

# Deliberation within and across Enclaves – Opinion and Knowledge Change in an Experiment

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## Abstract

The term ‘enclave deliberation’ was first introduced by Cass Sunstein (2002), and it is increasingly used to refer to discussion among like-minded people. The occurrence of group polarization among like-minded people has been recorded in social psychological experiments. Group polarization refers to a phenomenon of like-minded people reinforcing each other’s views and leading to a more extreme position for a group as a result of this. The lack of opposing arguments is also believed to lead to an amplification of cognitive errors.

We designed a population based experiment with a pre-test post-test design in order to test whether deliberative discussion norms interfere with the mechanisms of group polarization. Having surveyed people’s opinions on immigration, permissive and restrictive people were identified and selected to the experiment. We manipulated the group composition in order to compare standard deliberative groups where the participants had disagreeing views with two kinds of like-minded groups, consisting of people who wanted more immigration and people who wanted to restrict immigration. The post-deliberation results suggest that deliberative norms curb group polarization. More precisely, people with anti-immigrant attitudes became more tolerant even when they deliberated in like-minded groups. Further, the learning curves did not differ between people in the like-minded and the mixed treatment.

## Introduction

The increased interest in political discussion among political scientists and theorists has often been motivated by the so-called deliberative turn in democratic theory (Dryzek 2000; Delli Carpini & al. 2004). Theories of deliberative democracy provide normative criteria for the evaluation of processes of political discussion. Moreover, the quality of public decisions can be assumed to depend on the quality of democratic deliberation preceding decision-making. There are several different definitions of deliberation. According to the ‘Habermasian’ view, deliberation can be defined as free and equal communication based on the merits of arguments, such as the sophistication of justifications and the generalizability of values appealed to (e.g. Steenbergen et al 2004). In recent literature, the standards of deliberation have often been relaxed, although the idea of free and equal communication is still in the core of the concept. In a recent article, Mansbridge and her collaborators (2010, 55) define deliberation broadly as “communication that induces reflection on preferences, values and interests in a non-coercive fashion”. Overall, deliberative democrats seem to agree on that deliberation involves both processes of intersubjective communication, including exchange of arguments, as well as internal reflection based on that communication (Goodin 2001).

One of the key features of *democratic* deliberation is the *inclusion* of different viewpoints in the process of exchanging arguments. Indeed, political disagreement is often regarded as the reason why democratic deliberation is needed at the first place. The term ‘enclave deliberation’ was first introduced by Cass Sunstein (2002), and it is increasingly used to refer to discussion among like-minded people. Sunstein has emphasized the problems and risks related to enclave deliberation such as group polarization and the amplification of cognitive errors. Other scholars (e.g. Karpowitz & al. 2009) have stressed the importance of enclave deliberation for political articulation and mobilization, especially for those in disadvantaged positions.

In this paper, we study the question how the outcomes of deliberation vary depending on whether it takes place among like-minded people or among people who disagree on a political issue. Our analysis is based on an experiment where citizens drawn from a random sample deliberated on immigration. The experiment was held in Finland in the spring of 2012. In this paper, we analyze the development of participants’ opinions and knowledge during the experiment in order to test hypotheses on group polarization and the amplification of cognitive errors. The paper is organized in the following manner. First, relevant theoretical

discussion on enclave deliberation is presented. Second, four hypotheses based on this discussion are formulated. Third, the experimental procedure is described. Fourth, the hypotheses are tested with survey data from the experiment. Finally, we discuss the results and provide conclusions.

## **Theory and hypotheses**

Cass Sunstein (2002, 2007) has raised the question of the future of democracy if people only listen and speak to the like-minded. Sunstein has analyzed the problems of ‘group thinking’ which are involved in deliberation in groups of like-minded people. Sunstein has pointed out two possible negative outcomes following from discussions among the like-minded, namely group polarization and the amplification of cognitive errors. Group polarization occurs when deliberation in a group of like-minded reinforces those attitudes and opinions which prevail in the group at the outset. Sunstein (2009, 3) defines polarization as follows: [...] “members of a deliberating group usually end up at a more extreme position in the same general direction as their inclinations before deliberation began”.

Different mechanisms or group dynamics contribute to the emergence of group polarization. In a like-minded group, discussion is based on a limited or biased pool of arguments. In the absence of conflicting viewpoints, people are not encouraged to reflect critically on their preferences and beliefs. People’s desire to strengthen their in-group identity by conforming to the opinions of the majority may also contribute to group polarization. The so-called ‘spiral of silence’ means that, in fear of social isolation, people who think that their political views are unpopular remain silent (Noelle-Neumann 1984). The amplification of cognitive errors refers, in turn, to the corroboration of biased or erroneous epistemic beliefs. This may follow from the fact that alternative viewpoints and counterarguments do not come up in the discussions among like-minded, that is, the pool of arguments present in the discussion is limited. Sunstein (2007, 84-5) also points out that large-scale misconceptions, or ‘informational cascades’ may come up in enclave deliberation because people just follow the cues provided by others in the absence of contrary evidence.

The mechanisms behind the negative consequences of enclave deliberation have been confirmed by social psychological studies on political talk. Sunstein himself (2007, 60-62) provides some experimental evidence on group polarization. In his recent book, he puts forward a summary of social psychological studies showing that groups tend to move towards

the direction of the position which dominates the group initially (Sunstein 2009, 161-168). Group polarization and the amplification of errors are likely to be reinforced by well-known biases in how people process information. 'Confirmation bias' means that people tend to confirm their prior beliefs and to disregard information which is against them (Landemore & Mercier 2012). Social psychological experiments have also demonstrated that group pressures work in the way that people with minority views tend to conform to the views of the majority (Asch 1948, see also Farrar & al 2009).

Experimental evidence on so-called deliberative mini-publics (Goodin & Dryzek 2006) provides an entirely different picture: participants' cognitive errors are commonly corrected rather than amplified and groups de-polarize rather than polarize (e.g. Luskin & al. 2002; Setälä et al. 2010. Grönlund et al. 2010). This may be due to the fact that the inclusion of different viewpoints is ensured in deliberative mini-publics which therefore do not involve deliberation among like-minded. This explanation suggests that the composition of the group where people deliberate contributes to the outcome (Mendelberg & Karpowitz 2007). Sunstein (2009, 48) himself argues "When groups contain equally opposed subgroups, do not hold rigidly to their positions, and listen to one another, members will shift toward the middle; they will depolarize. The effect of mixing will be to produce moderation". However, deliberative mini-publics involve also other procedural features, such as information shared by all participants and the use of moderators which can explain the differences in the results.

In this paper, we analyze the impact of group composition on deliberation in like-minded groups and in groups where the participants' opinions are divided. The analysis is based on an experiment where citizens were invited to deliberate on immigration policy. Based on earlier theoretical and empirical findings, we test the following hypothesis:

- i. Deliberation in enclaves leads to a polarization of opinions.
- ii. Deliberation in mixed groups de-polarizes opinions.
- iii. Deliberation in enclaves amplifies cognitive errors.
- iv. Deliberation in mixed groups corrects cognitive errors.

In the experiment discussed in this paper, we applied the procedures of deliberative mini-publics, apart from group composition which was subject to manipulation. In other words, we look at the effects of group composition while holding the deliberative context constant. In this experiment, participants were therefore provided with some information on the issue and they discussed the issue in moderated small groups.

