Unequal inequalities? How participatory inequalities affect democratic legitimacy

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Abstract

Democratic theorists have long emphasized the importance of participatory equality, i.e. that all citizens should have an equal right to participate. It is still unclear, however, whether ordinary citizens view this principle as central to democracy and how different violations of this principle affect subjective democratic legitimacy. The attitudes of citizens are imperative when it comes to the subjective legitimacy of democratic systems, and it is therefore important to examine how participatory inequalities affect these attitudes. We here contribute to this research agenda with survey experiments embedded in two surveys ($n=324$, $n=840$). We here examine 1) whether citizens consider participatory inequality to be an important democratic principle, and 2) how gender and educational inequalities affect subjective legitimacy and the perceived usefulness of the participatory input. The results show that citizens generally consider participatory inequalities to be important, but only gender inequalities affect subjective legitimacy and usefulness. Hence it is important to consider the type of inequality to understand the implications.

Key words: Political equality, Gender inequality, Education, Legitimacy, Political participation, Survey experiments

Introduction

That all citizens are equal is a central democratic ideal, but some citizens are still more equal than others. Studies show that inequality influences the functioning of democracy by affecting key political attitudes (Andersen and Fetner, 2008), public attitudes toward minorities (Andersen & Fetner, 2008), and political behaviour (Solt, 2008). The last point is a particular worry for the present purposes, since studies show persistent differences in who takes advantage of the formal equal right to participate (Verba, Schlozman and Brady, 1995; Verba, 2003; Armingeon and Schädel, 2015; Dalton, 2017).

We here focus on inequalities in participatory processes, by which we mean the extent to which groups in society are represented equally in participatory processes such as referendums and citizen assemblies. While participatory equality both from a theoretical and empirical perspective is a cornerstone of democracy, it is still unclear what ordinary citizens think about this principle. Research on public opinion concerning political (in)equality is surprisingly scarce, perhaps because scholars often take for granted that the public supports an equal voice for all citizens (Howarth *et al.*, 2019, p. 200). The studies that do exist mainly examine whether equality is realized in practice based on differences in electoral turnouts or other forms of political participation across social groups (Verba, Schlozman and Brady, 1995; Verba, 2003). While these studies make valuable contributions, it is also important to examine how participatory inequality affect decision-making legitimacy in the eyes of the public. Studies indicate that many are unwilling to take an active role in politics, even when they believe that citizens should have an equal right to participate (Hibbing and Theiss-Morse, 2002; Bengtsson and Christensen, 2016; Fernández-Martínez and Font, 2018). Such convictions could entail that they do not see participatory inequality as a problem for democracy. It is therefore important to examine whether citizens consider participatory equality to be an essential democratic ideal.

While much of the discussion on participatory inequalities focus on elections and parliaments (Atkeson and Carrillo, 2007; Espírito-Santo, 2016; Beauvais, 2021), the representation of disadvantaged groups in participatory processes is also critical for sustaining democratic legitimacy (Karpowitz, Raphael and Hammond, 2009; Karpowitz, Mendelberg and Shaker, 2012; Beauvais, 2020; Afsahi, 2022). For such participatory processes to help regenerate legitimacy, it is necessary that they are seen as improving on existing inequalities.

Consequently, it is imperative to examine how participatory inequalities in participatory processes affect the legitimacy of political decision-making. Studies suggest that gender inequality has detrimental effects on the legitimacy of political decisions (Clayton, O'Brien and Piscopo, 2019), but other inequalities can have less severe effects (Mayne and Peters, 2022). Furthermore, the effects may differ depending on the type of legitimacy at stake (Scharpf, 1999; Schmidt, 2013). Finally, the impact of inequalities might be contingent on the nature of the decisions (Silagadze *et al.*, 2022) and the type of participatory process (el-Wakil and Strebel, 2022). It is crucial to examine the interplay between these factors to appreciate how participatory inequalities affect legitimacy.

In this article, we examine attitudes towards inequality and their implications for democratic legitimacy with the help of two studies. First, we assess the extent to which citizens demand participatory equality with the help of both explicit questions and a list experiment (n=324). By giving citizens the chance to express their true preference without admitting to holding socially unacceptable opinions, we provide a stern test of whether citizens consider participatory equality to be important. In a second study (n=840), we examine the interplay between different factors in shaping the impact. In addition to gender inequalities, we examine the impact of inequalities in educational attainment to see whether this has similar effects. We here distinguish between the impact on input legitimacy in the form of subjective legitimacy of the decision-making process, and output legitimacy in the form of the perceived

usefulness of the output of the participatory process. Finally, we consider whether the effects are moderated by issue consequences (personal or society at large) or type of participatory process (referendum or advisory assembly). Both studies are conducted in Finland, a context where equality is the dominant norm, which means we should be able to detect the impact of inequalities.

Our results show that people do value equality as a democratic ideal. We find that it has a negative effect on legitimacy when women are underrepresented, whereas educational inequalities do not have a similar negative effect. Furthermore, these differences are similar across issue consequences and the type of participatory process. All of this suggests that while participatory equality is indeed an essential democratic ideal among citizens, it is necessary to consider the type of inequality to understand the implications for legitimacy.

Popular perceptions of participatory inequalities

The principle of political equality expresses a moral judgement where the good of every human being ought to be regarded as intrinsically equal to the good of anybody else, which implies that government should give equal consideration to the good and interests of every person (Dahl, 1998).

One of the essential merits of democracy is its intrinsic capacity of yielding more legitimate decisions by giving citizens equal voice in the decision-making process (Dahl, 1989). This principle is in existing democracies enshrined in the one person, one vote principle. Nevertheless, this formal equality does not necessarily entail that all citizens also take advantage of this right in equal terms. Several studies show persistent inequalities in political participation in elections and between elections (Verba, Scholzman and Brady, 1995; Armingeon and Schädel, 2015; Dalton, 2017). Verba et al. (1995) find that these participatory inequalities have their roots in differences in individual resources, psychological engagement

and networks. Dalton (2017) contends that the expansion of participation in old and new forms creates a widening participation gap, and that education plays a key role in explaining this gap. When it comes to elections, education attainment is also considered a main driver for the participatory gap between social groups that has widened over the past decades (Armingeon and Schädel, 2015).

Groups with more resources, be they intellectual, economic or organizational, are not only likely to be more active, they are also more likely to be heard by decision-makers (Gilens, 2005). Empirically, it has also been found that inequalities hampers the proper functioning of democracy (Andersen and Fetner, 2008; Anderson and Singer, 2008; Solt, 2008). This is worrisome from a normative perspective, since it hampers democratic inclusiveness (Young, 2000). Furthermore, descriptive representation promotes decision acceptability and legitimacy of policy outcomes since people are more willing to accept a decision when it is made by a group of people that resemble themselves (Arnesen and Peters, 2018).

Considering the emphasis on participatory inequality in existing literature, it is somewhat surprising that few studies have examined attitudes towards such inequalities. One of the early survey-based studies to do so was Prothro & Grigg (1960), who found overwhelming support among Americans for the proposition that all citizens should have an equal chance to influence government policy. Later studies on how people evaluate democracy focus on formal forms of equality before the law and social and economic equality (Ferrín and Kriesi, 2016). This may be because it is taken for granted that the public supports an equal voice for all citizens (Howarth et al., 2019: 200). It can also be problematic to examine this with traditional survey items since respondents tend to rate all elements of democracy highly when asked directly (Ferrín and Kriesi, 2016). To some extent, all democratic ideals are important. But this result might also be due to social desirability bias, which concerns the tendency of individuals to give answers that are perceived as more favourable (Nederhof, 1985; Krumpal,

2013). It can be perceived as sensitive to disregard an established democratic ideal when the respondent is aware that this is considered important by others.

It may therefore be beneficial to use more subtle techniques when asking people to reveal their preferences for participatory equality.

However, a more substantial reason can also explain why people should not consider participatory equality to be important for a functioning democracy. Studies show support for a stealth model of democracy across several countries, which entails that ordinary citizens should not necessarily be involved in political matters on a regular basis (Hibbing and Theiss-Morse, 2002; Bengtsson and Mattila, 2009; VanderMolen, 2017; Fernández-Martínez and Font, 2018). This point of view entails that instead of popular involvement, elected elites and/or experts should make the important decisions. Involvement for ordinary citizens should be reserved to extraordinary circumstances when the system clearly no longer contributes to the benefit of all. Crucially, studies show that these ideals also have consequences for how active citizens are in political participation (Bengtsson and Christensen, 2016; Gherghina and Geissel, 2017). Consequently, people supporting stealth democracy are also likely to consider participatory inequalities to be less of a concern from a democratic perspective. Since widespread participation is not necessarily considered beneficial, it is necessary to examine whether people consider participatory equality important for democracy. This leads us to our first hypothesis:

H1. *People consider participatory equality to be an important democratic ideal.*

We examine this proposition in our first study with the help of both explicit questions and a list experiment to investigate whether results are affected by social desirability bias.

