**THE MANNER IN WHICH REFERENDA ARE HELD**

**A submission to the Citizens’ Assembly from the de Borda Institute**

**www.deborda.org**

**IN A PLURALIST DEMOCRACY, REFERENDUMS SHOULD BE MULTI-OPTIONAL**

**1 The Recommendation**

In the wake of what follows and many other suggestions submitted over the years to the All-Party Oireachtas Committee on the Constitution and others, the de Borda Institute recommends that:

 (a) referendums should be initiated either by the requirements of the constitution and/or by parliament and/or by a citizens’ initiative;

 (b) referendums should be binding;

 (c) once initiated, the referendum subject matter should be examined by an independent commission which would take submissions from the public to then draw up a (short) list of about 4 – 6 options;

 (d) the ballot should be conducted according to the rules laid down for a modified Borda count, mbc;

 (e) the outcome should be enacted:

 (i) if the turnout had passed a predetermined minimum of, say, 40%;

and

(ii) if the consensus coefficient[[1]](#footnote-1) of that outcome were, say, 0.4 or more.

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**2 Introduction**

Referendums may be binary or multi-optional. The former can only be analysed by a majority vote procedure, but variations may occur in

1. who may initiate such a poll;
2. the advisory or binding nature of the ballot;
3. any weightings that may be applied;
4. minimum turnout requirements; and
5. the matter of how many and which constituencies must approve the ballot for the relevant motion to be approved.

In addition to the above variations, several voting procedures are multi-optional, and while some of these allow the voters to cast just a single preference, others are preferential. Needless to say, referendums which are multi-optional may also differ in the methodologies of their analyses.

Referendums have had a mixed history. In some instances, the matter in question has thereby been successfully resolved in a democratic and peaceful manner. In others, alas, the tale is one of woe.

Accordingly, this paper first recalls some of the world’s more successful polls, both binary and multi-optional. Next it relates other instances in which binary ballots have been (not *the* but) *a* cause of division and perhaps violence if not indeed outright war. Then it outlines a critique of majority voting before referring to an analysis of different voting procedures. On this bases, it makes its recommendation, with mention of the various rules by which referendums should be conducted. And finally, it shows how a scientific analysis of preferential voting could identify the will of the people with a considerable degree of accuracy.

**3 A Brief History of the Referendum**

The world’s first binary referendum was held in Switzerland in 1294; the first multi-option plebiscite was in New Zealand in 1894. (Emerson 2012: 196-8.) Since then, the former has held numerous referendums, often under the rules laid down for citizens’ initiatives; and interestingly enough, the Swiss have now started to experiment with multi-optional and preferential referendums.

Some referendums have been successful. Ireland’s recent poll on gay marriage is one obvious example; some regard Norway’s plebiscite on independence in 1905 as another; and maybe too, the referendum held as part of the Peace Process in Northern Ireland in 1998 deserves mention. In like manner, some multi-option ballots have also been the vehicle by which a nation has peacefully changed a policy: New Zealand’s five-option referendum on its electoral system, for example, enabled the nation to find a collective compromise (see para 7).

Other polls, such as Ireland’s 2002 referendum on abortion or the earlier ballot on divorce – in both instances, the margin of ‘victory’ was less than 1%[[2]](#footnote-2) – have been bitter and divisive, and in the first instance, inconclusive.

It is hardly surprising to note that the worst examples of referendums come from plural societies. The consociational poll in Cyprus in 2004 was also inconclusive; but as so often seen in Northern Ireland’s Assembly, such is the nature of consociational voting: in effect, either side has a veto. Northern Ireland’s 1972 border poll, supposedly designed to take the border out of politics, did nothing to ease the violence in the province; indeed, if anything, it only made matters worse. In fact, of course, just as turkeys don’t vote for Christmas, and the sdlp organised a boycott of that poll.

In like manner, the Croats abstained from the referendum held in the Krajina,[[3]](#footnote-3) just one week before the Serbs did not participate in the ballot in Croatia as a whole. It was the same in Bosnia where in fact, Radovan Karadžić had warned that any vote would mean war; but the eu’s (ec’s) Badinter Commission “insisted” (Woodward 1995: 271) on a referendum and, on the day of the poll, “the barricades went up in Sarajevo,” (Glenny 1996: 147). Indeed, to quote Sarajevo’s legendary newspaper, *Oslobodjenje*, “all the wars in the former Yugoslavia started with a referendum,” (*op. cit*., 7.2.1999).