We are interested in the question whether the context of a mini-public can restrain the negative consequences of enclave deliberation. As a modification to the above-mentioned hypotheses, it may be expected that group polarization and the amplification of errors are not as strong as found in social psychological experiments where people do not deliberate but rather express or signal their views. In terms introduced by Mansbridge et al (2010), we anticipate that the procedures applied in deliberative mini-publics encourage communication that induces reflection on preferences and values. The information provided to participants can be expected to widen the set of arguments in put forward in discussions. Most importantly, the use of moderators and the application of certain rules in small group discussions are likely to enhance free and equal exchange of viewpoints as well as the evaluation of the arguments by their merits.

Although we assume that dynamics and outcomes of deliberation differ depending on the group composition, the set-up of deliberative mini-publics may foster deliberative forms of communication even in groups of like-minded people. This is in line with the argument by Landmore and Mercier (2010) who argue that the composition of the group is neither a necessary nor a sufficient condition for good deliberation but the deliberators' argumentative strategies are equally important. Group polarization and an amplification of errors may be moderated in enclave deliberation if the participants adopt argumentative strategies which help to compensate the biases in the argument pool, for example, by acting as "devils' advocates". We expect that *the deliberative setting may moderate the differences between like-minded and mixed groups*. Therefore, the above-mentioned hypotheses might not hold as strongly as earlier findings in social psychology suggest.

### **Experimental procedure**

The topic of the deliberation experiment was immigration policy, a contested and debated issue in Finland. The main purpose of the experiment was to compare deliberation in two types of small groups: 1) groups consisting of like-minded people, and 2) groups consisting of people who have different opinions relating to immigration. The participants of the experiment were randomly assigned to like-minded groups, mixed groups, and a control group. Subjects in the first two took part in the deliberation event, whereas the control group only filled in three mail-in surveys. The main comparisons are made between like-minded and

mixed groups, whereas the control group was formed in order to see whether certain societal events (e.g. crimes made by or towards immigrants) could have influenced people's opinions.

Participants' opinions were measured before and after deliberation. This means that we are looking at differences both between subjects (the comparison of like-minded and mixed groups) and within subjects (pre-test and post-test measures of opinions). The experiment was not completely randomized because we stratified people into two enclaves based on their initial opinions regarding immigration. Respondents with negative attitudes to immigration formed a *con* enclave, whereas respondents with a positive view on immigration formed a *pro* enclave.

A short survey (T1) was first mailed out to a simple random sample of 12,000 adults in the Turku/Åbo region. Of the addressed sample, 39 percent (n = 4,681) responded to the survey. T1 consisted of 14 questions whose aim was to measure the respondents' attitudes on immigration. The questions were first pilot tested with students at two universities in order to measure their appropriateness for the purpose of the experiment. All survey items worked well both in the pilots and in the actual survey conducted among the random sample (T1). In the surveyed sample, all 14 items loaded on one single factor and Cronbach's Alpha of the sum variable reached 0.94. Therefore, we were able to construct a sum variable of the 14 items. Each item was first recoded into a scale from 0 to 1 so that 1 indicates the most immigration friendly attitude. The questions are listed in Appendix A. Figure 1 shows the initial dispersion of attitudes among those respondents who had allowed further contacts (n=3,232) from the research group.

Figure 1 about here

The histogram shows that the initial opinions almost followed a normal distribution. Thus, we felt confident to use the sum variable as a ground for creating the *con* and *pro* enclaves. Since the design of the experiment required people with clear views on the immigration issue, we excluded moderates, i.e. respondents whose opinions on immigration were close to the middle on the 14 item scale (n= 631)<sup>1</sup>.

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<sup>1</sup> Those whose value for the sum variable was > 8.3 were included in the *pro* enclave, and those whose value was < 6.7 were included in the *con* enclave.

The second survey (T2) with 37 items and an invitation to take part in a deliberation (and a separate debriefing event) was sent to 2,601 people who qualified as members of either the *con* or the *pro* enclave. At this point, it was clearly stated that a deliberation event was a part of the research project and that a response to the survey meant a preliminary agreement to take part in it. Further, it was clarified that not all those who volunteered could be included in the deliberation event and that the choice would be made by lot. However, compensation was promised (and given) to everyone who would participate in the following stages of the project. A gift certificate worth 90 euros would be given to each participant of the deliberation and debriefing events and fifteen euros would be given to those whose task was only to fill in surveys.

Eventually, 805 people volunteered, and 366 were invited to take part in the deliberation event. The final target sample was 256 participants which would allow 32 small groups of eight (eight *pro* like-minded, eight *con* like-minded and sixteen mixed groups). The invited sample was based on stratified sampling in order to guarantee representation in terms of the *pro* and *con* enclaves as well as age and gender. Within the four strata (young/old, men/women), random sampling was used. Unfortunately, the target of 256 deliberators was not achieved and only 207 people showed up. Especially people in the *con* enclave tended to abstain at this final stage, even though there were no indications of this kind of a bias at the earlier stages of the recruitment process. Figure 2 shows the phases of the recruitment process.

Figure 2 about here

Since part of the people with anti-immigrant attitudes dropped out at the final recruitment stage, we wanted to check if the sample of people turning out to deliberate was skewed when it comes to attitudes. In table 1, comparisons between the preliminary invited sample (n=2,601), the initially volunteered respondents (n=805), the invited (n=366) and the actual participants (n=207) are made within the two enclaves. It can be seen that the participants in the *con* enclave were slightly more moderate, i.e. less anti-immigrant, compared to the whole enclave at earlier stages. In fact, the difference in opinions in the *con* enclave between the participants (n=86) and the ones who did not show up (n=97) is statistically significant at the .01-level. Put in other words, it was harder to attract people with the most anti-immigrant opinions to present their views in a deliberative event. In the *pro* enclave, the participants

were slightly more liberal than the mean of the whole enclave at earlier stages. This difference was not, however, statistically significant.

Table 1 about here

At the deliberation event, the small groups were randomly formed within the *con* and *pro* enclaves yielding *ten pro like-minded groups*, *five con like-minded groups* and *eleven mixed groups*.<sup>2</sup> The control group consisted of 369 people who were initially willing to take part and who returned each of the surveys T1, T2 and T4. Table 2 displays the assignment into small groups.

Table 2 about here

The deliberation event took place during one weekend, 31 March and 1 April 2012. The participants were divided into two groups and each participant took part only on Saturday or on Sunday. Each day, the event followed the same procedures and lasted from 9.30 am until 3 pm. The day started with a short quiz measuring immigration related knowledge and general political knowledge (15 items in all). After the knowledge quiz, the participants were shortly briefed about some basic facts related to immigration in Finland. The briefing was designed to be unbiased and focused on basic facts, and was presented as a slide show in an auditorium with all participants. A copy of the information was also handed out to each participant.

After the briefing, facilitated small group discussions began in each group's own location. Each small group consisted of eight participants and a moderator.<sup>3</sup> The group discussions lasted for four hours including a 45 minutes lunch break. The group discussions ended with a survey (T4) repeating the questions in T1, T2 and T3, apart from socio-economic background variables. It also included questions related to the participants' experiences of the deliberation event.

The phases of the experiment are listed in Table 3. In each small group, trained moderators facilitated the discussion. A written description of the rules of the discussion was handed out to the participants in the beginning. It emphasized respect for other people's opinions, the

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<sup>2</sup> One of the mixed groups was a Swedish speaking group allowing participants to talk in their mother tongue.

<sup>3</sup> Because some individuals did not show up three groups consisted of nine participants, two of seven participants and one of six participants. All mixed groups, however, had eight participants, four from both enclaves.



importance of justifying one's opinions and openness to others' points of view. The moderators also read aloud these rules. In the beginning of the group discussion, each group member put forward a theme related to the immigration issue which they wished to be discussed. The moderator wrote these themes down on a blackboard. After this, a free discussion on the themes followed. The moderators interfered only if any of the group members dominated the discussion or completely withdrew from the discussion. Further, the moderator could put forward a theme for discussion from those written down on the board in case the discussion paused, and interfere if crude or disrespectful utterances were made.