Participatory inequalities and implications for legitimacy

Even when people believe that participatory inequalities matter for democracy, the implications for the legitimacy of decision-making depend on several factors. For example, the inclusion of women in participatory processes is likely to be more important to women since it boosts their descriptive representation in the processes (Pitkin, 1967; Clayton, O'Brien and Piscopo, 2019). We examine how over- or under-representing certain groups affect the legitimacy of the outcomes of participatory processes, and the extent to which these effects are contingent on the nature of the issue and the type of participatory process. In the following, we propose several hypotheses that are examined in study 2.

First, it is important to recognize that different kinds of participatory inequality may have entirely different implications for legitimacy. The inclusion of representatives from historically underrepresented groups help legitimize political decisions (Clayton, O'Brien and Piscopo, 2019). But there are many different potential groups, and all do not play an equally important role in enhancing legitimacy. We here focus on two different forms of inequality: gender inequalities and inequalities in educational attainment. While the list of potential inequalities to include is virtually endless, these have received considerable attention in the literature on participatory inequalities and are widely recognised as individual-level factors that affect political participation.

A wide array of studies on gender inequalities in different forms of political participation provide evidence of consistent evidence of gender differences in participation (Schlozman, Burns and Verba, 1994; Karpowitz, Mendelberg and Shaker, 2012; Bolzendahl and Coffe, 2013). Schlozman et al. (1994) show that men are more active in traditional political activities. Bolzendahl and Coffé (2013) also find that men are more active in traditional political activities, but that women are more active in individualized activities such as signing petitions or political consumerism. A similar pattern exists when examining participation among

younger citizens (Grasso and Smith, 2022), as young women are more active in petitioning and boycotting, whereas young men are more active in political parties and organizations. Gender differences have also been found in participatory processes such as deliberative mini-publics (Karpowitz, Mendelberg and Shaker, 2012). A study suggests that women are more willing to deliberate, but their efforts are undermined by men's negative deliberative behaviours (Afsahi, 2022). The impact of participation may be gendered too, since Beauvais (2020) finds that people are more willing to revise their opinions after hearing a man's counterargument than after hearing an identical counterargument from a woman. While gender differences in participation are today less pronounced than previously (Burns, 2007; Coffé and Bolzendahl, 2010), it is a cleavage that cuts across other areas of stratification, which makes it salient for all citizens (Coffé and Bolzendahl, 2010, p. 318).

Gender inequalities are also important due to descriptive representation (Rosenthal, 1995; Atkeson and Carrillo, 2007; Clayton, O'Brien and Piscopo, 2019). Several factors such as age, party identification, and gender stereotypes help explain attitudes towards women's descriptive representation (Sanbonmatsu, 2003; Dolan and Sanbonmatsu, 2009; Dolan, 2010). A recent study contends that concerns with the adequate representation of women's interests explain women's support for gender equality, whereas this has no effect among men (Espírito-Santo, 2016). According to Clayton et al. (2019), gender inequalities in participatory processes suppress the legitimacy of decision-making in the US across issues and policy outcomes. Women's presence contributes to higher procedural legitimacy when the issue under discussion is unrelated to gender or even if decisions go against women's interests, whereas levels of procedural fairness, institutional trust, and acquiescence are lower if all-male panels advance feminist policies. All of this shows that the inclusion of women matters for perceptions of decision-making legitimacy.

Education is usually seen as arguably the strongest predictor of political participation, since those with more education are more likely to be politically active (Verba, Schlozman and Brady, 1995; Dalton, 2017; Mayne and Peters, 2022). Education can boost participation by helping to develop pertinent skills for participation and provide concrete information on how society and politics function (Verba, Schlozman and Brady, 1995). Furthermore, educational attainment cuts across other cleavages, such as income, and children born to affluent and well-educated parents are for instance known to be more likely to become well-educated and affluent themselves (Bowles, Gintis and Groves, 2005). Although Finland is a country with strong educational equity on the basic level (Ustun & Eryilmaz, 2018), there has been substantial differences in turnout depending on level of education, especially among the young age groups (Lahtinen, 2019), showing that educational inequalities have real consequences for political engagement, even in Finland.

Since educational attainment remains a strong source of participatory inequality in contemporary democracies, it is important to examine whether this also has a detrimental effect on democratic legitimacy. Here it is interesting to note that a recent study suggests that education-based differences are relatively unimportant for perceptions of legitimacy (Mayne and Peters, 2022). On the other hand, the increased emphasis on education as the key to success in society has been questioned (Sandel, 2021). Furthermore, education has become a key explanation for a contemporary cleavage between the winners and losers of globalization (Stubager, 2010; Kriesi *et al.*, 2012). Hence, there is reason to believe that educational inequalities may affect legitimacy.

Based on this, we propose the following two hypotheses:

H2a. *The perceived legitimacy of participation is lower when men are overrepresented.*

H2b. *The perceived legitimacy of participation is lower when the well-educated are overrepresented.*

We here use overrepresented to indicate that men/well-educated are represented in greater numbers than in the general population.

Legitimacy is also a multidimensional concept with different meanings that is difficult to measure unequivocally (Weatherford, 1992; Gilley, 2006; Tyler, Feldman and Rasinski, 2006; Arnesen and Peters, 2018). Our focus in the previous set of hypotheses is on how inequalities affect citizens' perceptions of input legitimacy of participatory processes. There are however studies that suggest that people care more about output legitimacy, or the extent to which decisions correspond to citizens' policy preferences (Scharpf, 1999; Schmidt, 2013; Esaiasson, Gilljam and Persson, 2017). We here refer to this as the usefulness of the advice since we do not study the impact of the policies in question. Output legitimacy conflict with input legitimacy since people may be willing to accept participatory inequalities when it is believed that those who are overrepresented can assure better policy outcomes. Since education can help develop civic skills and make participants better moral reasoners, increasing the proportion of participants with low education can lower the quality of participation, hence making outcomes less useful (Verba, 2003, p. 669). When people were to believe this to be true, they may well accept that the well-educated form the majority since it can make the participatory input more useful for decision-makers. While gender does not confer similar advantages, people use certain cues to infer traits or policy positions about representatives (Carnes and Sadin, 2015; Arnesen, Duell and Johannesson, 2019; Däubler, Quoß and Rudolph, 2021). Since men have historically held more civic resources than women (Burns, 2007), people might, even subconsciously, still believe that men are also more apt at political decision-making (Rashotte and Webster, 2005; Dolan, 2010). Such perceptions can endure even in a relatively gender-equal society such as Finland, where only 44 per cent of men and 52 per cent of women find both genders equally apt in all policy areas (Nieminen & Attila, 2018). We therefore propose the following two hypotheses regarding the usefulness of participation when advantaged groups are overrepresented:

H3a. Output legitimacy in the form of *perceived usefulness of participation is higher when men are overrepresented.*

H3b. Output legitimacy in the form of *perceived usefulness of participation is higher when the well-educated are overrepresented.*

Two more aspects are worth considering for the present purposes: the form of participatory process and the issue consequences since both are likely to moderate how participatory inequalities affect perceived legitimacy and usefulness.

Although much research on equality is focused on elections and parliaments, there is also a need to scrutinize equality in participatory processes that give citizens a voice between elections. As noted by Clayton et al. (2019, pp. 128–129), who in their study focus exclusively on deliberative bodies, the nature of citizen involvement and decision-making rules are likely to affect the results. Various forms of participatory processes exist (Fung, 2003; Smith, 2009), but they can be divided into two broad categories (LeDuc, 2015; el-Wakil and Strebel, 2022): 1. *Direct-democratic processes* that include a vote-centric conception of democracy where citizens make decisions directly (Altman, 2011; Qvortrup, 2013), and 2. *deliberative processes*, which are based on a talk-centric conception of democracy where citizens rarely make any final decisions, but instead provide advice to formal decision-makers by discussing issues to achieve an enlightened understanding (Grönlund, Bächtiger and Setälä, 2014). Although nuances exist, these two types of participatory processes exemplify important differences in how to involve citizens (el-Wakil and Strebel, 2022). For the current purposes, it is worth noting that direct democracy frequently involves the use of referendums where citizens decide on issues by casting a vote (Altman, 2011; Silagadze and Gherghina, 2018).¹ Deliberative processes, on the other hand, most often consist of different types of institutional

¹ While referendums are often formally advisory, at least in Finland they are often considered politically binding in practice since going against the will of the people is politically untenable (Jäske, 2017).

bodies where ordinary citizens discuss in smaller groups and provide an output that can be used as guidance by formal decision-makers and/or the general public (Grönlund, Bächtiger and Setälä, 2014). Since people are expected to care about policy outcomes (Arnesen, 2017; Werner and Marien, 2020), it is likely that they will care more about inequalities in participatory processes where participants have a direct say in the outcome. Hence, political inequalities may be expected to be more concerning in referendums that are usually more decisive compared to discussion forums of a more advisory nature.