That quotation can now be applied to Ukraine. Firstly, the Crimean Tatars vetoed the 2014 referendum. Next came the referendums in Donetsk and Luhansk. And then war.

The story in the Caucasus was a little different, for many of their referendums, in Nagorno-Karabakh and Abhazia for example, were retrospective ‘justifications’ for the respective change in constitutional status… by which time, of course, many of the relevant minority were in exile or killed.

The author of this report campaigned against the use of such binary ballots, especially the one in Bosnia where there was no majority anyway.[[4]](#footnote-4) As a consequence of the first post-communist elections in 1990 – a ballot which was little more than a sectarian headcount – the nation’s electorate was divided on religious (but not ethnic) lines of 40:30:20, Moslem:Orthodox:Catholic, so any two groups could gang up against the other. And that is what happened. As noted, it started the war. And then the two themselves split into another war, the Catholics versus the Moslems.

In so many places, it seems, binary voting is a cause of suffering. South Sudan is yet another. A binary referendum implies that the winner may win everything and the loser will get nothing. It is a very unAfrican way of decision-making. Africa’s youngest nation came about as a result of the 2009 referendum and, of course, it has since imploded.[[5]](#footnote-5)

But still, it seems, the world learns nothing. In this year alone, in Iraq, the Kurds drew a boundary – in a manner not dissimilar to the way others, 100 years ago, concocted the *krajina* of Northern Ireland – such that the city of Kirkuk would be in a largely Kurdish area. If the Shi’as had drawn a more easterly line, the city would have been part of a Shi’a majority. And if the Sunnis had held the pencil, it could have been in a predominantly Sunni area. The binary ballot is indeed, in many instances, at least crude, at worst a provocation to violence.

**4 A Critique**

As in Iraq, so too in many other instances, majority voting often means that those in charge may decide on the question, and in many instances, that question is then the answer. Such is the story of Napoléon’s three referendums, not to mention those of Mussolini, Hitler, Duvalier *et al*. Indeed, the only instance where a dictator has failed to win a referendum was in Chile where, in 1988, he lost his third poll. Interestingly enough and again in Chile, the first dictator to ‘dictate properly’ and get 100% support was an Irishman, Bernardo O’Higgins, who thus became *El Supremo*.

But similarly controlled referendums are also undertaken in ‘stable’ democracies by rather more democratic politicians. In 2011 in the uk, for example, David Cameron held a referendum on the electoral system. The choice was between his first preference, first-past-the-post, fptp,[[6]](#footnote-6) and his second preference, the alternative vote, av.[[7]](#footnote-7) Neither of these is pr. To ask pr supporters if they prefer fptp to av is like asking vegetarians whether they want beef or lamb. (Emerson 2016.)

Cameron then initiated a referendum in Scotland. This too should have been a multi-option poll, because the debate concerned three options: the status quo (sq), maximum devolution (dm) and independence (i). But he thought he would win a straight fight between sq and i; so he decided – or dictated – that there should be only two options. In the campaign, however, support for i was soon growing. So, in a state of near panic, Cameron changed his mind and issued the now famous vow, and sq was thus morphed into dm, even though polling had already started! sq won the ballot. But the winner was dm, even though nobody had voted for it! The real mistake, then, was in holding a ballot of only two options. If a three-option ballot had been held, the separatists in Ukraine might not have used the word *Shotlandiya* (Scotland) as justification for their own ballot. In a similar fashion, the people of *Republika Srpska* are today following events in Catalonia[[8]](#footnote-8) in the hope that the latter may get away with an illegal referendum, which might imply that they can too.

Cameron’s biggest mistake was in Brexit. There were at least four options: the uk in the eu, the eea, the Customs Union or the wto. But he decided there would be only one binary poll, in effect, “in the eu, yes or no?” It lost. But as in the House of Lords, (see para 9 below), a majority vote on any of the other options, in all probability, would also have lost, and by a greater margin. To say, then, that the will of the British people is to leave the eu is to rely on a hopelessly inaccurate methodology. Furthermore, the will of the people is still unknown, and hence another binary argument: is it to be a ‘soft’ ort a ‘hard’ Brexit?

