

**SUBMISSION TO**  
**Working Group on Unification Referendums on the Island of Ireland**  
**from**  
**THE DE BORDA INSTITUTE**

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*“If the problem ain’t binary, don’t use a binary vote.”*

*“The truth of an [electorate’s] decisions depends as much on the form by which they are reached as on the enlightenment of its members.”*

Le Marquis de Condorcet, (McLean and Urken 1995: 113).

*“In blunt words, by not publicising what can go wrong [with different voting systems]... expect to experience societal consequences that are significant and serious.”*

Donald Saari. (Saari 2008: 217.)

In the Belfast Agreement, {Constitutional Issues, para 1 (ii)}, the two governments:

Quote I recognise that it is for the people of the island of Ireland... to exercise their right of self-determination on the basis of consent, freely and concurrently given, North and South... subject to the... consent of a *majority* of the people of Northern Ireland;

and in para 1 (iii),

Quote II acknowledge that while a substantial section of the people in Northern Ireland share the legitimate wish of a *majority* of the people of the island of Ireland for a united Ireland, the present wish of a *majority* of the people of Northern Ireland... is to maintain the Union... and that it would be wrong to make any change in the status of Northern Ireland save with the consent of a *majority* of its people.

## **1 INTRODUCTION**

The Agreement is riddled with the word majority<sup>1</sup> (my emphases), due no doubt to the widely held notion that a majority opinion can be identified in a binary procedure, a (simple, weighted or consociational) majority vote. However, (just as there are many different electoral systems – some unfair, others so-so and a few accurate ones – so too) there are quite a few methodologies<sup>2</sup> which can be used in decision-making (to try) to identify a majority opinion. Apart from any binary procedure, these include:

**A** single-preference procedures in which the vote casts only one ‘x’, just once or maybe twice:

- i) a plurality vote; but the most popular outcome may not have majority support – it may be preferred by only the largest minority;
- ii) the two-round system TRS, is a plurality vote followed if need be by a majority vote; so the outcome definitely has the support of a majority;

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<sup>1</sup> In the first 20 pages, the word ‘majority’ is repeated 14 times. As Professor Sir Michael Dummett might have said, the authors were mesmerized by “the mystique of the majority,” (Dummett 1997: 71).

<sup>2</sup> Some voting systems can be used both in elections and in decision-making. Those which cater for proportional representation, however, can be used only in the former role.

**B** preferential systems in which voters may cast their preferences, 1-2-3-4..., as they wish:

- iii) the alternative vote AV,<sup>3</sup> is a series of plurality votes in which, at each stage, the least popular option is eliminated and its votes are transferred in accordance with its 2<sup>nd</sup> and/or subsequent preferences, until one option gets a majority; so here too, the final outcome definitely has the support of a majority;
- iv) the Borda count BC, which translates preferences into points, to see which option gets the most; the outcome is not necessarily the will of the majority, and this is especially so if some of the voters have submitted only partial ballots.
- v) at best, the modified Borda count MBC, which inherently encourages the voters to submit full (or nearly full) ballots, can identify the option with the highest average preference; if the result passes a minimum threshold, then it too has majority support;
- vi) the Condorcet rule in which the preferences cast in favour of one or other option in a pair of options are examined, one pair at a time, to then see which option wins the most pairings; if there is a Condorcet winner, it too will have majority support... but there may be a paradox, as we shall see.

Other multi-option decision-making methodologies include the non-preferential approval voting and the somewhat unrestricted range voting, neither of which guarantee a majority opinion.

Accordingly, with particular regard to referendums, this paper will critique majority voting before then examining the six methodologies listed above – Ai) and ii), and then Biii), iv), v) and vi) – any one of which could perhaps be used in any future referendum. Furthermore, a single-round system like Bv) or Bvi) could be used, either in a one-round binding poll, or in a non-binding first round which was then subject to a binding ratification.

## 2 MAJORITY VOTING

By a margin of 99% of an 85% turnout, the 1905 referendum in Norway was successful, and peaceful! Other plebiscites, however, have not been so benign, or accurate.

The three referendums held in Iran in 1953, '63 and '79 – for socialism, capitalism and then neither – all contradicted each other, totally, yet all passed with 99% majorities. So maybe each referendum identified, not so much the will of the people, and not even the will of a majority, but rather the will of the author. And let us remember that referendums have often been the instrument of choice of dictators, (Emerson 2012: 143-50).

In NI, the 1972 Border Poll only made the Troubles worse: the majority voted 'yes' but, like the Catholics in the Croatian Krajina, or the Orthodox in Croatia itself, or the Orthodox again in Bosnia, or the Georgians in South Ossetia, or the South Ossetians in Abkhazeti, or the Crimean Tatars in Crimea... the Catholics in NI abstained. If you know you're in the minority, there is little point in voting. Only in instances where the vote might be close, as in Quebec in 1995 when on a 94% turnout, the call for independence was lost by less than 1%, may the minority feel the need to participate.<sup>4</sup>

“*The minority?*” Might there not be more than one minority? And who is it that decides, in Croatia for example, that every voter has to act as if they are either a Serb nationalist or a Croatian nationalist; that no-one may act as a partner in, or as an adult child of, a mixed partnership; that no-one can (any longer) be a Yugoslav; and more importantly, that no-one shall be *free* – cf. quote I –

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<sup>3</sup> AV, the electoral system in Australia, is the same as the single transferable vote STV, when used in non-PR elections, eg, in electing Irish presidents. In decision-making, AV is also known as instant run-off voting IRV, and preference voting PV, in North America and Australasia respectively.