H4. *Differences in subjective legitimacy and perceived usefulness are more pronounced for referendums compared to discussion forums.*

Finally, we examine how the consequences of issues moderate how inequalities affect perceptions of legitimacy and usefulness. Several studies demonstrate that outcomes matter to perceptions of decision-making legitimacy (Arnesen, 2017; Esaiasson, Gilljam and Persson, 2017; Christensen, Himmelroos and Setälä, 2020; Werner and Marien, 2020, 2020). While the direct effect of outcome favourability on legitimacy is hardly disputable, the nature of the outcome can even have an indirect effect on how inequalities affect perceptions of legitimacy. We here follow the work of Kinder and Kiewiet (1981), who distinguish between sociotropic voters who care more about the economic situation of the nation, and egocentric voters, who use their personal situation to decide how to cast their vote. This distinction has also been used to explore the sources of public opposition to immigration (Solodoch, 2020). Following this line of reasoning, we assume that people evaluate political decisions either based on their perceived consequences for society at large, or their consequences for the individual in question. A recent study shows that sociotropic and egocentric perceptions of social inequalities has different associations with political participation since people with higher levels of sociotropic concerns about inequalities are more likely to take action (Silagadze *et al.*, 2022). Other studies suggest that self-interest plays a larger role when the policy stakes

for the individual are great, clear and salient (Chong, Citrin and Conley, 2001; Haselswerdt, 2020). All of this shows that whether the issue at hand concern personal matters or society at large is likely to have implications for how inequalities affect both aspects of legitimacy. Based on this, we base our final hypothesis on the assumption that effects of inequalities are stronger when personal issues are at stake rather than societal matters:

H5. *Differences in subjective legitimacy and perceived usefulness are more pronounced when decisions concern personal issues rather than societal issues.*

In the following, we outline how we examine these hypotheses in our studies.

Data and variables

To examine our hypotheses, we conducted two separate studies with survey experiments in Finland. Finland is an established Nordic democracy with strong egalitarian values and consensual political decision-making are dominant norms (Inglehart and Norris, 2003; Karvonen, 2014). At the same time, citizens exhibit high levels of satisfaction with democracy and institutional trust (Rapeli & Koskimaa, 2020; Bäck et al., 2016; Kestilä-Kekkonen & Söderlund, 2016), and citizens can engage in various participatory processes, such as the Citizens' initiative (Huttunen and Christensen, 2020). Finland scores high in gender equality (Inglehart and Norris, 2003; OECD, 2018) and in education (OECD, 2021). Nevertheless, reports indicate that a large portion of Finnish people believe that inequalities persist (Nieminen & Attila, 2018). Finland thereby provides an interesting contrast to the US, where most existing studies have been carried out. The pervasive equality in Finland is likely to strengthen the negative impact of participatory inequalities since they transgress established societal norms. Finland may therefore be considered a "most-likely case" (Eckstein, 1975), since it provides a case where the theoretical relationships are likely to exist.

The data for both studies were collected 19-27 May 2021. For study 1, 324 respondents filled in the survey while 840 respondents filled in the survey for Study 2. We did a priori power analyses with G*Power 3.1 to establish the necessary number of respondents (Faul *et al.*, 2009). For study 1, 146 respondents equally distributed between the groups should be enough to detect significant differences between the two groups with a statistical power of 0.9 when the expected mean is 3.0 in the control group (where 3 genuine democratic ideals/threats are presented) and 4.0 in the treatment group (where we include "equal participation for all citizens" in addition to the same three democratic ideals or "Inequalities in the political participation of citizens" as an additional potential threat), even when we assume a high SD of 2.0. To ensure that potential null results are not due to a low number of respondents, we set the target to 300 respondents and received 324 completed survey responses. Hence we are able to detect mean differences with a high level of power, although the number of respondents is insufficient to explore differences across respondents' characteristics (Ahlquist, 2018). For study 2, 523 respondents give a power of 0.90 for a factorial ANOVA with main effects and interaction effects when we assume an effect size of 0.20 (medium) and $\alpha=0.05$. We set the target to 800 respondents to be certain we have sufficient power and achieved 840 completed survey responses.

The respondents for both studies were recruited from online panels via Qualtrics. We used quotas to ensure that respondents in both studies reflected the Finnish population when it comes to age, gender, and place of living. Furthermore, respondents were not allowed to take part in both studies to avoid contamination. Information on the characteristics of both samples and the general population is found in Appendix 1.

In Study 1, we examine H1 on general attitudes toward political inequality with the help of direct questions on evaluations of various democratic ideals, including participatory equality. Here respondents on a scale 0-10 (10 most important) rated the subjective importance of

common democratic ideals: Equality in the possibility for political participation; Free and fair democratic elections; Opposition parties can freely criticise the government; Free media can freely criticise the government; and Government works to reduce income inequalities.

Since examining peoples' attitudes to democratic ideals in surveys is likely to suffer from social desirability bias, we also included two list experiments (LE1 and LE2) that were pre-registered for hypotheses, data collection and analysis at https://osf.io/4nbcz/?view_only=12857ff47f1342febcd8c02de07d4f3a. Deviations from the pre-registration are noted in Appendix 2. We included two list experiments to be able to discern both whether people consider participatory equality to be imperative for having a proper democracy (LE1) and whether participatory inequality is considered a danger to the survival of democracy (LE2). In LE1, the sensitive item is "Equal participation of all citizens" while in LE2 it is "Inequalities in the participation of citizens". The treatments here are broad since we do not mention specific forms of participation, but this is intentional since we here aim to examine the impact of participatory inequalities broadly conceived, while we focus on more specific effects in Study 2. Although the two list experiments have similar aims, we considered them sufficiently different so both experiments were randomized completely, meaning an individual could be in the treatment group twice.

The list experiment or item count technique is a technique that makes it possible to examine whether people value equality as an important part of democracy even when there is no pressure from social desirability bias as the sensitive question is asked in an indirect fashion (Blair and Imai, 2012; Blair, Imai and Lyall, 2014). In list experiments, a survey sample is split into randomly assigned treatment and control groups, which are given the same question. The respondents in the treatment group are presented a list including a sensitive item with several non-sensitive items, while the control group is presented with a list with only the non-sensitive item, and possibly a placebo item to ensure that the number of items is identical (Riambau

and Ostwald, 2021). We also include rare items in both groups to avoid ceiling effects that could entail that people feel that their true preferences are exposed (Glynn, 2013). The respondents are asked to indicate how many of the items on the list they agree with or apply to them without indicating which ones, thereby making it possible to answer without selecting the sensitive item. Any differences in mean scores can therefore be attributed to the sensitive item (Kramon and Weghorst, 2019). Table 1 shows the contents of each of the list experiments.

Table 1. Outline of list experiments.

	List experiment 1 (LE1)	List experiment 2 (LE2)
Introduction	<i>In the following is a list of five norms that may or may not be considered imperative for having a proper democracy. Please write the number of norms that you believe are essential for a proper democratic system. You should not write what norms, only how many of these you believe are essential.</i>	<i>Next, we would instead like to know how many of the following occurrences you believe are a potential danger to the existence of democracy. Again, you should not write which occurrences you see as a danger, only how many.</i>
Nonsensitive item 1	<i>Free and fair elections</i>	<i>Violence against opposition leaders</i>
Nonsensitive item 2	<i>Freedom of speech</i>	<i>Unelected elites secretly make important decisions</i>
Nonsensitive item 2	<i>The right to vote</i>	<i>Parliament decides to abandon upcoming elections</i>
Rare item (to avoid ceiling effects)	<i>Unlimited welfare benefits</i>	<i>Unemployment benefits</i>
Placebo (only control group)	<i>Violence against the opposition</i>	<i>Free and fair elections</i>
Treatment (only treatment group)	<i>Equal participation for citizens</i>	<i>Inequalities in the political participation of citizens</i>
Total n	324	324
Treatment n	160	164
Control n	164	160

Since our main interest here lies in establishing differences between treatment and control groups rather than individual differences, we follow the advice of Ahlquist (2018) and only analyse the results using a simple difference in mean estimate.

In Study 2, we examine hypotheses H2-H5 with a survey experiment where we with the help of a vignette examine the direct effects of gender and educational inequalities on outcome legitimacy (H2a and H2b) and the usefulness (H3a and H3b) of the input. Furthermore, we examine whether these associations differ depending on the type of participatory process (H4:

Referendum or Discussion forum) and the consequences of the issue (H5: egocentric or sociotropic). This study was also preregistered for the hypotheses, data collection and analysis at https://osf.io/rjqux/?view_only=03c7b3039ae14b78a5c1fb533537f9c0 and deviations from the pre-registration are again noted in Appendix 2.