**5 An Analysis**

Majority voting, then, can be inaccurate. To reduce a multi-option debate to a binary choice often distorts the debate, and this applies to disputes in parliament as well as to topics chosen for resolution by referendum. In a nutshell, in debates on contentious issues, a pluralist democracy should allow for everything to be ‘on the table’ – everything, that is, which is relevant and complies with an international norm like the un Charter on Human Rights.

Furthermore, to take a dispassionate example, I cannot calculate the average height of a group of people unless each tells me how tall they are. Telling me what they are not is of no help whatsoever. In like manner, if I want to identify the average will, I will want to know what each individual actually wants, and information as to what they do not want is at best unhelpful. Any ‘yes-or-no?’ vote, therefore, is inadequate. (And any change to ‘remain-or-leave?’ was pure semantics.)

Accordingly, any multi-option debate should conclude with a ballot that allows for a (short) list of options. This begs the question of how should such preferences be analysed.

**6 A Hypothetical Set of Preferences**

Consider, then, a decision-making process in which 15 persons cast their preferences on some or all of five options, ***A, B, C, D*** and ***E***, as shown in Table I.[[9]](#footnote-9)

**Table I A Voters’ Profile**

|  |  |
| --- | --- |
| Preferences | Number of voters and their choices of options |
| 5 voters | 4 voters | 3 voters | 2 voters | 1 voter |
| 1st | ***A*** | ***E*** | ***D*** | ***C*** | ***B*** |
| 2nd | ***B*** | ***D*** | ***B*** | ***B*** | ***A*** |
| 3rd | ***C*** | ***C*** | ***E*** | ***D*** | ***D*** |
| 4th | ***-*** | ***-*** | ***A*** | ***E*** | ***C*** |
| 5th | ***-*** | ***-*** | ***C*** | ***A*** | ***-*** |

At a cursory glance, option ***A*** – the 1st preference of 5 voters, the 2nd of only 1, the 3rd of none but the 4th or 5th of a further 5 voters – is rather divisive. Option ***E***, an opposite viewpoint,is almost as bad. So maybe ***B, C*** or ***D*** best represents the collective will of the 15 voters: though not liked by 4 voters, ***B*** is the 1st preference of only 1 but the 2nd of 10; ***C*** has some though very mixed support from everybody; and **D** is fairly popular amongst all but the first 5 voters.

These preferences will now be analysed by a number of different voting procedures. The most common is plurality voting which considers the voters’ 1st preferences only; (it is similar to the fptp electoral system, as used in the uk and usa). Another is the two-round system, trs, a plurality vote followed, if need be, by a majority vote; (its equivalent is the French electoral system).

The next three procedures – the alternative vote, av, approval voting and the mbc – allow the voters to cast some or even all of their preferences. av is like a knock-out based on a series of plurality votes. Approval voting allows the voter to cast some preferences, whereas the mbc encourages them to cast all of them; {approval voting is not used in any national electoral system, but the bc is used in Slovenian elections and, with a unique counting formula (in vented by an Irishman, Desmond Dowdall, in 1972) in Nauru}.

**6a Plurality Voting** Counting only the 1st preferences, the outcome is ***A*** 5, ***E*** 4, ***D*** 3, ***C*** 2 and ***B*** 1, so the democratic choice is option ***A***.

**6b trs** In the first round, if one option gets a majority of 50% + 1 of the votes, that option is the winner. If not, a second round majority vote is held between the two leading options from the first round – in this example, options ***A*** and ***E*** – and the option which then gains a majority is the winner. So, if the voters’ preferences remain the same, ***E*** wins by 9 to ***A***’s 6.

**6c av** In a series of plurality votes, the least popular option is eliminated at each stage and its votes are transferred in accordance with that voters’ 2nd and/or subsequent preferences. In stage (i), option ***B*** is the least popular, so its single vote is transferred to its 2nd preference, which is option ***A***. The score, then, in stage (ii), is ***A*** 6, ***E*** 4, ***D*** 3 and ***C*** 2. Thus ***C***’s 2 votes are now transferred, (not to ***B*** which has been eliminated, but to) the said voters’ 3rd preference, option ***D***. Stage (iii) thus has a score of ***A*** 6, ***E*** 4 and ***D*** 5. So option ***E*** is now out; its 4 votes go to ***D***, and ***D*** is the winner with 9 points to ***A***’s 6.

