The value of online deliberation?: the case of youth anti-social behaviour (ASB)

In this paper, we report results from the analysis of data relating to youth anti-social behaviour (ASB) without considering the order in which topics were considered (thus creating three groups of around 2,000). The simplest way to approach the data is to compare results across the three types of treatment groups: deliberation, information-only and control in the intention to treat (ITT) analysis. While there were differences across the groups on a very small number of questions, shifts appear random (there is no obvious consistency between questions where there is some change) and the degree of change means that it is probably down to chance. In other words, we find no systematic differences in opinion and knowledge across the three groups for the ASB questions. The RCT suggests that the provision of information and opportunities to deliberate have no impact on policy opinions and knowledge. See appendix 2 for the comparison of means.

However, the results relate to the intention-to-treat. We are faced with the problem of non-compliance: although members of the treatment groups were invited to participate in online activities, this does not mean that they

accepted the invitation.⁵ We need to carry out comparisons with the control groups where such self-selection has not taken place. This requires a solution, in a similar way to compliance with other experimental interventions, such as “Get Out The Vote” (Gerber et al 2000).

But where compliance with interventions is generally easy to define, it is not so simple in the deliberation group. Who has engaged? The most obvious answer is posting: deliberation here is defined as actively contributing to one or more threads by posting at least once during the experiment. But this may not be an accurate reflection of online deliberation as understood by many analysts of e-democracy. Engaging in deliberation is not just about talking, but also listening and reflecting on contributions. Playing a spectator role, while others make contributions (which may well reflect your own position), can be understood as participating in deliberation. After all, where large numbers are involved, not everyone can speak. It would thus seem strange to define only the speakers as those who have participated in the deliberation. In the online world, such spectators are often referred to as ‘lurkers’ (Jansen and Kies 2005: 331). If we wish to include lurkers within the definition of compliance, then a more suitable definition would include all participants who login to the boards, irrespective of whether they then post. Thus in analysing the data we will investigate the effects relating to two compliance groups: LOGIN and POST.

The non-compliance problem not only creates this definitional question, but also a technical problem of how to compare the compliance groups to the

⁵ Not all participants completed all three surveys: as such there is a difference between intention-to-treat and actual survey compliance.

control. While the randomisation ensures that the intention-to-treat and control groups have broadly similar characteristics, we cannot assume that the characteristics of the compliers in the deliberation and information-only group will be the same. Arguably the most popular approach to dealing with the non-compliance problem in RCTs is propensity score matching (PSM) which in principle allows us to match compliers with an identical population in the control group. But there are two (interrelated) problems with applying PSM to our data. First, we find considerable differences in results depending upon the variables selected for the matching process. Second, although large for a deliberation experiment, the population size is relatively small for effective PSM (Zhao 2004).

Given the limitations of PSM, we instead utilise the Complier Average Causal Effect (CACE) model, a latent variable approach to the estimation of experimental treatment effects in the presence of non-compliance (Jo and Muthen 2001). A latent class (or finite mixture) framework is used to estimate the compliance status of those in both the treatment and the control conditions, allowing 'fair' comparisons to be made between compliers in the treatment condition and 'potential compliers' in the control group. The basic problem in this regard is, of course, that in the control condition compliance status is unobserved and, without additional assumptions, the model is unidentified. The CACE model achieves identification of the latent compliance classes through application of the 'exclusion restriction' (Angrist et al 1996). The exclusion restriction in the context of non-compliance relates to the actual and potential behaviour of experimental subjects and how this is associated with the outcome. Experimental subjects can be categorized as

falling into one of the following 4 categories: (1) compliers – those who comply with experimental procedures; (2) never-takers – those who do not take the treatment when assigned to the treatment condition; (3) always-takers – those who take the treatment even if allocated to the control condition; (4) defiers – those who do the opposite of what they are assigned to do. The exclusion restriction assumes that there are no defiers and no always-takers. In addition to the exclusion restriction, identification of the latent non-complier class is aided by the incorporation of covariates which are predictive of non-compliance.

In this paper we present the analysis of the ITT and CACE model for the responses to two sets of questions relating to youth ASB: (1) perception of youth ASB as a problem; and (2) potential policy solutions (see Appendix 1 for the list of questions).

Results

Does deliberation matter online?