Table 3 about here.

## Results

The hypotheses are tested through various contingency tables, whereas the statistical significance of potential differences and changes is determined through t-tests. Finally, we also look at multivariate regressions in order to gain a better understanding of the determinants of opinion change at the individual level. We compare both the development of opinions and knowledge according to the four groups achieved by the combination of enclave and treatment (see Table 2). The comparisons are mainly done within the samples (pre- and post-test), and through between samples testing when applicable.

First, we test the hypotheses on the effect of treatment on opinions. Hypothesis i) state that a polarization of opinions occurs in a like-minded deliberation, whereas hypothesis iii) assumes that the opposite occurs in a mixed-group deliberation. Table 4 investigates the development of opinions in the course of the experiment. We compare opinions before (T1) the event, after deliberation (T4) and in the follow-up survey (T5) three weeks after the event.

Table 4 about here

First, it can be seen that there were three statistically significant opinion changes during the experiment. All of these were in the direction of a more liberal attitude towards immigration. The most prominent change occurred among the participants of the *con* mixed groups. Here, the initial mean on the sum variable was 4.33, and it increased to 6.12 after the experiment. The increase of 1.8 units is significant at the .001 level and corroborates hypothesis ii). The *pro* mixed group participants did not, contrary to hypothesis ii), on average change their

opinions when deliberating with “the other side”. Thus, depolarization in the mixed treatment was unilateral, since only persons with anti-immigrant attitudes shifted towards the mean. Those initially permissive towards immigration did not alter their opinions.

Moving on to the like-minded treatment, table 4 shows that the *con* like-minded groups did not polarize in comparison to their initial opinions. On the contrary, these people became more permissive toward immigration as a result of deliberation. The change of 0.67 units is not as large as among the *con* participants in the mixed groups, but still significant at the .01 level. This development works against hypothesis i). In the *pro* enclave, only the like-minded groups show a barely statistically significant (.05) mean change of opinions. These groups polarized slightly, according to the assumption in hypothesis i)<sup>4</sup>.

In appendix B, the opinion changes are presented as histograms at the individual level. There are five histograms, first for the whole sample and then for the four groups as in table 4. The histograms show that most changes were rather small but that especially the participants in the *con* enclave assigned to the mixed treatment became clearly more tolerant towards immigration as a result of deliberation.

How persistent were the opinion changes? Looking at the follow-up survey T5, we can see that the only statistically significant change between deliberation and the follow-up survey was a continued tendency among the *con* like-minded groups to become more tolerant towards immigration. This, again, is contrary to hypothesis i). The results draw a somewhat unclear picture. There is a clear de-polarization of opinions among the anti-immigration participants who were subject to the mixed group treatment, but also their peers in like-minded groups show a more permissive post deliberation attitude. Moreover, the latter continued to become more tolerant after deliberation. Among the participants in favor of immigration, the development of opinions was almost non-existent. The impact of the deliberative rules might explain the mixed patterns obtained in the experiment.

A minor observation concerning table 4 is the comparison made within enclaves at T1. This is done in order to trace possible initial differences between the subjects that were randomly

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<sup>4</sup> The overall patterns found at the aggregate level were confirmed in a separate group-by-group analysis. It turned out that none of the small groups behaved in a deviant manner. In 9 (out of 11) of the mixed groups, in 4 (out of 5) of the *con* like-minded groups, and in 7 (out of 10) of the *pro* like-minded groups the change was positive from T1 to T4.

allocated into the two treatments within both enclaves. The participants who were randomly assigned into the like-minded treatment were in both enclaves closer to the middle point than the participants whose lot was to deliberate in mixed groups. In the *con* enclave the difference was .73 and in the *pro* enclave .48, both statistically significant at the .05-level. This means that, chosen by lot, the participants in the enclave treatment were more moderate than the participants in the mixed treatment. It is impossible to establish if this initial division had any influence on the outcome within the treatments.

In order to understand the scope of opinion change in terms of individuals, table 5 shows people who changed sides as a result of deliberation. It compares the participants' pre and post deliberation attitudes. Moreover, the post deliberation attitudes are looked at anew at the follow-up survey T5.

Table 5 about here

Changing sides only occurred among persons who initially were critical towards immigration. No one in the *pro* enclave became negative beyond the middle position. At the end of the deliberation day (T4), 27 persons belonging to the *con* enclave had become permissive towards immigration; the sum variable for immigration attitudes had for their part exceeded the value of 7 on the 0 to 14 point scale. A majority of these, as table 4 already indirectly implied, were subject to the mixed treatment. When people with anti-immigrant attitudes faced counter arguments, many of them became clearly more positive toward immigration. However, also 10 people in the *con* like-minded groups changed sides.

Moving on to the follow-up survey, the trend to more permissive attitudes continues among the *con* enclave and especially in the participants of the like-minded groups. In the period between the deliberation day and the follow-up survey, six more people in *con* like-minded groups had become supporters of more immigration. To sum up, 18 out of 44 in the *con* participants in mixed groups had changed sides as a result of deliberation, and 16 out of 42 anti-immigrants deliberating with like-minded people had changed sides at the follow-up survey. Altogether 34 of the total of 86 anti-immigrants in the experiment became clearly more tolerant towards immigration as a result of the experiment. *Forty per cent of the participants with anti-immigration attitudes became permissive toward immigration as a result of the experiment.*

Table 6 reveals how the control group performed during the same time period. It can be seen that within the control group, attitudes toward immigration changed as well. The *con* enclave became slightly more permissive, whereas the *pro* enclave became slightly more critical. Put in other words, participation in a three wave panel study on immigration led to a depolarization of opinions among the sample. It seems probable that people who responded to the survey became more aware of the immigration issue and probably reflected upon it even though they did not participate in deliberations or receive any additional information from us on the topic. They might, for example, have sought more information on their own and reflected on it.

Table 6 about here

Next, in order to test hypotheses iii) and iv) we analyze knowledge change in the course of the experiment. Hypothesis iii) suggest that deliberation in like-minded groups amplifies cognitive errors, whereas hypothesis iv) anticipates that deliberation in mixed groups corrects cognitive errors. The knowledge questions were grouped in three subsets. First, there were six questions pertaining to immigration on which information was given in the beginning of the deliberation event. Second, there were four questions on immigration on which information was not given by the organizers. Third, there were five questions measuring general political knowledge. In table 7 we look at the learning effects by treatment and enclave. The table only includes the ten items related to immigration knowledge (for a detailed development of all knowledge items, see appendix C).

Table 7 about here

All participants learned a lot during the experiment. The learning effects were large and similar in all four groups. Neither treatment nor attitudes toward immigration had an effect on the learning curve. In fact, the pre-event knowledge shares were quite similar across the four groups as well. For all participants, the mean share of correct answers increased from 43 per cent to 63 per cent, and the information gains were recorded for questions on which information was given at the event (see Appendix C). This indicates that the correction of erroneous beliefs occurred both in mixed and like-minded groups to a similar degree, backing up hypothesis iv) but working against hypothesis iii). Initially, there were small differences within enclaves between the subjects who were randomly assigned to the like-minded vs.

mixed treatments. These differences were not statistically significant, neither were the differences within enclaves at T4.

Within the set of questions relating to immigration where no information was provided by the organizers there were two open-ended questions (questions 9 and 10 in Appendix C)<sup>5</sup>. They can be used to examine the hypothesis concerning cognitive errors. These questions pertained to the level of unemployment among immigrants (correct answer 27 per cent) and the level of a social security benefit received by an unemployed immigrant per month (correct answer 757 euros). It can be assumed that attitudes towards immigration are related to people's perceptions on the social problems and costs caused by immigration. Therefore, it may be assumed that those who have negative attitudes towards immigration might overestimate both the level of unemployment and social security benefits, and the opposite could be the case among supporters of immigration.

