RESEARCH ARTICLE

Sortition and its Principles: Evaluation of the Selection Processes of Citizens' Assemblies

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Sortition is sometimes seen as a means of addressing some weaknesses of the electoral system. Advantages of sortition are related to its three principles—randomness, representation and equality. Nowadays, we are witnessing the growing popularity of the citizens' assembly—the most expanded form of deliberative process based on sortition. The methods of selection of assembly members are very diverse. Theoretically, they should ensure that the selection process fulfils the principles of randomness, representation and equality, but in practice there are many factors that can disturb their implementation.

The aims of the paper are to investigate what selection methods are used in citizens' assemblies and to evaluate the processes of selection of assembly members from the perspective of principles of randomness, representation and equality. For this purpose, selection processes from 29 citizens' assemblies organised in the years 2020–2021 in 9 European countries were analysed. Then the selection processes were compared with an evaluation model prepared on the basis of theoretical concepts concerning randomness, representation and equality. The study was conducted using a desk research method whose subjects were reports and methodology descriptions regarding each citizens' assembly, as well as the assembly members' data.

The study shows the selection methods used in citizens' assemblies are very diverse. Although almost all of the analysed assemblies were representative of the given population, in some of the cases, the selection processes were far from the ideal of randomness and did not provide everyone with even near equal chances of being selected to participate.

Keywords: citizens' assembly; sortition; random selection; citizens' participation; deliberative democracy

Introduction

In times of crisis of representative democracy, sortition (random selection of representatives) is sometimes seen as an alternative or supplement to elections, which can address some weaknesses of the current political system. It is argued that sortition prevents systematic exclusion of certain citizens from public decision-making (Smith 2009, Wright 2010), as well as reduces corruption and domination of interest groups in the legislative process (Delannoi, Dowlen & Stone 2013; Mueller, Tollison & Willett 1972). Random selection of representatives is also seen as a way to undermine the party system in which politicians act in the interest of their party instead of the public interest (Carson & Martin 1999).

Besides randomness, these advantages are strongly related to two other principles that sortition is claimed to meet – representation and equality. It is often emphasised that random selection can ensure that people taking part in decision-making are much more representative of the whole society than in the electoral democracy, where

minorities and women are highly underrepresented (Callenbach & Phillips 1985, Carson & Martin 1999). It is also claimed that the use of sortition can provide equal chances for each citizen to participate in decision-making (Carson & Martin 1999, Malkopoulou 2015, Delannoi & Dowlen 2016).

Moreover, compliance with principles of representation and equality determines the legitimacy of sortitioned decision-making bodies (Pow 2021). The equality of chances to participate in decision-making is claimed to be a substitute for voters' equality in an electoral system and therefore to influence the legitimacy of sortition (Khoban 2021). And because the sortitioned bodies are not yet grounded in a political and legal systems, they can be authorised by the likeness between allotted representatives and represented citizens (Dellanoi et al. 2013). Thus, the legitimacy of sortitioned bodies is affected by their representativeness, as instead of being authorised through election, they are legitimised through the identification of representatives with represented citizens (Courant 2017).

The potential of sortition has given rise to the creation of many different theoretical concepts concerning the role that randomly selected bodies could play in the political system. Some of the authors propose granting them advisory role

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to institutions of direct democracy (Gastil & Richards 2013) or to elected legislature (Mueller, Tollison & Willett 1972). Others suggest coexistence of the elected and randomly selected parliament chambers (Callenbach & Phillips 1985; O'Leary 2006; Zakaras 2010; Gastil & Wright 2019), filling some of the seats in a parliament with randomly selected members (Buchstein & Hein 2009) or even creation of full-scale political systems based on sortition (Burnheim 1985; Goodwin 1992; Bouricious 2013).

These theoretical concepts are to some extent reflected in practice. Although often-mentioned examples of using sortition in a political system are ancient Athens and renaissance Italian city-states (Dowlen 2008; Sintomer 2010), random selection of authorities can also be found today in some indigenous communities in India (Shah 2021). Moreover, the concept of random selection in decision-making has been implemented in modern Western societies as well, because participatory and deliberative processes based on random selection began to be organised in various countries in the second half of the twentieth century (Escobar & Elstub 2017; OECD 2020).