Table 1 offers a comparison of the results of the CACE model (with compliance defined as LOGIN and POST) compared to the ITT for the two sets of youth ASB questions. We provide the mean score and standard deviation for each question for the deliberation group (with compliance defined as LOGIN and POST) in comparison to the control along with the average effect for the two sets of questions.

[Table 1 here]

When comparing the three definitions of compliance – intention-to-treat (ITT), those where compliance is taken to be logging into the site (LOGIN) and those where compliance is taken to be posting at least once (POST) – there is a discernable pattern of opinion change. In all but two of the questions there is a consistent increase in effect size as we move from ITT to LOGIN to POST (ASB23 and ASB31 are the exceptions where LOGIN moves in a different direction). This finding is reinforced when we consider the magnitude of the effect across the two sets of questions. The average effect is very small for ITT, slightly larger for LOGIN and considerably larger for POST. Our first finding, then, is that actively contributing to deliberation in the form of posting has the most significant impact on opinion change. Lurking has little effect.

While effect size is important, on its own it tells us nothing about the consistency of opinions. If we focus on the nine policy questions and take into account effect size (POST minus ITT), then there does indeed seem to be consistency in opinion change with relevant questions grouping together (see Table 2): movement away from legal punishment (ASB27, ASB35) and heavier policing (ASB28) and towards better role models (ASB31) and monitoring by adults (ASB28); and movement away from providing activities (ASB30) or rewards (ASB32) to young people. The two questions which relate to policy options that are arguably least familiar to the public – voluntary parenting classes (ASB34) and written rules of behaviour (ASB33) – show the least opinion change.

[Table 2 here]

This finding that online deliberation (understood as posting) can generate consistent opinion shifts can be further interrogated by focusing on the results from the information-only group. In this case we find little or no movement. These results are presented in Table 3.

[Table 3 here]

For the information-only groups, average effect sizes are small and differences between ITT, LOGIN and POST are fairly negligible. Certainly the differences we witness for the deliberation group (Table 1) are not present: the average effect size for the POST compliance group is not significantly different from the LOGIN or ITT groups.

This comparison between deliberation and information-only groups suggests that interaction between participants has an effect on their preferences. However, it could be that the deliberation group used the support materials more than the information-only group and as such it was their greater use of information that led to the shifts we have uncovered. A simple way of testing the impact of interaction as compared to information use is to run a correlation based on whether participants who posted in the deliberation and information-only group used the support materials at least once during the life of the forums. The results are in presented in Table 4.

[Table 4 here]

This basic correlation shows that for participants who posted there is a significant differential in information use between the two treatment groups. Those in the information-only group (63%) are more likely to access the supporting materials compared to those in the deliberation group (40%). In some ways this should not be such a surprise since the information-only group would not be distracted by the postings of other participants. What these results do suggest then is that it is the interaction between participants in the deliberation group that is shifting opinions rather than the use of information: active engagement with other participants is having the effect.

Who deliberates? A digital divide?

While we have shown that participants who took the opportunity to deliberate (in the sense that they posted at least once during the experiment) were more likely to alter their opinions in relation to youth ASB, we do not know the characteristics of those who complied. To what extent do they replicate the characteristics of the more politically-engaged in the offline world? In other words, does online engagement reinforce political inequalities?

[Table 5 here]

As Table 5 indicates, compliance drops-off as involvement in the experiment becomes more demanding on participants: hence the need to apply a CACE model to compare the different compliance groups with the control. Participation takes time and is not appealing to the majority of citizens. But who are the participants who actively engaged in the discussion forum? Table

6 provides the results of a cross-section logit regression for different forms of compliance, with the deliberation POST group highlighted.

[Table 6 here]

Two findings jump out. First, posters are significantly more likely to be female and have an already high political interest. They are also likely to be older and more highly qualified (although there is some discrepancy here given that level 2 qualification is also significant). The significance of gender and age suggest that available time (unsurprisingly) affects levels of engagement. In many ways the online world mirrors the offline, with well-known variables such as age, qualifications and political interest explaining much of the variation in participation (Verba et al 1978). What is more unexpected, however, is that the frequency of internet use does not appear to affect levels of compliance. In this sense the online world does not appear to create new disadvantage, but rather replicates and reinforces existing political inequalities.

Concluding remarks

Internet discussion forums are proliferating, and public authorities are slowly coming to realise that they may offer a more cost-effective approach to engaging the public in the political decision-making process. Bringing citizen engagement online increases the number of potential participants; potentially broadening the democratic experience. Initial findings from our internet experiment suggest that inviting citizens to participate may not have all the desirable effects that advocates of e-democracy wish for.