Whereas the coding of the open-ended questions in table 6 followed the binary logic of 'correct' and 'non-correct'<sup>6</sup> answers, we also examined the distance of the respondent's answers from the correct answers. When looking at the responses to these open questions before deliberation (T3,) it turns out that both those for and those against immigration tended to underestimate the unemployment rate and the level of social security. Among the participants in the *con* enclave, 42.2 per cent underestimated the unemployment rate. In the *pro* enclave, the share of people underestimating the unemployment rate was even higher: 53.3 per cent. The level of social security benefits for unemployed immigrants was underestimated by 67.5 percent in the *con* enclave and 68.1 percent in the *pro* enclave. However, overestimation was more common among those against immigration than among those for immigration as 33.7 per cent in the *con* enclave overestimated the unemployment rate (23.3 per cent in the *pro* enclave) and 21.7 per cent overestimated the level of benefits (10.1 per cent in the *pro* enclave). This gives some support to the assumption that attitudes towards immigration are related to the perceptions of the costs of immigration. However, the responses to the open-ended questions in T4 do not support the hypotheses on amplification of cognitive errors. The differences in the under- or overestimation of the unemployment rate and the social security benefit are not statistically significant, when comparing the four groups of enclaves and treatments with each other.

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<sup>5</sup> All other knowledge items were put forward as multiple choice questions with four alternatives.

<sup>6</sup> The intervals of acceptance for correct answers were defined as follow: 24-30 per cent for the unemployment rate, 700-800 EUR for the integration assistance.

Finally, we want to analyze the individual level attitude changes in a multivariate setting. For this purpose, table 8 shows the results of an OLS regression where the change in attitudes between pre and post deliberation (the dependent variable being the sum variable T4 minus the sum variable at T1) is analyzed with a number of independent variables. We only list a parsimonious model with significant variables. The non-significant variables which were tested are listed under the table.

Table 8 here.

First of all, none of the standard socio-economic or attitudinal control variables explain change in immigration attitudes between T1 and T4 (many of them, such as education, social trust, religiosity and ideology do explain baseline attitudes on immigration at T1 but those results are not listed here). Moreover, neither knowledge nor knowledge gains explain change in attitudes toward immigration, which suggests that immigration attitudes are not dependent on knowledge. Only four variables explain attitude changes. First of all, as expected based on tables 4 and 5, people in the *con* enclave who were subject to the mixed group treatment became most positive in the deliberation. Also those persons in the *con* enclave (n=28) who had an immigrant in their small group deliberation were affected towards a more permissive attitude.

People who agreed with the statement that also persons who disagree with them may have good grounds for their opinion changed their opinions more into a liberal direction than people who disagreed with the statement. This means that those who were open to arguments from the other side were more likely to change their minds towards more permissive direction. These people were mostly in the *con* enclave but for some reason the interaction term did not reach statistical significance. Finally, we have the negative effect of mixed groups and group tension. Participants in the mixed treatment were less inclined to change into a liberal direction if they felt that some participants interrupted and dominated the discussion, or they had difficulties listening to disagreement. It is possible that these people felt less empowered when facing strong and deviant opinions. Another possible explanation is that these people have a low deliberative “capacity”, i.e. it is not easy for them to face disagreement and they do not change in the same way as the large majority does.

## Conclusions

Our experimental results show neither systematic patterns of group polarization nor any amplification of errors in the like-minded groups. Only partial support for hypotheses i) and ii) concerning attitude changes was obtained. Those people in the *con* enclave who deliberated in like-minded groups did not become more extreme. On the contrary, they became more permissive towards immigration. In the mixed groups, participants in the *con* enclave became more permissive in mixed groups, but people from the *pro* enclave did not become more critical towards immigration. Concerning the hypotheses (iii and iv) on the amplification of cognitive errors, the participants who were assigned to mixed groups did not learn more than participants in the like-minded groups. All participants learned to a substantial degree but this was mostly as a result of the information given to them during the deliberation event. There were no differences in the average learning curve between the two enclaves and treatments.

These results support the view that organized deliberation is different from other forms of political talk. For students of democracy in general and deliberative democrats in particular, the implication is that discussion procedures have a strong impact on outcomes, perhaps even stronger impact than the initial viewpoints of the group members. It is worth pointing out that there were some significant opinion changes within the control group, which confirms that people may reflect on an issue just because they are participants in a panel study. However, the fact that the opinion changes in the control group did not follow the same patterns as the opinion changes in the experimental group suggests that deliberation as an intersubjective process has logic of its own.

The results of the experiment suggest that polarization and the amplification of errors are not by any means ‘automatic’ consequences of biases in group composition or, more precisely, in the initial dispositions of the group members. In this experiment, the group composition had an impact on the development of attitudes, but this impact was asymmetric. Opinions in support of immigration were more influential in the course of deliberation since all significant opinion changes were to the direction of more permissive attitudes towards immigration. The follow-up survey indicates that the development of the opinions to this direction continued even after the experiment. The regression analysis suggests that opinion changes during the experiment were at least partially driven by arguments put forward in the groups. However, also other group dynamics, such as group tensions (in a negative manner) as well as the

presence of an immigrant in the group (in a positive manner), affected the development of attitudes.

Overall, our study appears to lend some support to the idea of ‘progressive vanguardism’ as a substantive characteristic of democratic deliberation. (Neblo (2007, 548-9; see also Gerber & al. 2013). The idea of ‘progressive vanguardism’ with its emphasis on emancipatory effects of deliberation is controversial since it raises questions regarding the leftist underpinnings of deliberative democracy. Regardless of misgivings about ‘progressive vanguardism’, deliberative democrats seem to share the idea that all arguments and viewpoints should *not* have an equal weight in deliberative processes. Most notably, arguments appealing to generalizable moral principles should prevail whereas arguments based on attitudes such as prejudice should be ‘laundered’ in the course of deliberation (see e.g. Goodin 1986). The results of our experiment seem to be in line with this idea because they clearly show an increase in tolerance towards immigrants.