In a vignette survey experiment, respondents are provided with a short description of a scenario, where certain factors or treatments are randomly varied. Respondents are then asked to evaluate the scenario described in one or more variables that constitute the dependent variables (Mutz, 2011). By examining differences in the scores across treatments, it is possible to determine the effect of and interplay between all treatments. Such survey experiments thereby combine experimental control of treatments examined on subjects that constitute a representative sample of the population of interest (Mutz, 2011, pp. 1–2).

In study 2, our vignette is worded as follows (Randomized treatments in capital letters):

Imagine that there is a need to update existing legislation concerning an issue with great consequences for YOU PERSONALLY/FOR SOCIETY AT LARGE. To be able to improve existing legislation, the decision-makers want to receive input from the general public. They therefore arrange a REFERENDUM / DISCUSSION FORUM² where all Finnish citizens have a chance to participate. While the aim was to achieve equality in participation, it turns out that a majority of those who took part were MEN/WOMEN with BASIC EDUCATION / UNIVERSITY DEGREE.

The study thus has four treatments that correspond to our hypotheses, each with two values (2x2x2x2 design). The gender inequality treatment concerns whether men or women were

² We use 'Discussion forum' ('keskustelutilaisuus' in Finnish) to make the question more comprehensible for the respondents compared to mini-public or similar terms that are not recognized by most.

overrepresented, while the educational treatment concerns whether people with a basic education or a university degree were overrepresented. The issue treatment concerns whether the consequences affect respondents personally or society at large while the type of participation discerns whether it was a referendum or a discussion forum.

We include two measures that measure the impact on outcome legitimacy:

1. **Legitimacy 1:** *How legitimate do you think this input into the decision-making process is? (Answer on scale 0-100)*
2. **Legitimacy 2:** *In your opinion, to what extent should decision-makers follow the advice from this input when making their decision? (Four-graded answer Completely/ In most regards / To some extent / Not at all; this was recoded to also vary between 0-100)*

Two other measures probe how respondents consider the usefulness of the input:

3. **Usefulness 1:** *How useful do you think the input will be for decision-makers when adopting new legislation? (Answer on scale 0-100)*
4. **Usefulness 2:** *How likely do you believe it is that legislation will be improved as a consequence of this input? (Answer on scale 0-100)*

The data is analysed with factorial ANOVAs for each of the four outcomes where we include all possible interaction effects to examine moderating effects of the type of participation and the type of issue.³

³ We report the results in figures and text, but the full results are in Appendix 4 together with robustness tests where we show ANOVA models with only direct effects and models that only include the interaction effects of direct relevance to the hypotheses. Here we also report mean values and standard deviations for all 16 potential combinations. The substantial interpretations of the models are the same.

Analysis

We first report the results of the explicit questions in Study 1 on attitudes towards various democratic ideals, including how people perceive the importance of inequalities in political participation.

Figure 1. Violinplots showing answer distributions for rating democratic ideals

All ideals are popular among respondents as the mean scores range from 6.67 (Standard deviation (SD)=2.77) for reducing income inequalities to 8.99 (SD=1.81) for Free and fair elections. Equal political participation is second most important (M=8.61, SD=1.89). These results indicate that equality in participation is considered among the most important democratic ideals.

To examine whether social desirability bias affects the results, we in Table 2 report results from our list experiments that give people the chance to reveal their true preferences.⁴

Table 2. Mean differences between control group and treatment group

	Control mean	Treatment mean	Difference in mean	P-value
List experiment 1 (LE1)	3.13 (.08)	4.08 (.07)	-0.95 (.11)	0.000
List experiment 2 (LE2)	2.91 (.08)	3.36 (.09)	-0.45 (.12)	0.000

Note: Entries are mean values with standard errors in parentheses. P-values are from a tw-sample t-test with equal variance.

The results in LE1 indicates that respondents value equality as a democratic ideal since the mean value is about 1 point higher in the treatment group. In LE2, the mean in the treatment value is 0.45 higher than the control group, which shows that respondents consider inequalities in political participation a threat to democracy, albeit not an imminent one as the difference in mean was smaller than in LE1.

These results support H1 and suggest that people do consider equality in participation a valuable democratic ideal. The ensuing question is whether the effects on legitimacy depend on various characteristics? We explore this issue in the vignette survey experiment contained in Study 2.

⁴ The distribution of respondents is in Appendix 3.

Figure 2 Direct effects of gender and educational inequalities on decision-making legitimacy and usefulness of input

Note: Results represent conditional mean scores on scales 0-100 with 95% confidence intervals

Figure 2 shows that both decision-making legitimacy and perceived usefulness is generally lower when men are in majority. Differences are significant for Legitimacy 1 ($F(1, 824)=7.96$, $p=.005$), Usefulness 1 ($F(1, 824)=6.45$, $p=0.019$) and 2 ($F(1, 824)=6.22$, $p=0.013$). While the effects are significant, the differences are only about five points on the 0-100 scales, meaning effects sizes are weak, but consistent. As we show later, this is at least partly explained by heterogenous treatment effects across the population. The impact of educational differences is smaller, but there is a weak and insignificant tendency for usefulness to be higher when people with university degrees are overrepresented. The results run in opposite directions for subjective legitimacy, but even here the differences are insignificant. This entails that H2a is supported, but H2b and H3a and H3b are not supported by the evidence. Having a majority of women in participatory processes is generally a good thing for both decision-making

legitimacy and perceived usefulness of advice, whereas there are no clear gains when educational groups are over- or under-represented.⁵

In Figure 3 and Figure 4 we show results concerning conditional effects depending on type of participation and type of issue consequence.

Figure 3. Differences in effects across type of participatory process

Note: Results represent differences in conditional mean scores depending on type of participatory process on scales 0-100 with 95% confidence intervals

The differences across type of participation are small and conflicting regardless of the type of measure and whether we examine gender inequalities or educational inequalities. None of the relevant interaction terms are even close to significance, all of which shows that the effects are consistent across type of participation, contrary to H4.

⁵ A reasonable assumption might be that there is an interplay between the two forms of inequalities, so the effects are different for well-educated women compared to men with low education. We tested this by including only the two inequality treatments and an interaction term for all four dependent variables. The results show no significant interaction terms, the closest being the result for useful2 ($p=0.077$). Hence, we assume that the two treatments are independent of each other.

Figure 4. Differences in effects across issue consequence

Note: Results represent differences in conditional mean scores depending on issue consequences on scales 0-100 with 95% confidence intervals

There are also few relevant differences across issue consequences regardless of measure and type of inequality. The only minor exception is the interaction effect for gender differences, where the differences are fairly pronounced, since legitimacy is higher when women are overrepresented and the issue consequences are societal, which is reversed when consequences are personal. Nevertheless, the differences are even here under all circumstances non-significant although the interaction term approaches significance ($F(1, 824)=3.28, p=.071$). Furthermore, even this small piece of evidence of substantial differences contradicts our H5 that differences are smaller when consequences concern society at large. This shows that effects are rather similar across issue consequences.

So far, our main finding is the pronounced differences in the effects of participatory inequalities depending on whether they are based on gender or educational differences, which are consistent across type of participatory process and issue consequences. While we did not pre-register any hypotheses on this, there are reasons to believe that disadvantaged

groups put greater emphasis on inequalities (Banducci, Donovan and Karp, 2004; Clayton, O'Brien and Piscopo, 2019). We therefore in Table 3 explore whether there are substantial differences in effects across gender and level of education of the respondents.

Table 3. Differences in mean scores across gender and level of education of respondents

Treatment: Group over- represented	Mean (SE)				P	Mean (SE)				P
					Respondent gender # Gender treatment					Respondent education # Education treatment
	Male respondents		Female respondents			Respondents w high education		Respondents w low education		
	Men	Women	Men	Women		High educated	Low educated	High educated	Low educated	
Legit1	60.8 (1.9)	55.9(1.9)	42.4(1.8)	57.0(1.9)	<.001	51.1(2.2)	52.3(2.0)	52.3(1.8)	57.5(1.7)	0.135
Legit2	53.3(1.8)	51.4(1.9)	45.4(1.8)	49.7(1.9)	0.101	45.3(1.9)	43.0(2.1)	55.4(1.7)	52.1(1.7)	0.784
Useful1	55.4(1.9)	55.5(1.9)	46.1(1.8)	55.4(1.9)	0.012	51.2(2.0)	48.2(2.1)	54.8(1.7)	55.4(1.7)	0.338
Useful2	50.7(1.8)	48.7(1.9)	38.0(1.8)	48.5(1.9)	<.001	44.7(2.0)	42.9(2.1)	47.7(1.7)	48.2(1.7)	0.551

The analyses reveal that there are consistent differences in effects of gender inequalities between men and women. There is little difference in mean scores when women are overrepresented between male and female respondents. But when men form the majority, women see procedures as less legitimate, whereas men are more accepting or even approving of this situation across all four measures. For educational inequalities, we again do not discover a similar unambiguous result, since there are no consistent differences between respondents depending on their own educational attainment. These results again show that there are important differences in how people react to inequalities, even among the affected groups.