Our results indicate that a large-scale online asynchronous mini-public can lead to consistent changes in opinion for those who participate. But there are significant caveats to this finding. First, it is only those groups that actually contribute to discussions – i.e. post – that experience consistent changes in opinion. The claim amongst e-democracy advocates that online deliberation will also have an effect on lurkers (spectators) does not appear to hold in practice. Second, the use of supporting materials is limited amongst the deliberation group. Whilst we find that posters in this group shift their opinions it is only a minority who access background information. This is a significant difference between the online and offline worlds: face-to-face mini-publics are structured such that all participants are exposed to background information on the issue to hand. This cannot be ensured in the online design: accessing information is a matter of choice. The experiment suggests that it is the posts of other participants that are primarily driving opinion change, although further analysis of the data is required to substantiate this finding. Third, the results from the ASB question suggest that shifts in opinion are in a more liberal direction. Whether this finding holds across other ASB questions and on a different policy topic – community cohesion – will be a subject of further analysis. Finally, there is another significant difference between online and offline mini-publics: online moderators have less capacity to motivate engagement (posting) amongst participants than their offline equivalents. While facilitators in face-to-face mini-publics have a range of techniques at their disposal to ensure that all participants contribute (Smith 2009: 83-88), online moderators are limited to posting and emailing participants, encouraging them to contribute. Our findings suggest that traditional differentials in participation are present online: it is the politically-interested

who tend to participate more fully. E-democracy may replicate existing differences in power and influence across social groups.