Nowadays, we are witnessing the growing popularity and significance of the citizens' assembly – the most expanded form of deliberative process based on sortition, in terms of number of participants, as well as length and structure of a process (Escobar & Elstub 2017). Although most citizens' assemblies are still generally non-institutionalised and formally are granted at most an advisory role, they have a significantly greater impact on decisions of public authorities than typical public consultation.

Because citizens' assemblies are organised independently in many different countries (OECD 2020), the methods of selection of their participants are very diverse. Theoretically, these methods should ensure that the selection process fulfils the principles of randomness, representation and equality. In practice, however, there are many factors that can disturb the implementation of these principles.

Therefore, the aims of the conducted study were to investigate what selection methods are used in the citizens' assemblies and to evaluate the processes of selection of assembly members from the perspective of principles of randomness, representation and equality. The study referred to the legitimacy of citizens' assemblies that results not from their institutionalisation but from their alleged compliance with the mentioned principles. Therefore, the conducted evaluation allowed to assess whether the processes of selection of assembly members guaranteed a legitimation of the citizens' assemblies.

The design and findings of the conducted research can be valuable for further studies and future application of citizens' assemblies. First, the research can contribute to other studies concerning the legitimacy of citizens' assemblies and similar sortitioned bodies by providing the framework for their evaluation. Second, the research can be beneficial for practitioners by identifying elements of citizens' assemblies' design that can be improved to strengthen their legitimacy.

To achieve the aims of the study, I determined how randomness, representation and equality are to be understood in respect of a citizens' assembly, and on this basis I prepared the evaluation model of the selection processes. Afterwards, I analysed different selection methods used in citizens' assemblies and tried to check whether they complied with the evaluation criteria.

Thus, in the paper, I shall (1) briefly characterise a citizens' assembly as a deliberative process based on sortition, (2) describe concepts concerning principles that sortition is claimed to fulfil, (3) present the evaluation model for the selection process, (4) describe methods used in the research, (5) describe selection methods used in citizens' assemblies, and (6) present the findings of the study concerning the evaluation of the selection processes.

Citizens' Assemblies and Their Significance

A citizens' assembly is one of the forms of a mini-public—an institution consisting of randomly selected citizens who are representative of their population with regard to different demographic characteristics (such as age, gender, ethnicity, education, etc.) and who deliberate on a given issue through facilitated discussion, on the basis of evidence and advocacy provided by experts (Escobar & Elstub 2017). The first experimental mini-publics were organised in the 1970s, when citizens' juries in the United States and planning cells in Germany were invented (Crosby, Kelly & Schaefer 1986; Dienel 1999). Since then, citizens' juries have gained popularity in other countries, such as the UK, Ireland, Australia, or Italy (Coote & Lenaghan 1997; Carson & Hartz-Karp 2006). Simultaneously, new forms of mini-publics were established, such as deliberative polls and citizens' initiative reviews in the USA and consensus conferences in Denmark, the Netherlands, and the UK (Joss & Durant 1995; Fishkin & Luskin 2005; Gastil, Richards & Knobloch 2014).

Citizens' assemblies started to be organised in the early 2000s in Canada (Lang 2007; Rose 2007; Warren & Pearce 2008), and so far they are the most expanded form of mini-public. In comparison to other forms, a citizens' assembly is composed of a greater number of participants; according to the Organisation for Economic Co-operation and Development (OECD 2020), the average number of their participants is 90, whereas according to Escobar & Elstub (2017), the number of participants varies between 100 and 160. Moreover, the meetings of citizens' assemblies last longer than in other forms: the average length of meetings is 18.8 days, and the average length from first to last meeting is 47 weeks (OECD 2020); according to other calculations, the total length of meetings is between 20 and 30 days (Escobar & Elstub 2017). The other difference between a citizens' assembly and other forms of mini-public is the result of the process. The aim of a citizens' assembly is to deliver a detailed recommendation on a given policy question (Escobar & Elstub 2017; OECD 2020).

Because citizens' assemblies and other forms of mini-publics are based on sortition and deliberation, they are institutions of deliberative democracy (Fishkin 2009). Moreover, citizens' assemblies are claimed to be part of the 'second wave' of mini-publics, which are not only institutions of deliberative democracy, complementary to representative democracy, but are also combined with institutions of direct or participatory democracy and have the potential to become a tool of radical democracy (Sintomer 2019). Admittedly, a prevailing part of citizens' assemblies is not institutionalised yet, and recent studies

show that the level of social and political support for randomly selected legislative bodies is not as high as one might expect (Jacquet, Niessen & Reuchamps 2022). Even so, it is worth noting that a significant number of public authorities declare to treat assemblies' recommendations as politically binding, and some of them are organised through bottom-up initiatives (Sintomer 2019).