**6d Approval Voting** In approval voting, every preference cast is interpreted as an ‘approval’ of equal value, (so the voter who approves of *every* option has no influence on the final social ranking). Accordingly, the scores from Table I are ***A*** 11, ***B*** 11, ***C*** 15 (the maximum), ***D*** 10 and ***E*** 9, so the winner is ***C***.

**6e mbc** Based on a Borda count, bc, the mbc is a points system[[10]](#footnote-10) in which the voter may cast his/her preferences on one, some or all of the options listed. If the voter has cast a full ballot – that is, all five preferences – her 1st preference gets 5 points, her 2nd preference gets 4, and so on; if however he casts only two preferences, his 1st preference gets 2 points and his 2nd gets 1. The scores, then, are ***A*** 26, ***B*** 34, ***C*** 23, ***D*** 31 and ***E*** 25, so the winner is option ***B***.

Therefore, depending on the voting procedure used, the outcome could be option ***A***, or ***B***, or ***C***, or ***D***, or ***E***. They cannot all be right. The social choices and social rankings as measured in all five methodologies are shown in Table II.

**Table II The ‘Democratic’ Outcomes**

|  |  |
| --- | --- |
| Voting Systems | Social Rankings |
| Social choice | 2nd  | 3rd  | 4th  | 5th  |
| Plurality Voting | ***A*** 5 | ***E*** 4 | ***D*** 3 | ***C*** 2 | ***B*** 1 |
| trs | ***E*** 9 | ***A*** 6 | ***-*** | ***-*** | ***-*** |
| av | ***D*** 9 | ***A*** 6 | ***-*** | ***-*** | ***-*** |
| Approval Voting | ***C*** 15 | ***A/B*** 11 | ***D*** 10 | ***E*** 9 |
| mbc | ***B*** 34 | ***D*** 31 | ***A*** 26 | ***E*** 25 | ***C*** 23 |

In a nutshell, some voting procedures are not just inaccurate, they may actually fail to achieve the desired outcome: to measure the collective will. Plurality voting is flawed in this respect. Little wonder then that those other systems which are based on a plurality vote – trs and av – are at least capricious. With approval voting and the mbc, if and when the debate relates to a highly controversial matter, the former encourages the intransigent to remain so and, if all are thus inclined, the procedure reverts to a plurality vote. The mbc, in contrast, incentivises both the voters and, more importantly perhaps, the protagonists, to be inclusive.[[11]](#footnote-11)

In the above scenario, option ***B*** was suspected of being the one which best represents the collective will, but only the mbc identifies it as such.[[12]](#footnote-12) There are many other examples which show the mbc to be robust, accurate and therefore effective. It should also be pointed out that, unlike the other methodologies mentioned, the mbc is non-majoritarian.

In summary, majority voting and plurality voting can be and often are manipulated; furthermore, they are often hopelessly inaccurate. The same can be said of any system which is based on majority and/or plurality voting, like the trs or av/stv.

Those systems which take into account all preferences cast by all voters are more accurate; they do not include av, even though the latter is preferential; but they do include the mbc and the Condorcet rule.

**7 The Rules for Referendums**

Referendums may be initiated by the requirements of the constitution, as in Ireland; and/or by members of parliament, as in the uk; and/or again, as in Switzerland, by the nation’s citizens through the measure known as a citizens’ initiative. The rules for the latter require a certain minimum number of citizens to sign a petition in regard to a referendum on a particular topic, whereupon a binding referendum shall be held. “Switzerland has used the referendum, together with federalism and a coalition government embracing all the main political parties, precisely to defuse the conflicts that might otherwise arise in a divided society.” (Bogdanor 1994: 88.)

In Switzerland again, the rules sometimes dictate that a decision shall be taken only if the said policy receives support from both a majority of the citizens overall and a majority of the cantons. Denmark also stipulates a minimum turnout of 40%.

Elsewhere, rules seem to vary. The Belfast Agreement allows for a referendum every seven years or so, prompting some to call it a *never-end-’em*. In like manner, Quebec has already had two polls on the question of its independence. And having lost the 2014 plebiscite, the snp in Scotland may well want another, one day, at a time of their choosing. With regard to Brexit, however, some are saying there is to be no second poll. The rules do indeed vary, as often as not for reasons of political expediency.