Robustness tests

We performed several tests to ensure that our results are robust. First, we as noted above tested that the results were not model specific by testing ANOVA models where we only included direct effects and models where we only included the interaction terms of substantial interest. This way we can ascertain that any non-significant results are not due to

over-loaded models. The results are included in Appendix 4 and show that the results are substantially similar since it is still only the direct effects of gender inequalities that are significant. Consequently, we are confident that our results are not driven by model specification.

We also included attention checks in study 2 to see whether missing effects could be due to non-attentive respondents. We asked four multiple choice questions asking respondents what they were shown for each of the four treatments. We included three possible answers, two of which were incorrect, and a 'don't know' option to reduce the number of respondents who guessed the correct answer without remembering. The results reported in Appendix 5 show that only about 48% of respondents could recall the nature of the consequences and 55% what type of participatory process was shown. This can indicate that these treatments were not sufficiently strong, which also explain why they did not have the expected moderating effect. However, it may also entail that these aspects are not seen as particularly relevant by respondents, who therefore quickly forgot the correct answers.

This latter interpretation is substantiated by the fact that more respondents were able to answer correctly when it came to the two types of inequality, where about 70% answered correctly on each of these. Furthermore, if we restrict analyses to those who answered correctly, we get similar substantial results, i.e., the direct effects of gender inequalities are significant for three of the four measures while none of the interaction terms reach significance. There is some evidence that educational inequalities play more of a role for Legit2, but the result suggest that the level of legitimacy is higher when those with high education are overrepresented and thus still contradict our hypotheses ($M=43.1$ when people with low education are in majority compared to $M=47.6$ when the highly educated form the majority). Hence, we can rule out that our results are not driven by the attention level of the respondents.

Discussion and conclusions

Our results have several important implications for the link between participatory inequalities and decision-making legitimacy.

First, we can confirm our first hypothesis since our results show that people consider participatory equality to be essential for democracy. While previous studies also show equality to be a valued ideal (Prothro and Grigg, 1960; Howarth *et al.*, 2019), this could not be taken for granted considering the rise of stealth democracy (Hibbing and Theiss-Morse, 2002; Bengtsson and Mattila, 2009; VanderMolen, 2017; Fernández-Martínez and Font, 2018). Furthermore, we show that this holds true even when people get the chance to covertly disregard equality as a key democratic principle. We can therefore discard any concern that participatory equality is mainly valued due to social desirability bias. The worries over increasing participatory inequalities as a result seem warranted (Verba, Scholzman and Brady, 1995; Dalton, 2017; Clayton, O'Brien and Piscopo, 2019).

However, our results also show that all participatory inequalities are not equal. While we set out to examine differences in how participatory inequalities affect input and output legitimacy, our results show that the main differences exist between different types of inequalities. We found a positive effect on legitimacy beliefs when women formed the majority, which was particularly strong among female respondents. This was in line with our expectations for H2a, and shows that it is beneficial for legitimacy when women form the majority while men forming the majority undermines legitimacy (Young, 2000; Clayton, O'Brien and Piscopo, 2019). This is in line with the many studies showing that the descriptive representation of the women is important for decision-making legitimacy, in particular among women (Rosenthal, 1995; Sanbonmatsu, 2003; Atkeson and Carrillo, 2007; Espírito-Santo, 2016). Contrary to our H3a, output legitimacy in the form of the perceived usefulness of the output was also boosted when women formed the majority rather than men. Hence, women

are considered to be as capable of delivering useful input, which is testament to the strong norms of gender equality in Finland (Inglehart and Norris, 2003).

Contrary to our initial expectations, we found no similar results for educational inequalities. Differences in perceptions of legitimacy were scarce regardless of educational composition, which contradicted both H3b and H4b. This is interesting considering the literature arguing that educational differences are imperative for understanding differences in participation (Verba, Schlozman and Brady, 1995; Dalton, 2017), but is in line with the findings of Mayne and Peters (2022). This shows that, even if educational differences have become increasingly salient (Stubager, 2010; Kriesi *et al.*, 2012), it does not hurt decision-making legitimacy when people with high education form the majority. Furthermore, there are few worries over the output quality of participation when those with little education are in majority (Verba, 2003).

Since several studies show that the highly educated are more politically active, it is encouraging for those worried about democratic legitimacy that this does not necessarily have detrimental effects on decision-making legitimacy. More importantly for the present purposes, this finding also calls attention to the very different implications of different types of inequalities. Whereas gender matters in a consistent manner, educational attainment does not play a similar role, not even for the perceived usefulness of the outcome of the process. While this result was not our principal concern from the outset, this shows that it is important to specify exactly what participatory inequalities are in play when discussing the potential implications for how citizens evaluate the legitimacy of participatory processes.

We may at this point only speculate as to why these differences occur. For one, while both types of inequalities have received considerable attention in academic literature, gender inequalities are arguable more visible in popular discourse and media, which help explain the differences. Furthermore, gender roles have an inherently cultural component that is not pre-determined, gender roles are for most people fixed at birth and remain stable throughout the

life course. This means there is little free choice involved in selecting your gender and discrimination or exclusion based on this is therefore less acceptable. Education, on the other hand, is in principle available to everyone, not least in a Finnish welfare state with free education to all citizens. This type of inequality might be more acceptable since it is in principle possible for all individuals to become one of the well-educated. It is entirely possible that other results would be found outside of Finland with an education system that provides high levels of educational equity (Ustun & Eryilmaz, 2018).

It should also be noted that these differences were stable across type of participation and the consequences of the issue since we found no systematic evidence that these moderated the effects of either type of inequality. This seems to suggest that such characteristics matter less than what is often assumed (Clayton, O'Brien and Piscopo, 2019; Solodoch, 2020; Werner and Marien, 2020; el-Wakil and Strebel, 2022). However, it should here be noted that there are other relevant aspects that matter more than those we here examined, so there is still a need to examine factors that potentially moderate the impact of inequalities.

Other limitations to our studies also exist. As mentioned, the case of Finland constitutes a suitable case due to the strong culture of equality. However, it is necessary to explore whether similar results can be obtained elsewhere, preferably in a comparative manner that makes it possible to assess the impact of contextual traits such as culture and institutional factors, which can affect the impact of inequalities (Cooray and Potrafke, 2011; Li, Zuckerman and Diener, 2021).

Our exploratory findings suggest that the results differ across groups in society since women were clearly more likely to react when women form a minority (Rosenthal, 1995; Clayton, O'Brien and Piscopo, 2019). Again, no differences across the educational attainment of respondents exist. More research is here needed to establish what groups react to what types of under-representation, and to examine the causal mechanisms that can help explain when

participatory inequalities have detrimental effects on legitimacy. In connection to this, it is worth highlighting that other types of inequalities might have entirely different effects. A particularly topical aspect here concerns how the over- or underrepresentation of ethnic and religious immigrants and minorities affect attitudes to democratic legitimacy, since this is arguable one of the developments presently putting democracy under strain.

These caveats notwithstanding, our results clearly show that it is important to further investigate differences in how participatory inequalities affect democratic legitimacy.

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Online appendix

Appendix 1: Characteristics of respondents compared to Finnish population

Table A1 shows that characteristics of the respondents in both studies when it comes to age, gender and place of living.

Table A1. Characteristics of respondents and target population

(%)	STUDY 1 (n=324)	Study 2 (n=840)	Finnish population (Excluding Åland islands)
Gender			
<i>Male</i>	49.4	49.7	50.0
<i>Female</i>	50.6	50.3	50.0
	100.0	100.0	100.0
Age group			
<i>18-29</i>	22.2	23.0	23.0
<i>30-39</i>	19.1	19.1	19.0
<i>40-49</i>	17.9	18.0	18.0
<i>50-59</i>	20.4	19.9	20.0
<i>60-</i>	20.4	20.0	20.0
	100.0	100.0	100.0
Region of living			
<i>North & East Finland</i>	24.4	24.3	24.0
<i>South Finland</i>	20.7	20.8	21.0
<i>Helsinki-Uusimaa</i>	30.3	29.9	30.0
<i>West Finland</i>	24.7	25.0	25.0
	100.0	100.0	100.0

Since the distribution of respondents in both studies resemble the Finnish population, we do not apply weighting when performing the analyses.

Appendix 2: Deviations from the pre-registration

Study 1

The preregistration concerning hypotheses, data collection, variables and analyses can be found at:

https://osf.io/4nbcz/?view_only=12857ff47f1342febcd8c02de07d4f3a

In the following, we outline the deviations from the pre-registration that occurred during writing up the results:

- The hypothesis has been slightly altered from the pre-registration to include “participatory”, since we want to emphasize that we are here interested in this particular type of (in)equality. The content remains identical.