Because there are many various practises of organising mini-publics and the nomenclature used in different countries is not uniform, it is hard to clearly distinguish the forms of mini-publics. Then, the definitions of each form provided by different authors vary (Escobar & Elstub 2017; OECD 2020). For the needs of this paper, by a 'citizens' assembly' I mean a form of mini-public

1. which is composed of at least several dozen participants,
2. whose total duration is no less than several weeks (from first to last meeting),
3. whose aim is to provide detailed recommendations on a policy question, and
4. which is commissioned by public authorities.

Sortition and Its Principles

Randomness
By definition, randomness is an inherent feature of sortition. In practice, however, members of citizens' assemblies are selected in a 'near-random' but not 'pure random' way, which is the outcome of three factors (Smith 2009):

1. Incomplete registers—Because population registers can be incomplete, residents who are not registered can be excluded from selection from the very beginning;
2. Self-selection—Participation in mini-publics is voluntary, and selected citizens can decide not to participate; consequently, the selected group is not a completely random cross-section of the population, and it tends to be more politically active and better educated than the general population;
3. Stratified sampling—Because simple random selection can lead to underrepresentation of minority groups, practitioners use stratified sampling instead of simple sampling.

The third limitation is connected with the need to provide not only a randomly selected but also a representative group of assembly members.

Representation
With regard to sortition, representation is understood differently than in the case of electoral democracy and is called representation through identification, not through authorisation (Courant 2017). In this case, representatives are aimed to be a cross-section of the population, considering various demographic characteristics such as sex, age, and ethnicity (Carson & Martin 1999).

This type of representation is called 'descriptive', which means that representatives share some features, experiences and background with other members of the social group that they represent (Mansbridge 1999). Descriptive representation, by ensuring participation of disadvantaged groups in decision-making, can increase the cognitive diversity of this group and consequently upgrade the epistemic quality of deliberation (Landemore 2013).

It is claimed that if some conditions are fulfilled, pure random selection should guarantee that a group of decision-makers will be a cross-section of the population. First, the poll has to be large enough to mirror proportions of demographic characteristics of the population. Second, the representatives should be selected from a pool consisting of the whole population (Delannoi, Dowlen & Stone 2013). Third, each member of this population should have equal chances of being selected to be a representative (Benade, Golz & Procaccia 2019).

Unfortunately, there are two factors that disturb these expectations. First, only a small part of randomly selected citizens (2–5%) decide to participate in mini-publics. Second, those who are willing to participate mostly tend to be members of advantaged groups, and the minorities remain underrepresented (Flanigan, Golz, Gupta & Procaccia 2020). To prevent that, practitioners divide the selection process into two steps. In the first step, they select a larger number of people who are invited to participate in the process. Afterwards, representatives are selected from among the people who have accepted the invitation (Flanigan, Golz, Gupta & Procaccia 2020). Additionally, to counteract the self-selection bias, practitioners use stratified sampling, which guarantees that the selected group has the same proportions of demographic characteristics as the population that it represents (Carson and Martin 1999).

Besides ensuring that all social groups are proportionally represented, some practitioners intentionally oversample minority groups. This practice of deliberate deviation from descriptive representation has both supporters and critics. It is claimed that oversampling minorities is undesirable for epistemic reasons (Landemore 2013). It is also argued, however, that it can provide more socially diverse perspectives in deliberation (Brown 2006). Regardless of the assessment of this issue, both the use of stratified sampling and oversampling disadvantaged groups can, to some extent, disturb implementation of the principle of equality.

Equality
Similarly to electoral democracy, with regard to sortition, equality means that every member of a given population has the same voting power, on the assumption that voters can be selected by lot (Fishkin & Luskin 2005). Random selection is claimed to promote equality in a few different ways; it guarantees citizens equal chances of

1. being chosen to participate in decision-making,
2. developing their sense of self-worth and
3. gaining material benefits or suffering losses from holding office, and
4. it does not give selected people any reason to believe that they are superior to others (Carson & Martin 1999).

In this paper, I will focus on the first point, because the others are also dependent on different factors than selection methods.