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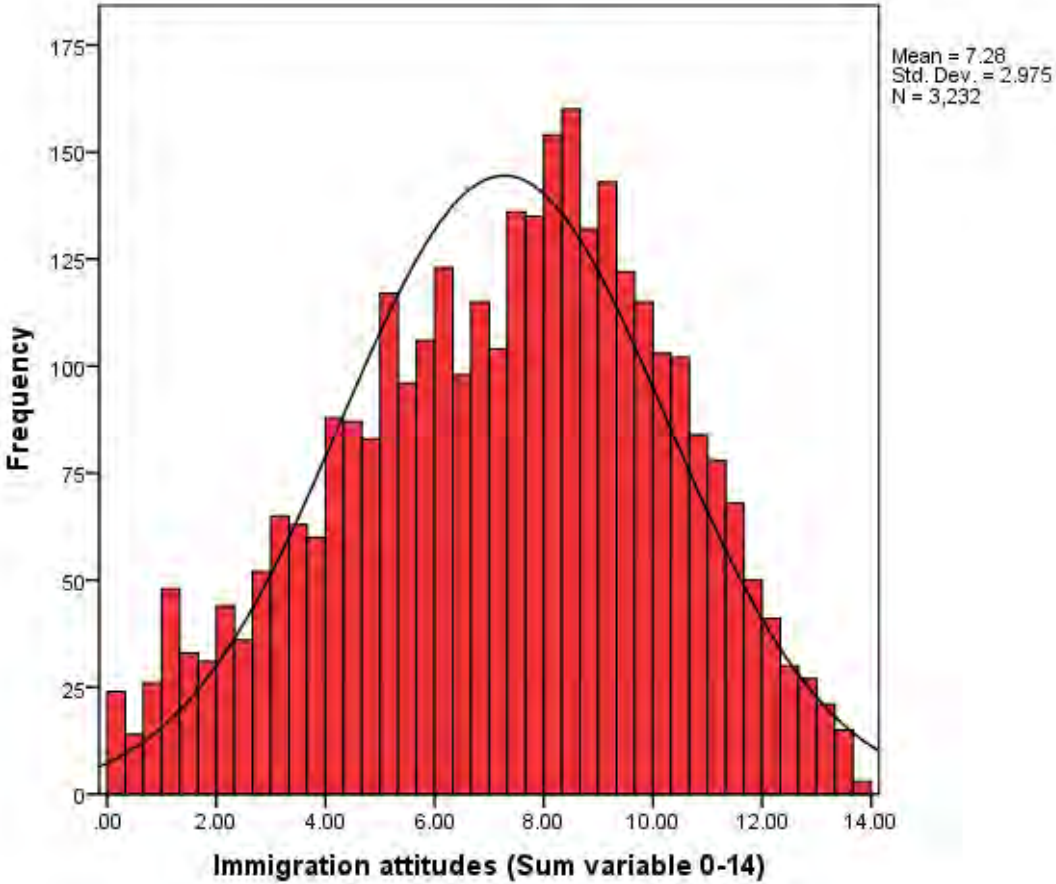
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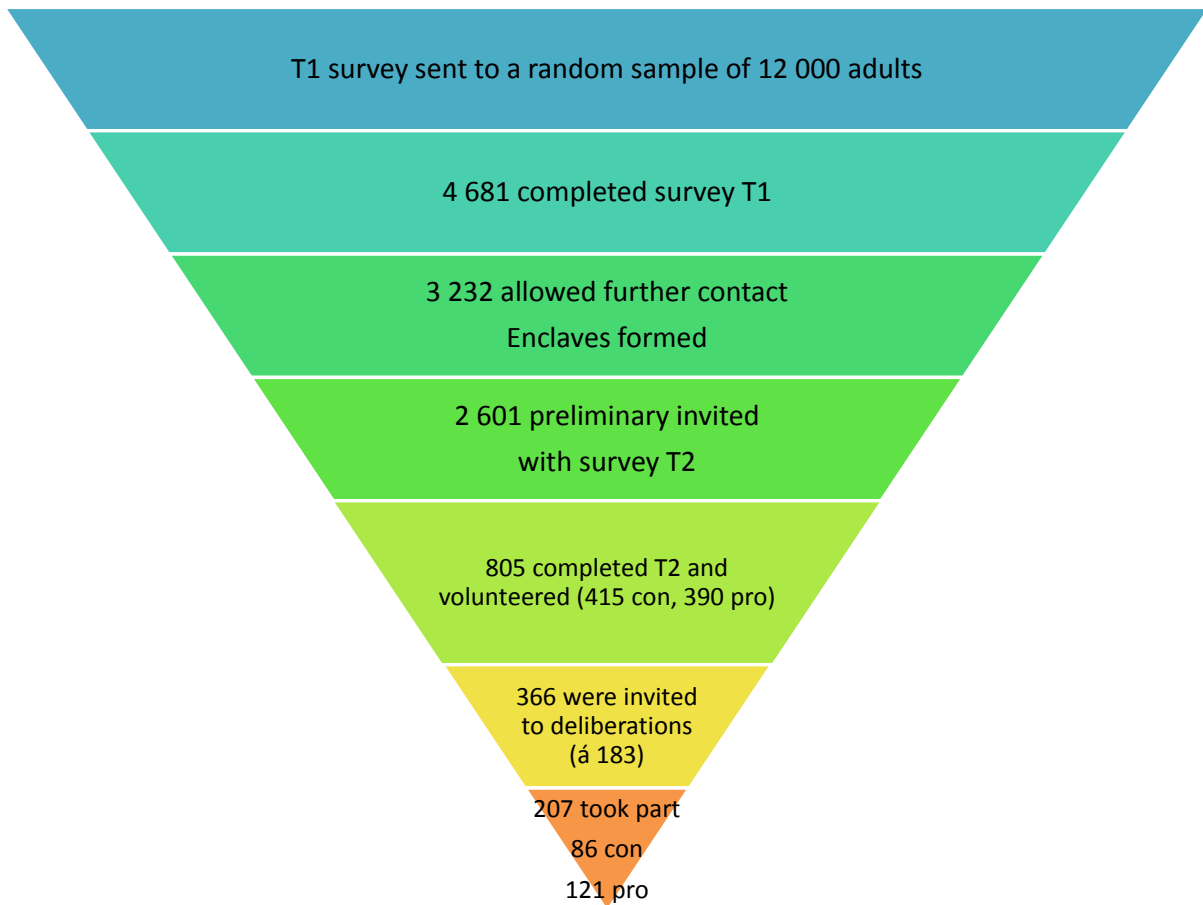
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Figure 1. The dispersion of initial attitudes on immigration among the respondents.



**Figure 2. Recruitment and attrition**



**Table1. The mean of immigration opinions at T1**

Comparisons between the participants and the sample at different stages.

	N			Sum of immigration opinions at T1	
	All	Con	Pro	Con	Pro
Preliminary invited	2601	1304	1297	4.28	10.15
Initially volunteered	805	415	390	4.25	10.17
Invited	366	183	183	4.33	10.24
Participated	207	86	121	4.68	10.26

**Table 2. Group formation**

		Randomization	
		Like-minded	Mixed
Stratification	Con	Con like-minded (n = 42)	Con mixed (n = 44)
	Pro	Pro like-minded (n = 77)	Pro mixed (n = 44)

**Table 3. The phases of the experiment.**

<b>Pre surveys</b> (January 2012)
1. Short survey to form enclaves (T1)
2. Second survey with invitation (T2)
<b>The deliberation event</b> (March 31 – April 1, 2012)
3. Quiz measuring knowledge (T3)
4. General instructions and briefing on the immigration issue
5. Small group discussions (4 hours, incl. 45 min lunch break)
6. The fourth survey measuring opinion and knowledge changes and experience of the event (T4)
<b>Debriefing</b> (April 20, 2012)
7. A follow up survey measuring the stability of opinion changes (T5)
8. Participants debriefed about the experiment and given their reward for participation

**Table 4. Opinion change by enclave and treatment**

	Before (T1)	After (T4)	Change (T4-T1)	Sig.	Follow up (T5)	Change (T5-T4)	Sig.	N
Con like-minded	5.05	5.73	0.67	**	6.15	0.42	*	42
Con mixed	4.33	6.12	1.80	***	6.32	0.20		44
Diff.	0.73	-0.39			-0.17			
Sig.	*							
Pro like-minded	10.44	10.73	0.29	*	10.60	-0.12		77
Pro mixed	9.95	9.90	-0.06		10.04	0.14		44
Diff.	0.48	0.83			0.56			
Sig.	*	**			*			

Mean values for a sum variable measuring opinions on immigration. The variable can vary between 0 (against) and 14 (in favor).