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TABLES AND FIGURES

Figure 1: the design of the experiment

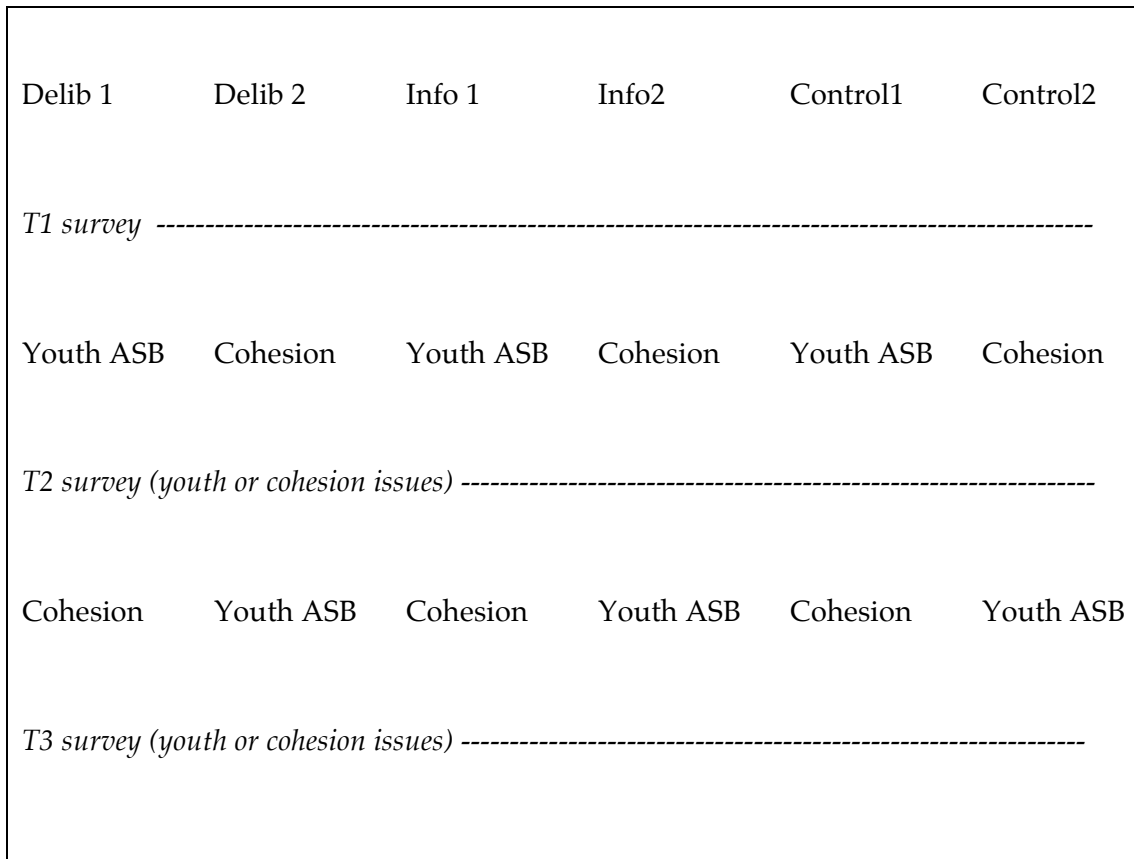


Table 1: Effect of online deliberation

variable name	control-delib ITT	control-delib (CACE-login)	control-delib (CACE-post)
asb20	-0.009 (0.062)	-0.016 (0.106)	-0.024 (0.224)
asb21	0.093 (0.061)	0.189 (0.114)	0.489 (0.225)*
asb22	0.063 (0.063)	0.134 (0.113)	0.260 (0.277)
asb23	0.097 (0.063)	-0.022 (0.033)	0.357 (0.237)
Average effect for perception of ASB questions	0.066	0.090	0.443
asb27	0.101 (0.055)	0.341 (0.112)*	0.917 (0.234)*
asb28	0.069 (0.053)	0.177 (0.108)	0.351 (0.431)
asb29	0.005 (0.052)	-0.066 (0.517)	-0.321 (0.140)*
asb30	-0.001 (0.051)	0.148 (0.108)	0.622 (0.172)*
asb31	0.009 (0.051)	0.175 (0.109)	-0.417 (0.102)*
asb32	0.096 (0.070)	0.227 (0.119) ^(p=.058)	0.450 (0.233) ^(p=.053)
asb33	0.017 (0.070)	0.028 (0.117)	0.105 (0.227)
asb34	-0.107 (0.069)	-0.148 (0.116)	-0.200 (0.208)
asb35	-0.026 (0.070)	0.035 (0.126)	0.245 (0.250)
Average effect for policy questions	0.049	0.149	0.403

Table 2: Policy questions ranked according to effect size

Number	Question	Direction of change	Effect size
asb27	Apply strong forms of legal punishment for young people who misbehave.	Disagree	0.816
asb30	Provide more activities for young people	Disagree	0.623
asb31	Promote better role models for young people	Agree	0.426
asb32	Give rewards to young people who stop committing anti-social behaviour	Disagree	0.354
asb29	Better monitoring of young people by adults in the neighbourhood	Agree	0.316
asb28	Put more police on the streets	Disagree	0.282
asb35	Take legal action against parents of poorly-behaved young people	Disagree	0.271
asb34	Provide voluntary parenting classes	Agree	0.093
asb33	Establish written rules of behaviour for the neighbourhood	Disagree	0.088

Table 3: Effect of information-only

variable name	control-info ITT	control-info (CACE-login)	control-info (CACE-post)
asb20	0.111(0.063)	0.066 (0.046)	0.101 (0.055) ^(p=.067)
asb21	-0.106(0.064)	-0.078 (0.047)	-0.088 (0.056)
asb22	0.178(0.065)*	0.137 (0.048)*	0.146 (0.059)*
asb23	-0.083(0.065)	-0.065 (0.048)	-0.075 (0.057)
Average effect for perception of ASB questions	0.120	0.087	0.103
asb27	0.046(0.057)	0.068 (0.056)	0.039 (0.169)
asb28	0.071(0.053)	0.077 (0.048)	0.052 (0.108)
asb29	0.013(0.053)	-0.089 (0.047) ^(p=.056)	0.065 (0.082)
asb30	0.012(0.053)	0.051 (0.049)	-0.113 (0.054)*
asb31	-0.026(0.053)	0.037 (0.046)	0.038 (0.065)
asb32	0.006(0.071)	0.009 (0.052)	-0.009 (0.062)
asb33	0.117(0.070)	0.080 (0.052)	0.086 (0.064)
asb34	-0.063(0.070)	-0.048 (0.053)	-0.070 (0.064)
asb35	0.054 (0.072)	0.034 (0.056)	0.037 (0.072)
Average effect for policy questions	0.045	0.054	0.057

Table 4: Comparing the use of supporting materials for POST

Used supporting materials at least once	Deliberation POST	Information-only POST	Total
No	317 (60.27)	238 (37.01)	555 (47.48)
Yes	209 (39.73)	405 (62.99)	614 (52.52)
Total	526 (100)	643 (100)	1,169 (100)