STUDY 2

This study was preregistered for hypotheses, data collection, variables and analyses at:

https://osf.io/rjqux/?view_only=03c7b3039ae14b78a5c1fb533537f9c0

In the following, we note the deviations from the pre-registration that occurred during the process:

- The numbering of the hypotheses has been altered since the two studies are reported in the same paper. H1a and Hb in the pre-registration are here referred to as H2a and H2b, H2a and H2b in the pre-registration are here referred to as H3a and H3b, while H3 and H4 in the pre-registration are here referred to as H4 and H5. The content is identical.
- We have slightly rephrased H3a and H3b to reflect that we consider usefulness a form of output legitimacy. The intention remain identical.
- We have rephrased H4 and H5 to clarify that we expect differences in both subjective legitimacy and perceived usefulness to differ depending on type of participatory process and issue consequences. The intention remain identical.

- We now include analyses on differences across respondents for the results. No hypotheses were pre-registered for these, but it was mentioned that exploratory analyses would be performed.

Appendix 3: Distribution of respondents in list experiments

We in Table A2 show the distribution of answers in both list experiments included in study 1.

Table A2. Distribution of answers in list experiments

Value	List experiment 1 (LE1)				List experiment 2 (LE2)			
	Control		Treatment		Control		Treatment	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
0	7	4.3	2	1.3	3	1.8	1	0.6
1	5	3.1	1	0.6	10	6.1	10	6.3
2	10	6.1	4	2.5	34	20.7	21	13.1
3	93	56.7	22	13.8	81	49.4	45	28.1
4	35	21.3	77	48.1	24	14.6	65	40.6
5	14	8.5	54	33.8	12	7.3	18	11.3
Total	164		160		164		160	

For both experiments, the modal values are the expected 3 in the control group and 4 in the treatment group. However, there is quite a few respondents at the extremes. It is in particular worth noting that in LE1 a third of the respondents in the treatment group select 5 as their answer. We are unable to tell whether this is because of strategic or non-strategic reasons; i.e. whether respondents wanted to conceal their true motivations or misunderstood the task at hand.

Appendix 4: Mean scores and ANOVA models for Study 2

First, we in table A3 report the mean scores for the four treatments and all 16 combinations of them for the four dependent variables.

Table A3. Mean scores for main effects and combinations

	Leg1				Leg2				Useful1				Useful2			
Main effects	Mean	SE	95% CI		Mean	SE	95% CI		Mean	SE	95% CI		Mean	SE	95% CI	
Gender																
Women overrepresented	56.39	1.30	53.84	58.93	50.77	1.27	48.27	53.27	55.59	1.25	53.14	58.04	48.73	1.25	46.28	51.18
Men overrepresented	51.41	1.37	48.72	54.09	48.87	1.31	46.30	51.45	50.50	1.36	47.84	53.17	43.85	1.36	41.19	46.51
Education																
Low educated overrepresented	54.79	1.41	52.03	57.54	48.22	1.33	45.61	50.83	52.46	1.36	49.79	55.14	45.80	1.34	43.16	48.43
High educated overrepresented	52.94	1.28	50.43	55.44	51.32	1.26	48.85	53.79	53.50	1.26	51.03	55.98	46.67	1.28	44.16	49.18
Participatory process																
Discussion forum	52.30	1.31	49.73	54.86	50.12	1.27	47.62	52.61	53.20	1.28	50.68	55.72	46.00	1.31	43.42	48.57
Referendum	55.41	1.37	52.72	58.11	49.48	1.32	46.89	52.07	52.78	1.34	50.16	55.41	46.49	1.31	43.92	49.06
Issue consequences																
Society	54.99	1.32	52.39	57.58	50.12	1.36	47.45	52.79	53.93	1.33	51.32	56.54	47.43	1.33	44.82	50.04
Personal	52.72	1.35	50.06	55.38	49.49	1.23	47.07	51.90	52.07	1.29	49.53	54.61	45.07	1.29	42.54	47.60
Combinations																
Society#Discussion forum#Women#Only basic	56.88	4.17	48.69	65.07	53.49	4.06	45.52	61.46	57.28	4.08	49.28	65.28	46.00	4.06	38.04	53.96
Society#Discussion forum#Women#University-degree	54.71	3.56	47.72	61.70	51.41	3.47	44.61	58.21	56.78	3.48	49.95	63.61	53.27	3.46	46.47	60.07
Society#Discussion forum#Men#Only basic	52.24	3.59	45.19	59.29	47.13	3.49	40.27	53.99	46.83	3.51	39.94	53.72	43.03	3.49	36.18	49.89
Society#Discussion forum#Men#University-degree	44.62	4.22	36.33	52.91	46.03	4.11	37.97	54.09	47.64	4.12	39.55	55.74	35.33	4.10	27.28	43.39
Society#Referendum#Women#Only basic	59.65	4.03	51.73	67.57	51.45	3.92	43.75	59.15	57.30	3.94	49.57	65.04	48.63	3.92	40.93	56.33
Society#Referendum#Women#University-degree	58.11	3.72	50.80	65.42	54.94	3.62	47.83	62.05	57.96	3.64	50.82	65.10	53.28	3.62	46.17	60.38
Society#Referendum#Men#Only basic	56.29	3.12	50.16	62.41	47.19	3.03	41.23	53.14	50.09	3.05	44.11	56.07	44.88	3.03	38.93	50.83
Society#Referendum#Men#University-degree	56.18	4.44	47.47	64.90	50.88	4.32	42.40	59.35	61.47	4.34	52.96	69.98	55.47	4.31	47.00	63.94
Personal#Discussion forum#Women#Only basic	54.44	4.27	46.05	62.83	46.34	4.16	38.18	54.50	53.10	4.17	44.90	61.29	46.61	4.15	38.46	54.76
Personal#Discussion forum#Women#University-degree	56.16	3.45	49.39	62.93	51.32	3.35	44.74	57.90	57.60	3.37	50.99	64.21	47.78	3.35	41.20	54.36
Personal#Discussion forum#Men#Only basic	54.21	3.50	47.34	61.09	49.18	3.41	42.49	55.87	55.97	3.42	49.25	62.68	50.20	3.41	43.51	56.88
Personal#Discussion forum#Men#University-degree	44.04	3.66	36.86	51.21	54.76	3.56	47.78	61.74	49.18	3.57	42.17	56.19	42.36	3.55	35.38	49.33
Personal#Referendum#Women#Only basic	57.49	4.38	48.89	66.09	45.30	4.26	36.93	53.66	52.15	4.28	43.75	60.55	45.10	4.26	36.74	53.46
Personal#Referendum#Women#University-degree	54.65	3.37	48.04	61.26	50.00	3.28	43.57	56.43	51.97	3.29	45.51	58.43	47.18	3.27	40.76	53.61
Personal#Referendum#Men#Only basic	47.60	3.99	39.76	55.43	46.10	3.88	38.48	53.72	49.32	3.90	41.67	56.97	41.89	3.88	34.28	49.51
Personal#Referendum#Men#University-degree	53.42	3.87	45.82	61.02	50.00	3.76	42.61	57.39	45.40	3.78	37.98	52.82	37.32	3.76	29.94	44.70

In Table A4, we report results from factorial ANOVA analyses of all four dependent variables and including all possible interactions. These are the results we report in the text.

Table A4. Full factorial ANOVA models

Source (df)	Legit1				Legit 2				Useful1				Useful2				
	Partial SS	MS	F	Prob> F	Partial SS	MS	F	Prob> F	Partial SS	MS	F	Prob> F	Partial SS	MS	F	Prob> F	
<i>Model (15)</i>	15519.4	1034.			7347.4	489.8	0.69	0.795	16920.7	1128.			21759.6	1450.			
<i>Consequences (cons) (1)</i>	877.4	877.4	1.17	0.279	284.6	284.6	0.40	0.526	1346.3	3	1.88	0.170	1451.6	6	2.05	0.152	
<i>Participatory process (part) (1)</i>	2143.8	2143.			45.9	45.9	0.06	0.799	5.3	5.3	0.01	0.931	265.7	265.7	0.38	0.540	
<i>Gender inequality (gndr) (1)</i>	5961.8	5961.			531.5	531.5	0.75	0.387	4609.6	4609.			4397.3	4397.			
<i>Educational inequality (educ) (1)</i>	900.5	900.5	1.20	0.273	1692.0	1692.			112.3	112.3	0.16	0.692	100.3	100.3	0.14	0.707	
<i>cons#part (1)</i>	961.5	961.5	1.28	0.258	868.2	868.2	1.23	0.269	3927.4	3927.			5058.5	5058.			
<i>cons#gndr (1)</i>	37.4	37.4	0.05	0.823	2321.5	2321.			218.7	218.7	0.31	0.580	179.6	179.6	0.25	0.615	
<i>part#gndr (1)</i>	358.5	358.5	0.48	0.489	13.4	13.4	0.02	0.891	456.4	456.4	0.64	0.424	207.5	207.5	0.29	0.588	
<i>cons#educ (1)</i>	112.2	112.2	0.15	0.699	723.6	723.6	1.02	0.313	1106.9	1106.			1810.8	1810.			
<i>part#educ (1)</i>	1210.1	1210.			221.7	221.7	0.31	0.576	309.1	309.1	0.43	0.511	1240.8	1240.			
<i>gndr#educ (1)</i>	165.5	165.5	0.22	0.638	3.0	3.0	0.00	0.948	28.2	28.2	0.04	0.843	1920.5	1920.			
<i>cons#part#educ (1)</i>	34.2	34.2	0.05	0.831	477.6	477.6	0.67	0.412	578.1	578.1	0.81	0.369	416.0	416.0	0.59	0.443	
<i>cons#part#gndr (1)</i>	212.7	212.7	0.28	0.594	249.4	249.4	0.35	0.553	1227.1	1227.			2948.0	2948.			
<i>cons#gndr#educ (1)</i>	1.9	1.9	0.00	0.960	6.0	6.0	0.01	0.927	2308.4	2308.			138.5	138.5	0.20	0.658	
<i>part#gndr#educ (1)</i>	2373.5	2373.			15.0	15.0	0.02	0.885	907.2	907.2	1.27	0.260	1706.1	1706.			
<i>cons#part#gndr#educ (1)</i>	588.5	588.5	0.79	0.376	1.2	1.2	0.00	0.967	10.8	10.8	0.02	0.902	1085.4	1085.			
<i>Residual (824)</i>	617051.1	748.8			583730.	7			708.4	588638.	3			582939.	8		
<i>Total (839)</i>	632570.6	754.0			591078.	0			704.5	605559.	0			604699.	4		