The fact that sortition provides equal chances of being selected is seen as its inherent feature that can correct the weaknesses of elections (Zakaras 2010; Delannoi & Dowlen 2016). At the same time, it is emphasised that sortition does not guarantee an equal opportunity to participate in decision-making but only equal chances of being chosen to participate (Brown 2006).

Random selection methods guarantee that initially, all citizens have equal opportunity for being selected to participate. In ideal situations, besides equality of opportunity, sortition would also provide equality of outcomes of the selection. However, due to social inequalities, the equality of outcomes can be distorted during the selection process.

As with representation, its implementation can be impeded by the fact that participation in mini-publics is voluntary, and only a small part of the population is willing to participate. This can be problematic especially for disadvantaged groups, whose members are less likely to take part in such processes (Malkopoulou 2015). Thus, as mentioned earlier, to counteract a low level of volunteering and to prevent underrepresentation of disadvantaged groups, practitioners use stratified sampling and determine that within the final group of assembly members, there will be appropriate proportions of representatives of various social groups.

Thus, practitioners divide the selection process into two steps. Within the first step, they randomly select a bigger group of citizens who are invited to participate in the process, and in the second step, they randomly select the final group of participants from those who have accepted the invitation (using stratified sampling). It is claimed that most methods used at this stage do not permit controlling the individual citizens' probability of being chosen (Flanigan, Golz, Gupta & Procaccia 2020). Thus, with the purpose of guaranteeing representation, they distort individuals' equality of outcomes to a large extent. Moreover, because these selection methods give individuals a lower or higher probability of being selected on the basis of the combination of their various demographic characteristics, they can also systematically exclude some intersectional groups from participation in assemblies (Flanigan, Golz, Gupta & Procaccia 2020).

Evaluation Model

The aims of the paper are to investigate what selection methods are used in citizens' assemblies and to evaluate the selection processes from the perspective of the principles of randomness, representation and equality.

In the research, I distinguished three stages of the selection process that appeared in all analysed cases, whose objectives are as follows:

1. Stage 1, to set up the initial composition of an assembly,
2. Stage 2, to select people who are invited to participate in a selection process,
3. Stage 3, to select assembly members.

Each of these stages of selection can be evaluated from the perspective of randomness, representation or equality. At the first stage of selection, only the representation can be evaluated; at the second stage, randomness and equality are evaluated; and at the third stage all three principles are evaluated.

On the basis of described theoretical concepts concerning the analysed principles, I prepared the evaluation model (**Table 1**). All of the analysed selection

Stage of Selection:	1	2	3
Randomness	Not applicable	Is the method near random? Yes: 1 point; No: 0 points.	Is the method near random? Yes: 1 point; No: 0 points.
Representation	Is the initial composition of an assembly proportional to the population? Yes: 1 point. No: Is the distortion's aim to overrepresent disadvantaged groups or smaller units? Yes: 1 point; No: 0 points.	Not applicable	Is the final composition of an assembly proportional to the population? Yes: 1 point. No: is the distortion's aim to overrepresent disadvantaged groups or smaller units? Yes: 1 point No: Is the distortion a result of insufficient number of applications from certain groups or resignation after selection? Yes: 1 point; No: 0 points.
Equality	Not applicable	Does every citizen have equal chances of being selected to get an invitation (with reference to both equality of opportunities and outcomes)? Yes: 1 point No: Is the distortion's aim to overrepresent disadvantaged groups or smaller units? Yes: 1 point; No: 0 points.	Does everyone participating in the selection process have as equal as possible chances of being selected as an assembly member? Yes: 1 point; No: 0 points.

Table 1: Evaluation model of citizens' assemblies from the perspective of principles of randomness, representation and equality.

processes could score one point for compliance with principles of randomness, representation and equality at each stage of selection (two points for each principle, in total six points). For all of the principles, the selection processes scored one point at each stage if the given principle was implemented directly. Moreover, in case of representation and equality, the cases were given one point if there were some deliberate or unavoidable distortions of these principles—for example, aimed to overrepresent the disadvantaged groups The cases where the data concerning any of the stages of selection was not available were counted separately.

Methods

For the purpose of investigating different selection methods and evaluating selection processes, I analysed the cases of citizens' assemblies using a desk research method. In order to limit the number of the analysed cases, I chose the most recently organised assemblies (in 2020 and 2021) that took place in Europe.