One example of how a referendum could be conducted well was the one referred to earlier, the poll in New Zealand in 1992. On what was the heated topic of electoral reform – some of their recent fptp elections had produced some very ‘odd’ results – an independent commission was established to look at a number of different options. They settled for a short list of five – the status quo of fptp, and four possible alternatives ranging from av to pr-stv and two other systems in between. The system of analysis to be used was an unusual form of trs in which, the winner in the 1992 first round, would then have a 1993 second round majority against the status quo fptp. In fact, the latter came third in the first round. It nevertheless competed in the second round, but lost; so New Zealand now enjoys a compromise, the German system known as multi-member proportional, mmp, which is half fptp and half pr-list.

**8 A Recommendation**

 (a) Referendums should be initiated either by the requirements of the constitution and/or by parliament and/or by a citizens’ initiative;

 (b) referendums should be binding;

 (c) once initiated, the referendum subject matter should be examined by an independent commission which would take submissions from the public to then draw up a (short) list of about 4 – 6 options;

 (d) the ballot should be conducted according to the rules laid down for a modified Borda count, mbc;

 (e) the outcome should be enacted:

 (i) if the turnout had passed a predetermined minimum of, say, 40%;

and

(ii) if the consensus coefficient[[13]](#footnote-13) of that outcome were, say, 0.4 or more.

**9 The Accuracy of Preferential Voting**

To take a simple example of a multi-option debate, in 2003 the British parliament tackled (yet again) the question of reforming the House of Lords. There were five options ‘on the table’, all of which could be arranged in sequence: from all elected at one end of the spectrum, to all appointed at the other; and there were three compromise options: 80/20, 50/50 and 20/80 in the middle.

In all, then, the five were as follows: 100/0 elected/appointed; 80/20 E/A; 50/50; 20/80 and 0/100 E/A. British parliamentarians, however, like their Irish counterparts, believe in majority voting. So they took five majority votes, one on each option, and lost them all.

Logically, however, if a Mr J has a first preference (or 5 points) for ‘all elected’ – 100/0 – he would probably have a 2nd preference (4 points) of 80/20, a third of 50/50, and so on. His graph is the straight blue line in Table III.

A second individual shown in brown, Ms K, with a first preference (5 points) of 50/50 might well have a second of 20/80, a third of 80/20, a fourth of 100/0 and a fifth of 0/100; in other words, she probably wants something pretty close to 50/50.

Another member, Mr L in green, might vote 50/50, 20/80, 0/100, 80/20, 100/0, so he might prefer something more like 40/60.

**Table III The Collective Will**

Now the very mathematics of an mbc encourages the voter to cast a full slate of preferences. If everyone does vote logically, then the collective will, as shown in this example by the dashed red line – we just collect, add up, all the points cast by all of those voting, as in Table IV – will be the sum of everyone’s points, and it too will be logical. Always.

**Table IV The Points**

|  |  |
| --- | --- |
| TheVoters | The Options |
| 100/0 | 80/20 | 50/50 | 20/80 | 0/100 |
| Mr J | 5 | 4 | 3 | 2 | 1 |
| Ms K | 2 | 3 | 5 | 4 | 1 |
| Mr L | 1 | 2 | 5 | 4 | 3 |
| The Collective Will | 8 | 9 | 13 | 10 | 5 |

Furthermore, by comparing the area under the graph in Table III, the collective will is seen to be biased a little towards the left, and the actual collective will of these three persons is for 53% to be elected and 47% appointed. With an electorate measured in hundreds, the outcome can thus be determined fairly exactly.

**9 Conclusion**

In summary, the mbc is not only inclusive. It is also highly accurate. With regard to a decision on abortion, for example, any vote in the Dáil or national referendum could set forth a number of options – let us say four:[[14]](#footnote-14) from zero, via 12 and 22 weeks to full term – and if the voters are enabled to cast their preferences, then an accurate assessment of the collective will could be made. Some people might cast only partial ballots. Others may abstain altogether. And yet a third category may vote ‘illogically’. Given, however, that most people are honest and sensible, it is nevertheless submitted that an mbc could not only be the catalyst of a well-mannered and nuanced multi-option debate, it could also via a precise calculation identify the collective will.[[15]](#footnote-15)