In Table A5 we report ANOVA models that only include the direct effects

Table A5. ANOVA analyses that only include direct effects

	Legit1				Legit 2				Useful1				Useful2						
Source (df)	Partial SS	MS	F	Prob> F	Partial SS	MS	F	Prob> F	Partial SS	MS	F	Prob> F	Partial SS	MS	F	Prob> F			
<i>Model (15)</i>	9436.1	2359.0	0	3.16	0.014	2709.8	677.5	0.96	0.428	6296.6	1574.0	1	2.19	0.068	6275.3	1568.0	8	2.19	0.069
<i>Consequences (1)</i>	815.2	815.2	1.09	0.296	185.1	185.1	0.26	0.608	804.8	804.8	1.12	0.290	1228.1	1228.1	1	1.71	0.191		
<i>Participatory process (1)</i>	1845.7	1845.7	7	2.47	0.116	79.9	79.9	0.11	0.736	53.6	53.6	0.07	0.785	31.3	31.3	0.04	0.834		
<i>Gender inequality (1)</i>	5890.0	5890.0	0	7.89	0.005	431.0	431.0	0.61	0.434	5213.0	5213.0	0	7.26	0.007	4810.3	4810.0	3	6.71	0.010
<i>Educational inequality(1)</i>	1203.9	1203.9	9	1.61	0.204	1770.7	1770.7	7	2.51	0.113	37.5	37.5	0.05	0.819	25.4	25.4	0.04	0.851	
<i>Residual (835)</i>	623134.5	746.3			588368.2	704.6			599262.4	717.7			598424.2	716.7					
<i>Total (839)</i>	632570.6	754.0			591078.0	704.5			605559.0	721.8			604699.4	720.7					

In table A6, we report ANOVA models where we only include the interaction terms that are of primary interest according to our hypotheses.

Table A6. ANOVA models including only relevant interaction terms

Source (df)	Legit1				Legit 2				Useful1				Useful2			
	Partial SS	MS	F	Prob> F	Partial SS	MS	F	Prob> F	Partial SS	MS	F	Prob> F	Partial SS	MS	F	Prob> F
<i>Model (15)</i>	10978.5	1372.3	1.83	0.067	5744.1	718.0	1.02	0.420	8293.0	1036.6	1.44	0.175	9398.1	1174.8	1.64	0.110
<i>Consequences (cons) (1)</i>	863.6	863.6	1.15	0.283	250.1	250.1	0.36	0.552	770.7	770.7	1.07	0.301	1252.3	1252.3	1.75	0.187
<i>Participatory process (part) (1)</i>	1678.7	1678.7	2.24	0.135	70.9	70.9	0.10	0.751	29.1	29.1	0.04	0.841	58.9	58.9	0.08	0.775
<i>Gender inequality (gndr) (1)</i>	5806.8	5806.8	7.76	0.006	491.4	491.4	0.70	0.404	5019.6	5019.6	6.98	0.008	4555.6	4555.6	6.36	0.012
<i>Educational inequality (educ) (1)</i>	1147.7	1147.7	1.53	0.216	1620.5	1620.5	2.30	0.130	39.9	39.9	0.06	0.814	30.7	30.7	0.04	0.836
<i>cons#gndr (1)</i>	27.9	27.9	0.04	0.847	2411.3	2411.3	3.42	0.065	244.2	244.2	0.34	0.560	166.8	166.8	0.23	0.630
<i>part#gndr (1)</i>	524.9	524.9	0.70	0.402	25.6	25.6	0.04	0.849	347.6	347.6	0.48	0.487	128.6	128.6	0.18	0.672
<i>cons#educ (1)</i>	83.6	83.6	0.11	0.738	787.3	787.3	1.12	0.291	1117.4	1117.4	1.55	0.213	1795.3	1795.3	2.51	0.114
<i>part#educ (1)</i>	1098.7	1098.7	1.47	0.226	129.0	129.0	0.18	0.669	157.0	157.0	0.22	0.640	809.6	809.6	1.13	0.288
<i>Residual (831)</i>	621592.1	1	748.0		585333.9	9	704.4		597266.0	718.7			595301.3	3	716.4	
<i>Total (839)</i>	632570.6	6	754.0		591078.0	0	704.5		605559.0	721.8			604699.4	4	720.7	

The results are in both cases similar which means that model specification does not decide the results.

Appendix 5: Attention checks

Table A7 shows the attention checks and distribution of answers.

Table A7. Attention checks

	Freq.	Percent	# Correct
Who was affected by the legislation			
Me personally	125	14.88	108
Society at large	511	60.83	298
Residents of the USA	22	2.62	0
Don't know	182	21.67	0
How did decision-makers get input from participants			
Referendum	297	35.4	225
Discussion forum	295	35.1	239
Survey to all residents	110	13.1	0
Don't know	138	16.4	0
What gender were the majority of the participants?			
Male	354	42.1	311
Female	287	34.2	287
Non-binary	17	2	0
Don't know	182	21.7	0
What was the level of education of the majority of participants?			
University degree	349	41.6	302
Basic education	341	40.6	290
Educated abroad	9	1.1	0
Don't know	141	16.8	0

We see that few answered correctly for the consequences of the legislation and the nature of the participatory process. More people remembered correctly when it comes to the types of inequality, although here also about 1/3 of respondents did not recollect the correct answer.

The following Table A8 shows the results when restricting analyses to respondents who answered correctly.

Table A8. ANOVA models

	ALL RESPONDENTS				ONLY RESPONDENTS WHO ANSWERED CORRECT FOR GENDER				ONLY RESPONDENTS WHO ANSWERED CORRECT FOR EDUCATION			
Legit 1												
Source	Partial SS	MS	F	Prob>F	Partial SS	MS	F	Prob>F	Partial SS	MS	F	Prob>F
Model	15519.4	1034.6	1.4	0.149	16405.5	1093.7	1.4	0.141	17425.3	1161.7	1.5	0.107
conseq	877.4	877.4	1.2	0.279	1223.2	1223.2	1.6	0.211	164.1	164.1	0.2	0.648
particip	2143.8	2143.8	2.9	0.091	1487.3	1487.3	1.9	0.168	2524.7	2524.7	3.2	0.074
conseq#particip	961.5	961.5	1.3	0.258	597.9	597.9	0.8	0.382	2137.6	2137.6	2.7	0.100
gendr	5961.8	5961.8	8.0	0.005	4883.9	4883.9	6.3	0.013	7013.4	7013.4	8.9	0.003
conseq#gendr	37.4	37.4	0.1	0.823	1567.7	1567.7	2.0	0.157	465.8	465.8	0.6	0.442
particip#gendr	358.5	358.5	0.5	0.489	587.5	587.5	0.8	0.386	251.9	251.9	0.3	0.571
conseq#particip#gendr	212.7	212.7	0.3	0.594	64.9	64.9	0.1	0.773	0.6	0.6	0.0	0.978
educ	900.5	900.5	1.2	0.273	1.6	1.6	0.0	0.964	240.3	240.3	0.3	0.580
conseq#educ	112.2	112.2	0.2	0.699	5.8	5.8	0.0	0.931	132.0	132.0	0.2	0.682
particip#educ	1210.1	1210.1	1.6	0.204	1888.7	1888.7	2.4	0.120	991.9	991.9	1.3	0.262
conseq#particip#educ	34.2	34.2	0.1	0.831	169.5	169.5	0.2	0.641	236.5	236.5	0.3	0.583
gendr#educ	165.5	165.5	0.2	0.638	649.5	649.5	0.8	0.362	298.0	298.0	0.4	0.538
conseq#gendr#educ	1.9	1.9	0.0	0.960	613.5	613.5	0.8	0.376	0.1	0.1	0.0	0.993
particip#gendr#educ	2373.5	2373.5	3.2	0.075	386.7	386.7	0.5	0.482	1745.8	1745.8	2.2	0.137
conseq#particip#gendr#educ	588.5	588.5	0.8	0.376	1220.2	1220.2	1.6	0.212	950.4	950.4	1.2	0.272
Residual	617051.1	748.8			443451.4	780.7			452291.2	785.2		