Sig. \* < .05 \*\*< .01 \*\*\*< .001

**Table 5. Did the participant change sides during deliberation (compared to T1)?**

At T4	Yes		No		Total
	Like-minded	Mixed	Like-minded	Mixed	
Con	10	17	32	27	86
Pro	0	0	77	44	121
Total	10	17	109	71	207

At T5	Yes		No		Total
	Like-minded	Mixed	Like-minded	Mixed	
Con	16	18	26	26	86
Pro	0	0	77	44	121
Total	16	18	103	70	207

**Table 6. Attitude changes in the control group**

	Before (T1)	After (T4)	Change	Sig	St.dev. Before	St. dev. After	N
Con	4.21	4.7	0.5	***	1.76	2.02	194
Pro	10.06	9.55	-0.51	***	1.34	1.54	175
Diff.		5.85	4.84				
Sig	***	***					

Sig. \* < .05 \*\*< .01 \*\*\*< .001

**Table 7. Knowledge gains according to treatment and enclave.**

Per cent shares of correct answers.

	Before (T3)	After (T4)	Change Sig.
Con like-minded	43	62	19 ***
Con mixed	37	59	22 ***
Diff.	6	3	
Sig.			
Pro like-minded	46	65	19 ***
Pro mixed	43	65	22 ***
Diff.	3	0	
Sig.			
All participants (N=207)	43	63	20 ***

Sig. \* &lt; .05 \*\* &lt; .01 \*\*\* &lt; .001

Mean of the 10 items relating to immigration knowledge (see appendix C for details).

**Table 8. OLS regression of the determinants of attitude change**

	Change T4-T1	
	B	t p
Interaction con enclave and mixed group	1.38	4.8 ***
Interaction con enclave and immigrant in group	0.80	2.8 **
Understands the other side	1.20	2.1 *
Interaction mixed groups and participant felt group tension	-1.46	-2.4 *
F	16.5	***
R-sq.	0.251	
N	207	

Significant at \* .05-level, \*\* .01-level, \*\*\* .001-level. Two-tailed test.

All independent variables coded into a scale from 0 to 1.

Non-significant controls:

Gender, age, education, employed, married, left-right ideology, political interest, interest in immigration politics, religiosity, internal efficacy, external efficacy, social trust, immigration knowledge at T3, change in immigration knowledge, group tension, immigrant in group, con like-minded group, pro like-minded group, interaction con enclave and understands the other side, prefers discussing with like-minded, interaction con enclave and prefers discussing with like-minded

Participant felt group tension is a sum variable (mean of):

- Some participants dominated the discussion too much.
- Other participants interrupted when it was my turn to speak.
- I found it difficult to listen to people who disagreed with me.

Understands the other side:

Someone who does not agree with me on immigration may have good grounds for their opinion.

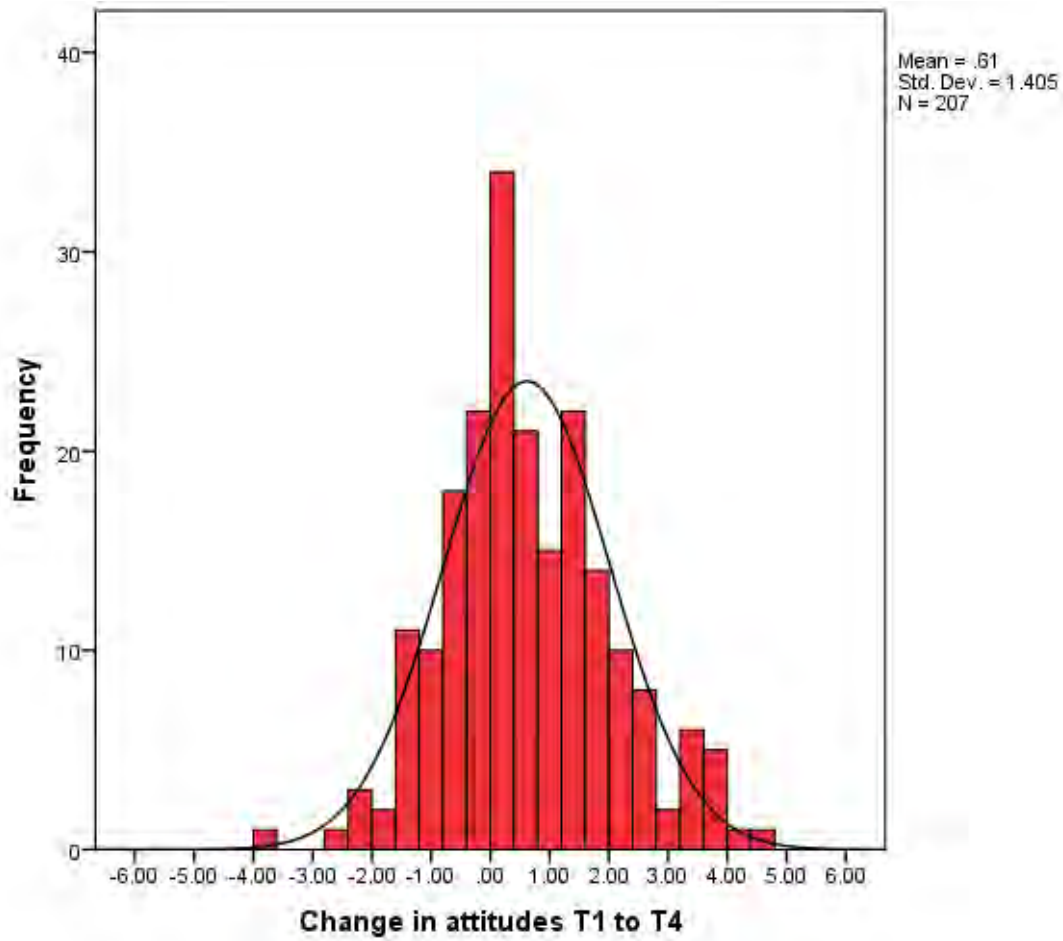
**Appendix A.** The main items measuring attitudes on immigration.

1. Finland should take more immigrants. Do you think this is a bad or a good suggestion?
2. Migration of foreigners into Finland should be restricted as long as there is unemployment in Finland. [r]
3. Do you think Finland will change into a better or a worse place to live when people from other countries move to Finland? (Questions 1 to 3 were presented on a scale from 0 to 10).
4. It is good for the Finnish economy that people from other countries move to Finland.
5. Immigrants take away jobs from native Finns. [r]
6. Immigrants should have the same right to social security as Finns even if they are not Finnish citizens.
7. The state and the municipalities use too much money to aid immigrants. [r]
8. Immigration poses a serious threat to our national originality.
9. Everyone who wants to come to Finland to live and work should be allowed to do so.
10. Immigration policy should primarily favor Christians instead of other religions. [r]
11. Generally speaking, immigrants adapt well into the Finnish society.
12. I would be happy to have an immigrant as a co-worker.
13. I would accept an immigrant as a family member.
14. I would accept immigrants in my neighborhood. (Questions 3 to 14 were presented as a standard Likert scale with four values).