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**Abbreviations**

av alternative vote

bc Borda count

ec European Commission

eu European Union

fptp first-past-the-post

gef Green European Foundation

irv instant run-off voting

mbc modified Borda count

mmp multi-member proportional

pv preferential voting

sdlp Social Democratic and Labour Party

snp Scottish Nationalist Party

stv single transferable vote

trs two-round system

wto World Trade Organisation

1. In any given ballot of *n* options in which the valid vote is ***v***, an option’s consensus coefficient is a measure of its popularity based on its actual mbc score, divided by the maximum possible score which is *n* times ***v***. [↑](#footnote-ref-1)
2. And on both occasions, the then Taoiseach said, “The people have spoken.” [↑](#footnote-ref-2)
3. Three border regions – and hence the name – of Croatia, largely populated by Orthodox Serbs. [↑](#footnote-ref-3)
4. In 1990, he spoke on preferential voting at a press conference in Tbilisi. One year later, and six months *before* the war in Bosnia, he helped to organize a cross-community conference in Belfast at which one of the guests was a native of Sarajevo. The keynote speaker at that event was the current President, Michael D Higgins, and the conference was notable from yet a further perspective: the participants’ preferential paper ballot was analysed by computer and the outcome of this electronic vote was then displayed via a data projector. [↑](#footnote-ref-4)
5. On a return trip to East Africa in 2005, the author campaigned against any use of a binary ballot in South Sudan. [↑](#footnote-ref-5)
6. This name is odd. After all, there is no post. In a two-candidate contest, the winner needs 50% + 1. If there are ten candidates, success might need only 11%. And the world record is held in Papua New Guinea, where some mps were elected on passing a non-existent ‘post’ of less than 5%. Little wonder then that the good folk of png have now adopted a preferential system. [↑](#footnote-ref-6)
7. This is the same as the single transferable vote, stv, apart from the fact that when used in its pr form in elections, it is usually called pr-stv. It is also referred to as instant run-off voting, irv, in the Americas, and preference voting, pv, in Australasia.

 [↑](#footnote-ref-7)
8. The first person to propose preferential voting was actually a Catalan, Ramón Llull, and that was some 800 years ago. [↑](#footnote-ref-8)
9. This example was first used in our paper, *An Overview – Decision-making in the Citizens’ Assembly* dated 24.7.2017. [↑](#footnote-ref-9)
10. In an mbc of *n* options, the voter may cast *m* preferences where *n ≥ m ≥ 1*. Points are awarded to preferences cast according to the rule (*m, m-1 … 1*). [↑](#footnote-ref-10)
11. The rules laid down for an mbc were devised by the bc’s inventor, Jean-Charles de Borda. Unfortunately, today’s bc uses a different formula, either (*n, n-1 … 1*) or (*n-1, n-2 … 0*). Yet again, a different rule can cause a different and inaccurate outcome: in this instance, while the two social choices are the same, the mbc gives a social ranking of ***B-D-A-E-C***, whereas a bc gives ***B-C-D-A-E***. It should also be pointed out that in a very polarized debate, as with approval voting, voters may be tempted to cast just a 1st preference, so the bc can also deteriorate into a plurality vote. [↑](#footnote-ref-11)
12. There is another voting procedure which is also very accurate – the Condorcet rule. In this example, the Condorcet social ranking is ***B-D-A/C/E***. Here too, as in many voters’ profiles, the mbc winner is also the Condorcet winner, {just as, in many sports competitions, the team with the most points/goals/tries (the mbc winner) is also the team which wins the league (the Condorcet winner)}. [↑](#footnote-ref-12)
13. In any given ballot of *n* options in which the valid vote is ***v***, an option’s consensus coefficient is a measure of its popularity based on its actual mbc score, divided by the maximum possible score which is *n* times ***v***. [↑](#footnote-ref-13)
14. To use the four options used by the Citizens’ Assembly. [↑](#footnote-ref-14)
15. It is a matter of regret that the Citizens’ Assembly steering committee decided not to even discuss this more scientific voting procedure. Instead it decided to rely on a methodology in which the outcome was bound to be one of a set of predetermined options – the same 12 weeks, 22 or whatever – and therefore its outcome was inevitably one of dubious accuracy; secondly, the chosen methodology of the Assembly is a procedure in which, if used in other settings, the outcome could depend on the whim of a capricious chairperson and his/her casting vote. [↑](#footnote-ref-15)