While identifying the cases of citizens' assemblies organised at that time and place, I used data from the report 'Innovative Citizen Participation and New Democratic Institutions: Catching the Deliberative Wave' (OECD 2020). First, I checked whether in the countries where citizens' assemblies took place in years included in the report (1986–2019), assemblies were also organised in 2020 or 2021. Because three forms of deliberative processes described in the report could have met the adopted definition of citizens' assembly (a citizens' jury, a citizens' assembly and a permanent citizens' dialogue), I took into account all of these forms. Afterwards, I completed the list of identified cases with two countries where citizens' assemblies were organised for the first time in 2020 or 2021—Bosnia and Herzegovina, and Hungary.

As a result, in total I have studied cases of 29 citizens assemblies organised on the national (7), regional (3) or local (19) level in 9 different countries: Belgium (2), Bosnia and Herzegovina (1), France (1), Germany (2), Hungary (1), Ireland (1), Poland (5), Spain (1), and the UK (15). The list of the analysed cases along with the specific data concerning the methods of selection is available in the appendix to the paper (Table A).

During the study, I analysed publicly available reports, methodology descriptions and assembly members' data regarding each citizens' assembly. In most of the cases, I complemented the research with information gained directly from the organisers of the assemblies. From these sources, I gained data concerning selection methods, as well as demographic characteristics of assembly members and the populations that they represented. Organisers of nine citizens' assemblies did not provide me with all the requested data.

Methods of Selection—Description
Stage 1

As mentioned earlier, organisers of citizens' assemblies set demographic quotas to ensure that an appropriate number of people belonging to different social groups participate in an assembly. Then, in the first stage of the

selection process, the practitioners have to decide what the initial composition of the citizens' assembly will be—what size and what proportions of demographic characteristics it should have.

In the analysed cases, the average size of an assembly was 70 members. In the assemblies organised on a national level, the size of the group was bigger than in local or regional assemblies (99–160 vs. 25–80 members). In six cases, besides the main group, there was also a list of substitutes who could replace members of assemblies that resigned from participation after the end of the selection process. In other assemblies, the substitutes were selected ad hoc from the group of citizens who had agreed to participate.

Demographic variables used to set up the demographic quotas were similar in all analysed cases. They included in particular gender, age, and place of residence (e.g., district of a city, region of a country, rural or urban area). Other commonly used variables were level of education, attitude to the theme of the assembly, ethnic group and socio-economic status.

In most of the analysed cases, the proportions of representatives of different social groups were directly proportional to the society in question. It has to be emphasised, however, that because a group of assembly members is several times smaller than the corresponding population, the initial composition of an assembly can hardly ever be a perfect reflection of the population. Moreover, in a few cases some modifications concerning proportions of citizens representing units of cities or states were introduced. In three assemblies organised in Poland (Wrocław, Warsaw and Poznań), seats in the assembly were granted to districts proportionally to the square root of the population of each district, and then the smallest districts were granted additional seats. Whereas in Germany (2020–2021), the number of seats in the assembly was dependent on the number of seats that each region has in the federal parliament.

Also, the eligibility criteria for participation in the assemblies were different in the analysed cases. First, the minimum age of participants varied between 15 and 18 years, although in the majority of cases, it was set at the age of 16. The second important difference was the main condition of participation—in some of the cases, only citizens with voting rights could participate, whereas in others, all the residents of the city or country were entitled to take part in an assembly. In several cases, certain groups were excluded from participation, such as citizens affiliated with local, regional, national or European authorities; political parties; stakeholders or organisers; experts; observers or media workers. Additionally, in the German-speaking community of Belgium, in the event of other ethical contraindications, the permanent citizens' council has a right to exclude other citizens from participation in an assembly (Stuers 2019).

Stage 2

There are two barriers mentioned earlier that impede random selection of assembly members: (1) not always is there a register containing the data of everyone entitled to participate in an assembly, and (2) not every selected

person agrees to participate in an assembly (Smith 2009). Thus, the selection process has to be divided into two steps: in the first step, the practitioners select from the whole population people who are invited to take part in the selection process, and in the second step, assembly members are selected from the group of people who have accepted the invitation.

Considering the problem with access to appropriate population registers, there are a few different practices of selecting people invited to participate in the selection process:

- Open call for volunteers
- Random selection of individuals, addresses of households or phone numbers

Only in one case (Łódź, Poland) was there an open call for volunteers willing to participate in the selection process. In this case, everyone who met the eligibility criteria could apply to participate. Afterwards, the assembly members were selected from the group of volunteers.