	ALL RESPONDENTS				ONLY RESPONDENTS WHO ANSWERED CORRECT FOR GENDER				ONLY RESPONDENTS WHO ANSWERED CORRECT FOR EDUCATION				
Total	632570.6	754.0			459856.8	788.8			469716.5	794.8			
Legit 2													
Source	Partial SS	MS	F	Prob>F	Partial SS	MS	F	Prob>F	Partial SS	MS	F	Prob>F	
Model	7347.4	489.8	0.7	0.795	7116.6	474.4	0.7	0.785	9221.7	614.8	0.9	0.563	
conseq	284.6	284.6	0.4	0.526	87.5	87.5	0.1	0.719	38.9	38.9	0.1	0.811	
particip	45.9	45.9	0.1	0.799	19.7	19.7	0.0	0.865	15.5	15.5	0.0	0.880	
conseq#particip	868.2	868.2	1.2	0.269	608.6	608.6	0.9	0.343	448.8	448.8	0.7	0.418	
gendr	531.5	531.5	0.8	0.387	125.0	125.0	0.2	0.668	239.4	239.4	0.4	0.554	
conseq#gendr	2321.5	2321.5	3.3	0.071	316.5	316.5	0.5	0.494	1410.5	1410.5	2.1	0.151	
particip#gendr	13.4	13.4	0.0	0.891	132.5	132.5	0.2	0.658	210.3	210.3	0.3	0.579	
conseq#particip#gendr	249.4	249.4	0.4	0.553	687.7	687.7	1.0	0.314	92.0	92.0	0.1	0.714	
educ	1692.0	1692.0	2.4	0.123	2255.8	2255.8	3.3	0.068	3037.4	3037.4	4.5	0.035	
conseq#educ	723.6	723.6	1.0	0.313	103.4	103.4	0.2	0.696	51.0	51.0	0.1	0.785	
particip#educ	221.7	221.7	0.3	0.576	1315.4	1315.4	1.9	0.164	489.3	489.3	0.7	0.398	
conseq#particip#educ	477.6	477.6	0.7	0.412	571.6	571.6	0.8	0.359	377.0	377.0	0.6	0.458	
gendr#educ	3.0	3.0	0.0	0.948	289.3	289.3	0.4	0.514	4.0	4.0	0.0	0.939	
conseq#gendr#educ	6.0	6.0	0.0	0.927	42.2	42.2	0.1	0.803	97.3	97.3	0.1	0.706	
particip#gendr#educ	15.0	15.0	0.0	0.885	651.8	651.8	1.0	0.327	1706.6	1706.6	2.5	0.114	
conseq#particip#gendr#educ	1.2	1.2	0.0	0.967	28.7	28.7	0.0	0.837	74.3	74.3	0.1	0.742	
Residual	583730.7	708.4			384479.7	676.9			393090.6	682.4			
Total	591078.0	704.5			391596.3	671.7			402312.3	680.7			
Useful 1													
Source	Partial SS	MS	F	Prob>F	df	F	Prob>F		Partial SS	MS	F	Prob>F	
Model	16920.7	1128.0	1.6	0.073		15641.9	1042.8	1.4	0.142	17172.3	1144.8	1.5	0.085
conseq	1346.3	1346.3	1.9	0.170		1874.6	1874.6	2.5	0.113	538.0	538.0	0.7	0.395
particip	5.3	5.3	0.0	0.931		126.4	126.4	0.2	0.681	227.4	227.4	0.3	0.580
conseq#particip	3927.4	3927.4	5.5	0.019		2141.2	2141.2	2.9	0.091	3074.5	3074.5	4.2	0.042
gendr	4609.6	4609.6	6.5	0.011		3361.4	3361.4	4.5	0.034	5236.0	5236.0	7.1	0.008
conseq#gendr	218.7	218.7	0.3	0.580		1.3	1.3	0.0	0.967	494.1	494.1	0.7	0.415
particip#gendr	456.4	456.4	0.6	0.424		40.8	40.8	0.1	0.815	1.8	1.8	0.0	0.961
conseq#particip#gendr	1227.1	1227.1	1.7	0.190		1838.8	1838.8	2.5	0.117	1279.3	1279.3	1.7	0.190
educ	112.3	112.3	0.2	0.692		783.4	783.4	1.1	0.306	656.8	656.8	0.9	0.347
conseq#educ	1106.9	1106.9	1.6	0.214		2134.2	2134.2	2.9	0.091	1171.9	1171.9	1.6	0.209
particip#educ	309.1	309.1	0.4	0.511		473.4	473.4	0.6	0.426	158.8	158.8	0.2	0.644
conseq#particip#educ	578.1	578.1	0.8	0.369		1088.2	1088.2	1.5	0.228	1045.7	1045.7	1.4	0.235
gendr#educ	28.2	28.2	0.0	0.843		47.7	47.7	0.1	0.800	8.8	8.8	0.0	0.913
conseq#gendr#educ	2308.4	2308.4	3.2	0.073		1090.9	1090.9	1.5	0.227	2081.7	2081.7	2.8	0.094
particip#gendr#educ	907.2	907.2	1.3	0.260		468.7	468.7	0.6	0.428	751.5	751.5	1.0	0.314
conseq#particip#gendr#educ	10.8	10.8	0.0	0.902		114.6	114.6	0.2	0.695	112.1	112.1	0.2	0.697
Residual	588638.3	714.4				423651.5	745.9			426931.6	741.2		
Total	605559.0	721.8				439293.4	753.5			444103.9	751.4		
Useful2													
Source	Partial SS	MS	F	Prob>F	Partial SS	MS	F	Prob>F	Partial SS	MS	F	Prob>F	
Model	21759.6	1450.6	2.1	0.010	19463.9	1297.6	1.8	0.027	21623.3	1441.6	2.1	0.011	
conseq	1451.6	1451.6	2.1	0.152	748.2	748.2	1.1	0.304	62.9	62.9	0.1	0.765	
particip	265.7	265.7	0.4	0.540	134.3	134.3	0.2	0.663	410.5	410.5	0.6	0.446	
conseq#particip	5058.5	5058.5	7.2	0.008	2826.9	2826.9	4.0	0.046	4074.3	4074.3	5.8	0.017	
gendr	4397.3	4397.3	6.2	0.013	4331.1	4331.1	6.1	0.014	5135.4	5135.4	7.3	0.007	
conseq#gendr	179.6	179.6	0.3	0.615	19.0	19.0	0.0	0.870	457.1	457.1	0.7	0.421	
particip#gendr	207.5	207.5	0.3	0.588	2.7	2.7	0.0	0.951	2.5	2.5	0.0	0.953	
conseq#particip#gendr	2948.0	2948.0	4.2	0.042	4241.8	4241.8	6.0	0.015	2118.1	2118.1	3.0	0.083	
educ	100.3	100.3	0.1	0.707	488.7	488.7	0.7	0.406	1999.5	1999.5	2.8	0.093	
conseq#educ	1810.8	1810.8	2.6	0.110	2217.3	2217.3	3.1	0.077	1858.7	1858.7	2.6	0.105	
particip#educ	1240.8	1240.8	1.8	0.186	313.9	313.9	0.4	0.505	153.0	153.0	0.2	0.641	
conseq#particip#educ	416.0	416.0	0.6	0.443	441.1	441.1	0.6	0.430	751.7	751.7	1.1	0.302	
gendr#educ	1920.5	1920.5	2.7	0.100	2075.6	2075.6	2.9	0.087	2224.7	2224.7	3.2	0.076	
conseq#gendr#educ	138.5	138.5	0.2	0.658	29.3	29.3	0.0	0.839	459.4	459.4	0.7	0.420	
particip#gendr#educ	1706.1	1706.1	2.4	0.121	852.7	852.7	1.2	0.273	913.6	913.6	1.3	0.255	
conseq#particip#gendr#educ	1085.4	1085.4	1.5	0.216	308.1	308.1	0.4	0.509	376.1	376.1	0.5	0.465	
Residual	582939.8	707.5			401507.3	706.9			405620.7	704.2			
Total	604699.4	720.7			420971.2	722.1			427244.1	722.9			

The results are largely similar regardless of the restriction since gender inequality preserves the only inequality to consistently affect legitimacy and the interaction terms do not reach significance.