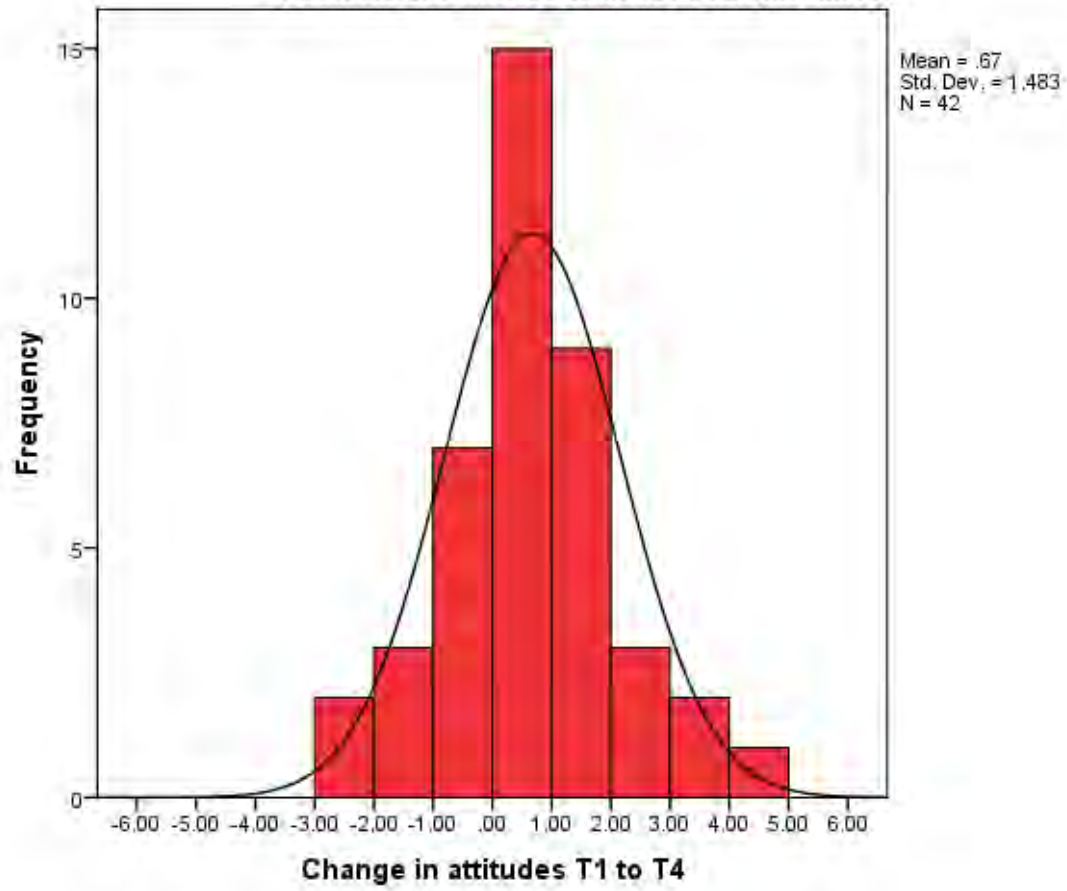
[r] = Reversed coding in the sum variable