Random selection of individuals was performed in three assemblies, two organised in the German-speaking community in Belgium (GSCB) and one in Cantabria, Spain. The selection process in the assemblies organised in the GSCB is regulated by the Decree of the 25th of February 2019 establishing a permanent citizen dialogue in the German-speaking community. According to the provisions of the decree, the first selection is performed using the data from population registers of municipalities located in the territory of the GSCB—the permanent secretary of the citizen dialogue can request the municipalities to provide lists of citizens indicated in the population registers of each municipality. Citizens selected in this step are then invited to participate in the next step of selection and can accept or decline the invitation.

The most popular method of first selection was random selection of households located in the given city or country (almost 80% of the analysed cases). In those assemblies, their organisers randomly selected a given number of addresses of households and sent invitations to these addresses. Then citizens living in the selected households could decline the invitation or accept it and participate in the next stage of selection. The number of invitations varied between 4,362 and 30,000, and the average number of invitations was around 13,000.

In the last method used in this stage, the objects of first selection were phone numbers. It was used only in two assemblies (in Germany in 2021 and in France). In these cases, the organisers randomly selected numbers of landline and mobile phones, and people who answered them could accept or decline the invitation.

Stage 3
In the next stage, assembly members were selected from among the people who had been invited. In the analysed cases, the following methods were used at this stage:

- Filling the seats in an assembly with selected people by pollsters

- Registration of citizens willing to participate and random selection of assembly members from registered citizens using one type of algorithms:
  · greedy algorithms
  · simulated annealing algorithm
  · algorithm providing the fairest distribution of probability

In the first method, citizens selected in the previous stage were contacted by pollsters, who checked if their demographic profiles matched the quotas and if they were willing to participate in an assembly. If so, such a citizen was selected to be an assembly member. The discussed method was used in three cases (in Ireland, in France, and in Scotland in 2020).

The other methods of selection were divided into two steps. In the first one, citizens who had received the invitation and who had met eligibility criteria could register to take part in the further selection process. In the second step, assembly members were selected from the pool of registered citizens. Because this step required the practitioners to match registered citizens to the quotas imposed on the assembly, the use of an algorithm selecting assembly members with appropriate demographic profiles was necessary.

The first group of algorithms used in selection processes were greedy algorithms that filled the seats in an assembly one after another. At each stage, the algorithm chose the best option: one randomly selected person, whose profile at this stage suited the demographic quotas to the greatest extent. Greedy algorithms were used in three of the analysed cases (in Wrocław and Warsaw in Poland, and in Mostar). In Wrocław, the algorithm selected not people but demographic profiles. Therefore, if more than one person matched the selected profile, in the final step, the assembly member was selected from people matching this profile (by simple random selection).

Another algorithm used in the analysed cases was simulated annealing. Contrary to the algorithms described earlier, this algorithm first randomly created a whole assembly and in next steps slightly modified it, in order to find assemblies that matched the demographic quotas better. The algorithm was used in two assemblies organised in Poland (Poznań and Cracow). In both of them, six different assemblies were created using the algorithm, and in the final step, one of them was selected by a roll of the dice.

The last described algorithm was the most popular—it was used in 15 cases (mostly in the UK, but also in Cantabria, Spain, and in Budapest, Hungary). It also created a set of assemblies, and in the final step, it chose one of them by random selection. While creating the set of assemblies, the algorithm's aim was to provide the fairest possible distribution of probability among individual citizens. Then, assemblies added to the set were assessed on the basis of two criteria: whether they matched the demographic quotas, and whether their addition would upgrade the fairness of the distribution of probability within the set (Flanigan, Golz, Gupta, et al. 2021).

Main Findings

All of the analysed selection processes were analysed through the evaluation model presented earlier. **Table 2** shows the percentage of citizens' assemblies that complied with the principles of randomness, representation and equality on each stage of the selection process. It also presents in what part of the cases the data concerning implementation of these principles was not available.

In the evaluation model, the selection processes could have gained one point for compliance with principles of randomness, representation and equality on each stage of selection (two points for each principle, in total six points). **Table 3** shows the percentage of citizens' assemblies that gained a certain number of points in the evaluation for each of the principles. It also presents in what part of the cases the data concerning implementation of these principles on any of the stages of selection was not available.