Pearson $\chi^2(1) = 62.7302$ Pr = 0.000

Table 5: Compliance across groups

	ITT	Completed survey	LOGIN	POST
Deliberation	2,004	1,409	1,073	526
Information	2,003	1,305	1,216	643
Control	2,002	1,622		

Table 6 Factors that affecting compliance according the level of compliance

Standard errors in parentheses

VARIABLES	deliberatio	deliberation	deliberation	Informatio	Informatio	Information
	n Questionna ire completed	login	post	n Questionna ire completed	n login	post
Female	0.341*** (0.102)	0.196* (0.094)	0.480*** (0.108)	0.077 (0.098)	-0.099 (0.096)	0.001 (0.100)
age 25-34	0.018 (0.179)	0.333 (0.176)	0.064 (0.215)	0.250 (0.184)	0.318 (0.185)	0.166 (0.211)
age_35-44	0.305 (0.179)	0.481** (0.173)	0.195 (0.208)	0.456* (0.180)	0.396* (0.180)	0.436* (0.203)
age_45-54	0.470* (0.185)	0.518** (0.176)	0.337 (0.210)	0.833*** (0.192)	0.517** (0.188)	0.478* (0.210)
age_55+	0.840*** (0.174)	0.723*** (0.164)	0.579** (0.195)	1.037*** (0.177)	0.679*** (0.174)	0.632** (0.195)
Non-white	-0.084 (0.167)	0.264 (0.160)	0.288 (0.172)	-0.306* (0.151)	0.260 (0.155)	0.364* (0.155)
Level 1 qualification	0.228 (0.240)	0.517* (0.218)	0.500 (0.263)	-0.069 (0.236)	0.136 (0.217)	0.335 (0.235)
Level 2 qualification	0.258 (0.216)	0.487* (0.197)	0.576* (0.240)	-0.219 (0.211)	0.234 (0.195)	0.107 (0.214)
Level 3 qualification	0.252 (0.230)	0.340 (0.210)	0.363 (0.258)	0.051 (0.225)	0.406 (0.210)	0.397 (0.227)
level 4-5 qualification	0.333 (0.210)	0.524** (0.191)	0.575* (0.233)	0.082 (0.212)	0.503* (0.196)	0.301 (0.212)
Other qualifications	0.019 (0.223)	0.380 (0.205)	0.496* (0.249)	-0.218 (0.217)	0.161 (0.200)	0.130 (0.219)
Frequent internet user	0.299 (0.214)	0.222 (0.207)	0.503 (0.276)	0.360 (0.190)	0.531** (0.185)	0.309 (0.212)
High political interest	-0.079 (0.113)	0.356*** (0.103)	0.302** (0.114)	-0.161 (0.108)	0.221* (0.106)	0.378*** (0.107)
Constant	-0.162 (0.334)	-1.181*** (0.319)	-2.579*** (0.404)	-0.207 (0.314)	-0.985** (0.304)	-2.037*** (0.343)
Observations	2000	2000	2000	1999	1999	1999

*** p<0.001, ** p<0.01, * p<0.05

Appendix 1

Variable name	Question wording
Perception questions	<i>Survey question: "To what extent do you agree or disagree with the following statements?"</i> 1 agree; 7 disagree
asb20	Youth anti-social behaviour is a major problem for neighbourhoods
asb21	The media make the problem of youth anti-social behaviour appear much worse than it actually is
asb22	When I see a group of young people on the street it makes me feel nervous
asb23	People are less tolerant of young people than they used to be
Policy questions	<i>Survey question: "Do you agree or disagree with the following ideas about how youth anti-social behaviour should be dealt with?"</i>
asb27	Apply strong forms of legal punishment for young people who misbehave.
asb28	Put more police on the streets
asb29	Better monitoring of young people by adults in the neighbourhood
asb30	Provide more activities for young people
asb31	Promote better role models for young people
asb32	Give rewards to young people who stop committing anti-social behaviour
asb33	Establish written rules of behaviour for the neighbourhood
asb34	Provide voluntary parenting classes
asb35	Take legal action against parents of poorly-behaved young people

Appendix 2: Mean Difference Test (ITT)