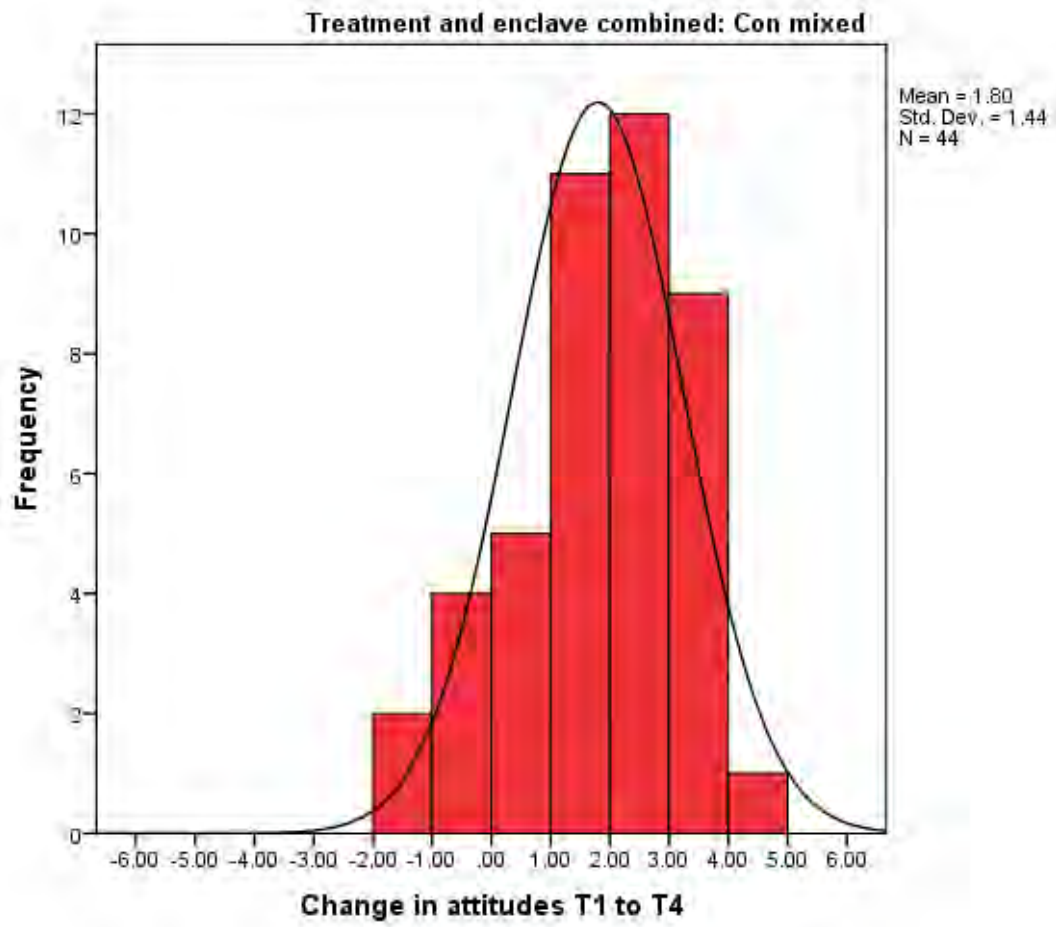


**Appendix B.** Histograms for opinion changes at the individual level during deliberation

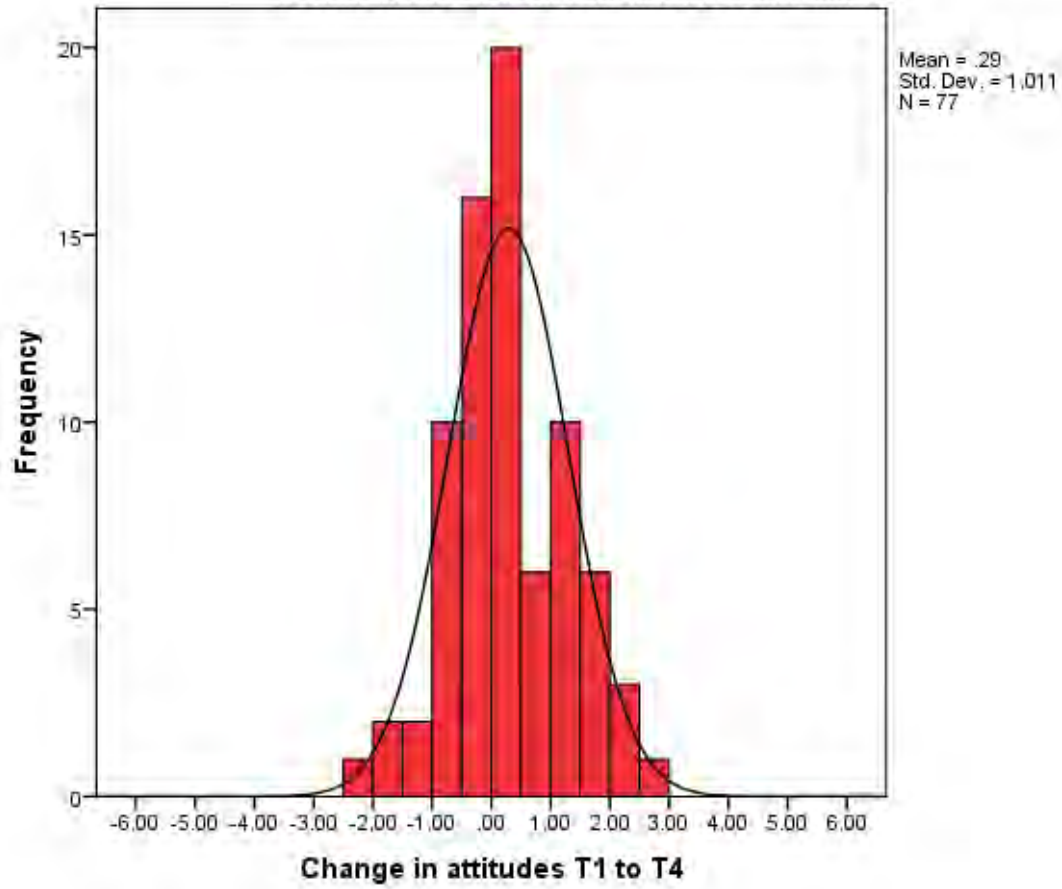


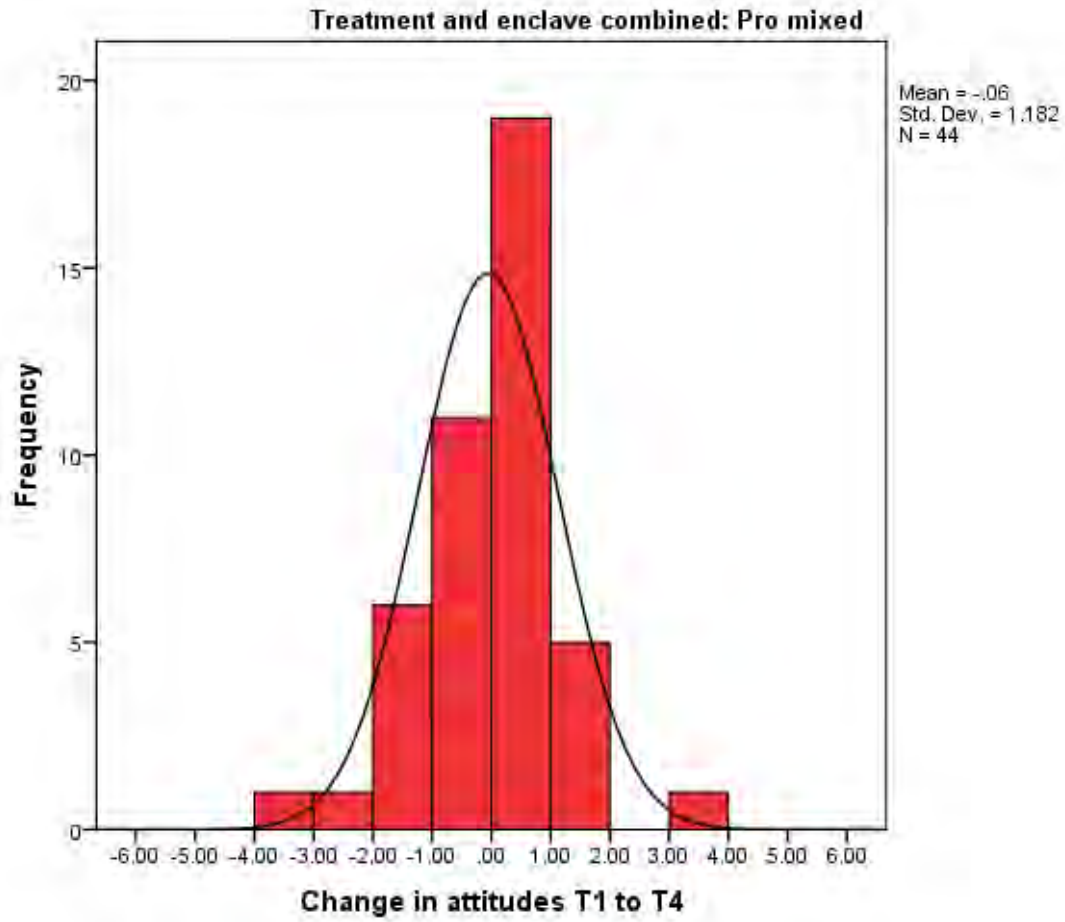
Treatment and enclave combined: Con like-minded





Treatment and enclave combined: Pro like-minded





## Appendix C. Knowledge gains within treatments (shares of correct answers)

Item	Like-minded N=119				Mixed N=88			
	Before	After	Change	sig.	Before	After	Change	sig.
Who decides on residence permits?	93	100	7	**	94	98	3	
The share of foreigners in Finland	61	83	23	***	55	73	18	**
From which continent most immigrants to Finland?	63	88	25	***	48	90	42	***
Who decides the size of the refugee quota?	40	66	27	***	41	64	23	***
The size of the Finnish refugee quota	40	86	45	***	26	86	60	***
Most common reason to apply for residence permit	19	89	70	***	19	84	65	***
<b>Mean of correct answers (Info package items)</b>	<b>53</b>	<b>85</b>	<b>33</b>	<b>***</b>	<b>47</b>	<b>82</b>	<b>35</b>	<b>***</b>
The number residents of foreign origin in Turku	48	42	-6		39	36	-2	
Foreigners' share of sentenced crime	40	40	-1		39	40	1	
Unemployment among immigrants	24	24	1		23	28	6	
The amount of integration allowance in EUR	19	20	2		15	21	6	
<b>Mean of correct answers (Items not in the info package)</b>	<b>33</b>	<b>32</b>	<b>-1</b>		<b>29</b>	<b>31</b>	<b>3</b>	
The name of the foreign secretary	88	91	3		84	85	1	
Who are eligible voters in Finland	72	71	-1		69	66	-3	
The definition of parliamentarism	71	63	-8		61	52	-9	
Fourth largest party in the Parliament	56	58	3		56	55	-1	
The name of the Lisbon treaty	41	44	3		33	38	5	
<b>Mean of correct answers (General political knowledge)</b>	<b>66</b>	<b>65</b>	<b>-1</b>		<b>61</b>	<b>59</b>	<b>-2</b>	
<b>Mean of correct answers (all 15 items)</b>	<b>52</b>	<b>64</b>	<b>13</b>	<b>***</b>	<b>47</b>	<b>61</b>	<b>14</b>	<b>***</b>

Significance (one-tailed t-test) \*=0.05, \*\*=0.01, \*\*\*=0.001

## Appendix D. Socio-demographics of the participants and control group

	<b>Participants</b> (n = 207)	<b>Control group</b> (n = 369)
<b>Gender</b>		
Male	52.2	48.2
Female	47.8	51.8
<b>Age</b>		
18-34	22.2	16.3
35-49	16.4	15.2
50-64	27.5	33.6
65-	33.8	35.0
<b>Education</b>		
Primary or Secondary	10.7	14.7
Vocational or Upper secondary	33.5	37.0
Polytechnic or Bachelor	34.0	35.1
At least Master's Degree	21.4	13.3

**Appendix E. Socio-demographics of the participants according to enclave and treatment**

	<b>Con like-minded (n = 42)</b>	<b>Con mixed (n = 44)</b>	<b>Pro like-minded (n = 77)</b>	<b>Pro mixed (n = 44)</b>
<b>Gender</b>				
Male	50.0	47.7	44.2	52.3
Female	50.0	52.3	55.8	47.7
<b>Age</b>				
18-34	11.9	13.6	31.2	25.0
35-49	9.5	20.5	15.6	20.5
50-64	21.4	31.8	27.3	29.5
65-	57.1	34.1	26.0	25.0
<b>Education</b>				
Primary or Secondary	14.6	20.5	6.5	4.5
Vocational or Upper secondary	34.1	47.7	26.0	31.8
Polytechnic or Bachelor	34.1	15.9	37.7	45.5
At least Master's Degree	14.6	15.9	29.9	18.2