Randomness

The presented findings show that in some of the cases, the selection processes were not even near random (in one case at the second stage of the selection, and in two cases on the third stage). Moreover, in five cases the data concerning selection methods at the third stage was not available. Thus, even if in the prevailing number of cases, the methods of selection were random, the presented findings can be disturbing because randomness should be an inherent feature of the sortition.

As mentioned earlier, there is always an element of self-selection that impedes pure random selection of assembly members and causes assembly members to tend to be more politically active than average citizens. Nevertheless, in one of the methods used on the second stage (the open call), the level of self-selection seemed to be significantly higher than in other methods (Courant 2017). Moreover, the method of open call raises the risks of unfair influence of interest groups on the composition of an assembly.

At the third stage, the method that disturbed randomness to the largest extent was the filling of the seats in an assembly by pollsters. Because the step of registration was skipped, randomness of selection was dependent on the method of determining the order in which citizens are contacted. Only if this order were determined randomly would the selection process be random. Otherwise, the possibility of being contacted first (and therefore having a bigger chance of being selected) depends on non-random factors.

Representation

In all of the cases, the selection processes complied with the principle of representation. However, in a significant number of cases, the data concerning either the initial (one case) or the final (eight cases) composition of the assembly was not available. In the rest of the cases, the selection processes met the evaluation criteria; even if in a few cases the initial or final composition of an assembly was not completely proportional to the corresponding population, the distortions of proportion (intentional or accidental) were acceptable.

At the first stage, intentional distortions were mostly made to overrepresent regions or districts that otherwise would not have had any representation in the assembly or would have had very few representatives. At the third stage, there were some unavoidable distortions of proportion (caused by an insufficient number of applications from certain groups or by resignation after selection). However, according to data provided by organisers, in all of the cases the proportions within the assemblies were almost the same as in the corresponding populations—there were very small deviations concerning variables such as education, place of residence or attitude to the theme of an assembly.

Equality

Equality was the most problematic principle. At the third stage in more than one-third of the cases, it was impossible to check what the individuals' equality of outcomes was because the methods of selection did

Randomness			
Points:	0	1	2	No data available
No. of CAs	0.00%	10.34%	72.41%	**17.24%**
Representation			
Points:	0	1	2	No data available
No. of CAs	0.00%	0.00%	72.41%	**27.59%**
Equality			
Points:	0	1	2	No data available
No. of CAs	**17.24%**	6.90%	51.72%	**24.14%**

Table 3: Evaluation of citizens' assemblies from the perspective of principles of randomness, representation and equality (percent of CAs with a certain number of points for each principle).

	Randomness		Representation		Equality	
Stage of selection:	**CAs complying with the principle:**	**CAs with no available data:**	**CAs complying with the principle:**	**CAs with no available data:**	**CAs complying with the principle:**	**CAs with no available data:**
1	Not applicable	Not applicable	100% (28 CAs)	3.45% (1 CA)	Not applicable	Not applicable
2	**96.55% (28 CAs)**	**0% (0 CAs)**	not applicable	not applicable	**77.78% (21 CAs)**	6.90% (2 CAs)
3	**87.50% (21 CAs)**	**17.24% (5 CAs)**	100% (21 CAs)	**27.59% (8 CAs)**	**65.22% (15 CAs)**	**20.69% (6 CAs)**

Table 2: Level of implementation of the principles of randomness, representation and equality on each stage of the selection process (percent and number of CAs complying with the principles).

not allow the practitioners to control the individuals' probability of being chosen. Also in the second stage in five of the cases, the methods of selection did not provide citizens with equal chances of being selected. Moreover, the second table shows that in a significant number of the cases the selection process was not equal at any of the stages. Additionally, data concerning the equality of random selection was not available in numerous cases.

At the second stage of selection, equality was impeded by errors committed in the random selection of households and phone numbers. First, in some of the cases, the addresses of households were selected separately for each district or region. In those assemblies, the number of addresses selected per unit was calculated in a few different ways, proportionate to (1) the number of seats that the unit was awarded in the initial composition of the assembly, (2) the number of residents of the unit or (3) the number of households located in the unit. Only in the third case were the chances for receiving an invitation equal for each resident. In the first case, the chances were not equal because the number of seats in the initial composition per district or region was not awarded in a directly proportionate manner—for example, the smallest units were often granted additional seats. Therefore, the residents of those units had greater chances of being selected than the residents of others. In the second case, the chances would be equal only if the average number of household's residents in each unit were the same. Otherwise, citizens living in units in which the number of residents per household is larger, would have greater chances of being selected.