	T2/3 ASB QUESTIONNAIRE	C vs. D	C vs. I	D vs. I
<p>1. There is a lot of concern these days about young people causing trouble in local neighbourhoods. The government calls this 'youth anti-social behaviour'.</p> <p>Which of the following, if any, are appropriate ways for local residents to deal with youth anti-social behaviour in their neighbourhood?</p>				
1.	Keep an eye out on what is happening in the street	.898	.907	.896
		.871	.891	.873
2.	Talk to young people about their behaviour if they are annoying other people	.364	.392	.433
		.355	.405	.422
3.	Offer their services to a local youth club or organisation	.327	.339	.454
		.331	.367	.325**
4.	Report a shopkeeper who sells alcohol to under 18s	.581	.670	.720
		.559	.693	.709
5.	Step in to stop a dispute between young people	.131	.132	.146
		.129	.120	.127
6.	Local people shouldn't be expected to do anything	.043	.039	.033
		.044	.029	.046
<p>2. What do you think are the main causes of youth anti-social behaviour? (Please select up to three)</p>				
7.	Broken families	.223	.215	.275
		.235	.272*	.215
8.	Poor parenting	.695	.705	.688
		.688	.684	.743
9.	Boredom – nothing for young people to do.	.373	.367	.429
		.371	.405	.316*
10.	A lack of positive role models in families, neighbourhoods and schools	.356	.341	.371
		.371	.325	.376
11.	Neighbours being afraid to intervene early	.069	.064	.033
		.067	.042	.084

12.	Lack of jobs and apprenticeships for unskilled/semi-skilled young people	.164	.160	.150
		.151	.163	.135
13.	Lack of discipline in schools	.292	.299	.316
		.255	.325	.333
14.	Too easy to get social security benefits from the state	.156	.153	.113
		.171	.171	.173
15.	Binge drinking culture	.298	.290	.317
		.292	.254	.287
16.	Video games and music with violent content	.070	.082	.083
		.088	.073	.093
17.	Ineffective policing	.097	.126	.104
		.106	.116	.084
18.	3. As far as you know, what is an asbo?	.878	.877	.839
		.891	.872	.902*
19.	4. Sir Al Aynsley-Green was appointed children's commissioner in march 2005. y/n	.530	.539	.532
		.522	.454+	.486
5. Do you agree or disagree with the following statements?				
20.	Youth anti-social behaviour is a major problem for neighbourhoods	4.51	4.50	4.73
		4.53	4.70*	4.44*
21.	The media make the problem of youth anti-social behaviour appear much worse than it actually is	4.63	4.66	4.41
		4.64	4.48+	4.78*
22.	When I see a group of young people on the street it makes me feel nervous	4.55	4.56	4.82
		5.60	4.80*	4.37**
23.	People are less tolerant of young people than they used to be	4.54	4.53	.445
		4.63	4.38	.458
24.	6. % of anti-social behaviour orders given to young people	.410	.415	.364
		.424	.366	.431
25.	7. the rank of UK for the well-being of children and young people in 21 countries in a 2007 report by UNICEF	.419	.436	.366
		.475	.359*	.452+
26.	8. Apart from parents, which of the following groups do you think should be primarily responsible for dealing with			

	youth anti-social behaviour in neighbourhoods? <ul style="list-style-type: none"> • Local people • The National Health Service • The local authority • The police • The national government • Local religious organisations 			
9. Do you agree or disagree with the following ideas about how youth anti-social behaviour should be dealt with?				
27.	Apply strong forms of legal punishment for young people who misbehave.	5.36	5.39	5.45
		5.44	5.61*	5.37
28.	Put more police on the streets	5.48	5.45	5.47
		5.54	5.55	5.58
29.	Better monitoring of young people by adults in the neighbourhood	5.53	5.54	5.61
		5.63	5.65	5.75
30.	Provide more activities for young people	5.61	5.62	5.57
		5.58	5.63	5.64
31.	Promote better role models for young people	5.63	5.62	5.63
		5.62	5.65	5.74
32.	Give rewards to young people who stop committing anti-social behaviour	4.31	4.20	4.20
		4.36	4.35	4.50+
33.	Establish written rules of behaviour for the neighbourhood	4.41	4.47	4.77
		4.48	4.71*	4.51
34.	Provide voluntary parenting classes	4.57	4.59	4.52
		4.38	5.54	4.54
35.	Take legal action against parents of poorly-behaved young people	4.65	4.61	4.63
		4.67	4.69	4.69
36.	10. As far as you know, what is a parenting order?	.756	.773	.763
		.772	.749	.738
T2/T3 COMMUNITY COHESION QUESTIONNAIRE				

1. Which of the following, if any, are appropriate ways for local residents to promote better relations between different ethnic groups in their neighbourhood?				
1.	• Be friendly to neighbours from different ethnic groups	.895	.868	.869
		.862	.871	.885
2.	• Welcome new migrants to the neighbourhood	.505	.510	.478
		.485	.497	.496
3.	• Encourage young people from across different groups to play with each other	.725	.707	.706
		.709	.699	.750
4.	• Challenge someone who is racially abusing a neighbour	.452	.455	.416
		.446	.417	.467
5.	• Local people shouldn't be expected to do anything to promote better relations	.046	.076	.057
		.088**	.069	.061
2. What do you think are the main causes of tensions between ethnic groups in neighbourhoods?				
6.	• Neighbourhoods are changing too quickly	.067	.070	.061
		.071	.084	.090
7.	• Insensitive policing of local neighbourhoods	.027	.025	.020
		.026	.030	.020
8.	• Communication problems because immigrants do not learn to speak English	.429	.456	.473
		.438	.452	.467
9.	• Too many people being allowed into Britain	.411	.434	.416
		.434	.445	.434
10.	• Immigrants are first in line for jobs, housing and other services	.238	.249	.220
		.236	.230	.235
11.	• Media scare stories	.311	.282	.331
		.297	.310	.270
12.	• People are afraid of cultures and languages they do not understand	.399	.398	.429
		.393	.357	.402
13.	• Immigrants do not respect British values	.370	.379	.322
		.369	.396	.426*
14.	• A small number of racists cause problems	.366	.357	.392
		.352	.376	.295*

15.	• Discrimination by employers towards minorities	.029	.024	.029
		.037	.030	.020
16.	• Not enough public funding for housing	.073	.067	.065
		.057	.047	.070
3. Which do you think are the best ways, if any, to help people from different ethnic backgrounds to get along with each other in their neighbourhoods?				
17.	Youth projects that bring young people from different backgrounds together	.616	.574	.637
		.580*	.600	.594
18.	Neighbourhood mentors or wardens who get to know people in the area	.180	.175	.202
		.146	.197	.143
19.	Twinning schools or places of worship used by different ethnic groups	.144	.127	.184
		.149	.168+	.160
20.	Campaigns to increase local pride in neighbourhoods	.325	.341	.306
		.330	.333	.348
21.	Citizen days to celebrate both national and local cultures	.185	.185	.147
		.173	.183	.172
22.	Information packs about the local neighbourhood for new migrants	.270	.261	.224
		.269	.219	.283
23.	Compulsory English language lessons for non-English speakers	.572	.605	.624
		.601	.578	.648
24.	4. % born abroad	.216	.205	.195
		.201	.196	.221
25.	5. % of faith school in UK	.225	.236	.224
		.278+	.265	.335*
6. Do you agree or disagree with the following statements?				
26.	Relations between different ethnic groups is a major problem for neighbourhoods	4.11	4.16	4.14
		4.17	4.11	4.10
27.	The media make the problem of community relations appear much worse than it actually is	4.20	4.22	4.36
		4.24	4.18	4.21

28.	When I see a group of people from another ethnic group on the street it makes me feel nervous	4.12	4.08	3.97
		4.12	4.14	4.21
29.	People are less tolerant of other ethnic groups than they used to be	4.18	4.19	4.09
		4.24	4.11	4.12
7. There are different opinions about immigrants from other countries living in Britain. (By 'immigrants' we mean people who come to settle in Britain). How much do you agree or disagree with the following statements:				
30.	Immigrants increase crime rates	3.94	3.87	3.76
		3.80	3.87	3.83
31.	Immigrants are generally good for Britain's economy	4.01	4.06	4.04
		4.02	4.08	3.88
32.	Immigrants take jobs away from people who already live in Britain	4.00	3.97	4.02
		4.02	4.09	4.10
33.	Immigrants improve Britain's society by bringing in new ideas and cultures	4.12	4.11	4.00
		3.98	4.06	3.97
34.	8. as far as you know, where do you think most immigrants in Britain are from	.145	.140	.140
		.151	.163	.150
35.	9. in 2007, which country do you think most immigrants came from?	.602	.587	.603
		.569	.608	.541
36.	10. Who do you think should primarily responsible for improving relations between different ethnic groups in your neighbourhood? <ul style="list-style-type: none"> • The national government • The police • Your local council • Local community groups • Local people living in the neighbourhood • Local religious groups • Local schools 	*(see table)		
11. To what extent do you agree or disagree with the following statements?				