Moreover, in the third case, citizens living in different units would have the same chances of being selected only on condition that the number of household's residents who can accept the invitation were not limited. Then each household, wherever it is located, would have the same chance of being selected. Consequently, because an unlimited number of residents of households could accept the invitation, all of them would have the same probability of being selected. Meanwhile, in one of the analysed cases, only one person from each household could accept the invitation. In this case, the chances were not equal, because citizens living in larger households had a smaller probability of being selected. Additionally, this condition disturbs the randomness of selection to some extent because the choice of the representative of a household is not made by lot. It can then eliminate from the selection process people who are potentially more exposed to exclusion, for example women, elderly people or people with a lower level of education.

In the cases where the phone numbers were selected, the probability of being selected is hard to estimate because the pools of landline and mobile phone owners are not separable. Then, equal chances of being selected are disturbed.

Moreover, in a few of the analysed cases, the equality of selection was distorted intentionally by selecting proportionately more households from smaller units or by selecting separately households from deprived areas. As in the case of representativeness, this kind of distortion seems to be acceptable.

At the third stage, three of the selection methods (filling the seats in an assembly by pollsters, greedy algorithms and simulated annealing algorithms) did not allow the practitioners to control probability with which individuals were selected. Therefore, they did not meet the assumption that each individual should have equal chances of being selected to participate in an assembly. Only in the last method could the probability have been controlled. Although the algorithm did not guarantee that everyone had exactly equal chances of being selected, it ensured that chances were as equal as possible (Flanigan, Golz, Gupta, et al. 2021). Then, considering the necessity to balance both equality and representation, the method ensured the highest achievable level of equality for individual citizens.

Conclusion

The conducted study shows that the selection methods used in citizens' assemblies are very diverse. In all of the cases where assembly members' data was available, the assemblies were representative of the given population despite some small deviations resulting from the deliberate overrepresentation of minorities or from factors that were beyond the control of the practitioners. These deviations were not big enough to significantly influence the composition of the assemblies in respect of their diversity.

Unfortunately, in many of the cases, the final individuals' chances for being selected to be the assembly members were not even near equal, either because the methods of selection provided not-equal chances for individuals or because they did not let the practitioners control the probability of being selected. Moreover, some of the selection methods were far from the ideal of randomness. It is also disturbing that in numerous cases, the data concerning assemblies' composition or selection methods was not publicly available.

Because the legitimacy of citizens' assemblies results from their compliance with the principles of representation and equality, lack of equality in a significant number of the assemblies can question their legitimacy. In particular, because some of the methods of selection were based on non-equal probability of being selected or did not allow practitioners to control the probability of being selected, the democratic equality was not ensured in the assemblies in which these methods are used.

Another problematic issue is the transparency of the selection process. In a significant number of cases, data regarding selection of assembly members was not publicly available. Therefore in numerous cases, it was impossible to assess whether the principles of representation and equality were fulfilled. Consequently, the lack of selection transparency further significantly undermined the legitimacy of these citizens' assemblies.

If the role of citizens' assemblies in the political and legal system is to be further enhanced, more attention should be paid to the implementation of the principles of randomness and equality, as well as to the transparency of the selection process. In particular, the practitioners should more frequently use selection methods that are at least near

random and that guarantee that the individuals' chances for being selected are as equal as possible. Moreover, the data concerning selection methods and final composition of the assemblies should be publicly available.

Improvement of these elements of the selection processes can raise the quality of selection and lead to enhancement of the legitimacy of citizens' assemblies. The conducted study can contribute not only to the practical application of citizens' assemblies but also to the further academic research. In particular, the developed framework can be applied and expanded by other scholars to evaluate different cases of citizens' assemblies and similar mini-publics. Moreover, the collected data concerning selection processes of numerous European citizens' assemblies can be used in further research on various aspects of sortition.

Additional File

The additional file for this article can be found as follows:

- **Supplementary Data File.** Methods od selection of assembly memebers in the analysed cases of CAs. DOI: https://doi.org/10.16997/jdd.1310.s12

Competing Interests
I am reporting that I was a member of the Coordinating Team of the Wroclaw Citizens' Assembly (2020) which is one of the cases of citizens' assemblies analysed in the paper.

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