37.	Different religious groups should be allowed to run their own schools	4.47	4.52	4.63
		4.45	4.60	4.46
38.	Government policies should promote shared British values	4.38	4.40	4.40
		4.32	4.43	4.41
39.	Speaking good English should be an essential requirement for immigrants	4.55	4.48	4.49
		4.43	4.40	4.58
40.	Immigrants who do voluntary work should qualify for British citizenship faster	4.52	4.45	4.63
		4.42	4.55	4.49
41.	12. Do you think the following statement is true or false? Immigrants generally have a higher level of education than the UK-born population	.292	.239	.263
		.288	.263	.230
13. Now we would like to ask you about your general feelings about people from other ethnic groups. Please describe how you feel about other ethnic groups by making a rating on the following scales.				
42.	warm-cold	3.57	3.59	3.55
		3.49	3.55	3.41
43.	negative- positive	4.42	4.35	4.36
		4.45	4.41	4.46
44.	friendly –hostile	3.47	3.48	3.37
		3.40	3.39	3.44
45.	suspicious-trusting	4.05	3.98	4.04
		4.06	4.02	4.04
46.	respect –contempt	3.48	3.50	3.43
		3.46	3.42	3.44
14. Would you be willing to accept someone from a different ethnic group				
47.	As a close relative by marriage	.889	.876	.910
		.849*	.875	.877
48.	As my close personal friend	.934	.922	.943
		.908+	.940	.943
49.	As a neighbour on the same street	.967	.952	.959
		.951	.957	.980

50.	As a co-worker in the same occupation	.965	.957	.959
		.967	.959	.996**
51.	As a citizen in my country	.893	.878	.898
		.872	.892	.898
52.	As only a visitor in my country	.683	.693	.678
		.673	.718	.643
53.	Would exclude from my country	.151	.168	.114
		.143	.138	.112
54.	<p>15. Do you think the number of immigrants to Britain nowadays should be...</p> <ul style="list-style-type: none"> • Increased a lot • Increased a little • Remain the same as it is • Reduced a little • Reduced a lot 	*	(see table)	
16. To what extent do you agree or disagree with the following statements:				
55.	I feel I belong to my neighbourhood	4.46	4.55	4.51
		4.33	4.63	4.72
56.	I am interested in what goes on in my local area	4.41	4.43	4.54
		4.25*	4.50	4.56
57.	I feel able to influence decisions affecting my local area	4.45	4.56	4.85
		4.19*	4.54	4.54*
58.	<p>How much interest do you generally have in what is going on in politics:</p> <ul style="list-style-type: none"> • A great deal • Quite a lot • Some • Not very much • None at all 	2.70	2.67	2.49
		2.68	2.61	2.54

59.	Would you say: Select one of the following statements	1.58	1.54	1.44
	<ol style="list-style-type: none"> 1. Many of the people in your neighbourhood can be trusted? 2. Some of the people in your neighbourhood can be trusted? 3. A few of the people in your neighbourhood can be trusted? 4. No-one in your neighbourhood can be trusted? 	1.63	1.53	1.56+
60.	Would you be interested in opportunities to participate in online forums discussing similar issues?	(N.A)	(N.A)	1.82
	<ol style="list-style-type: none"> 1. Very interested 2. Quite interested 3. Not very interested 4. Not at all interested 	(N.A)	(N.A)	1.79
61.	How useful did you find the background materials and videos? 1: Very useful to 7: Not at all useful	(N.A)	(N.A)	
		(N.A)	(N.A)	
62.	To what extent do you think your views about youth anti-social behaviour changed as a result of participating in the forum?	(N.A)	(N.A)	3.54
	<ol style="list-style-type: none"> 1. A great deal 2. A fair amount 3. A little 4. Not at all 	(N.A)	(N.A)	3.54
63.	To what extent do you think your views about the relationship between different ethnic groups changed as a result of participating in the forum?	(N.A)	(N.A)	3.79
	<ol style="list-style-type: none"> 1. A great deal 2. A fair amount 3. A little 4. Not at all 	(N.A)	(N.A)	3.76