<sup>4</sup> Whereupon the Quebec Premier, Jacques Parizeau, blamed the Cree Indians... and therefore had to resign.

to vote for a compromise. In effect, that referendum disenfranchised the peaceful. As in the referendum, so too in the war of which it was (not *the* but) *a* cause, voters were obliged to take sides. And in total, “all the wars in the former Yugoslavia started with a referendum,” (*Oslobodjenje*, 7.2.1999). Basically, binary voting can be extremely dangerous. With that background, let us now turn to our own disputes.

## 2.1 REFERENDUMS IN NI

Designed “to take the border out of politics,” the 1972 Border Poll “did nothing to resolve the basic problem,” (Bogdanor 1994: 38). Others suggest it just made matters worse.

The 1998 referendum on the Good Friday Agreement was an altogether different affair. The majoritarian nature of that Agreement however, the designations for the Assembly and the provision for a seven-year itch – ‘the never-end-‘em’, a repeat referendum every seven years or so – were two basic flaws, perpetuating the very sectarianism the Agreement was supposed to overcome. (Lebanon’s Taif Accords and Bosnia’s Dayton Agreement make similar mistakes.)<sup>5</sup>

## 2.2 THE UK’S 2011 REFERENDUM

The 2011 referendum on the UK’s electoral system posed the question, first-past-the-post FPTP<sup>6</sup> or AV? Neither of these is PR. For any supporter of PR, therefore, that question was as illogical as that of the Belfast gunman who asked a Moslem, “Are you Protestant or Catholic?”

Many people wanted PR, but David Cameron decided, or rather dictated, that the ballot should be a choice of either his 1<sup>st</sup> or his 2<sup>nd</sup> preference. And some people (including this author) were not *free* – quote I again – to vote as they might have wanted to.

## 2.3 SCOTLAND IN (1997 AND) 2014

In 1992, the Scottish National Party SNP, proposed that the then forthcoming 1997 referendum should offer three options – the status quo, devolution and independence – and that it should be conducted under the rules for AV. But Tony Blair wanted the Scots to want devolution, so, like David Cameron on Brexit, he dictated that the question should be a binary ballot – the status quo or devolution? – and as a result, many if not all SNP supporters were not *free* to vote for their 1<sup>st</sup> preference, and had to settle for their 2<sup>nd</sup> choice.

The same applied in Wales where Plaid Cymru wanted AV on four options. Again, however, Tony Blair wanted the Welsh to want what he wanted. So only devolution was on offer. And it won – if that’s the right word – by less than 1%.

In 2014, in the build up to Scotland’s second referendum, the SNP still wanted three options and AV. Alas, having won the 2011 FPTP versus AV referendum by manipulating the question, David Cameron thought he could do the same in Scotland, so the vote was again to be binary: the new status quo or independence, let’s say options *A* and *B*. A third option, maximum devolution, which we’ll call option *C* and was known as devo-max, was also ‘on the table’... but not on the ballot paper.

In the campaign itself, the SNP was doing rather well. London went into a state of panic, and even though postal voting had already started, the three main parties in Westminster issued a vow to say, in effect, that option *A* was actually option *C*. And to cut the story short, option *C* won, but nobody voted for it! It wasn’t on the ballot paper.

## 2.4 BREXIT, 2016

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<sup>5</sup> Nevertheless, of course, this author campaigned actively for a ‘yes’.

<sup>6</sup> In decision-making, this system is called a plurality vote.

In any multi-option debate in any modern pluralist society, every controversy should allow for the possibility of more than two options ‘on the table’. This is because, logically, if there isn’t a majority *for* any one thing, there will be a majority *against* every (damned) thing<sup>7</sup>... and this was the case in Brexit. It was, we *now* know, a multi-option debate<sup>8</sup> with (at least) four options – the UK in the EU, the EEA, a Customs Union or the WTO, let’s call these **A**, **B**, **C** and **D** – with many variations on each theme.

To our great misfortune, the UK held a binary referendum on the simple question, “**A**, yes or no?” and, as is well known, there was a (small) majority for ‘no’ or ‘leave’. If the question had been “**D**, yes or no?” the majority against would probably have been huge! But today, August 2020, option **D** is beginning to look more and more likely.

## 2.4 A MAJORITY VOTE SUMMARY

So in Norway a hundred and more years ago, the binary referendum was fine. The history of majority vote referendums since then has been peppered. The good votes – the Belfast Agreement and recent referendums in Ireland on same-sex marriage and abortion, for example – were indeed good, largely because the majorities obtained were large. But none of them achieved a consensus; they couldn’t; with so many votes ‘for’ and so many ‘against’, majority voting measures the very opposite, the degree of dissent.

It should also be suggested that any good referendums might have been even better if they had been conducted with a multi-option methodology. Furthermore, majority referendums and/or majority rule have often been disastrous, not only in plural societies after the collapse of the Soviet Union and in numerous majority/minority conflicts in the Middle East, but also in sub-Saharan Africa for example, where “majority rule was a foreign notion,” (Mandela 1994: 25). Why was majority rule, we might ask if only in retrospect, imposed on Rwanda? The *Interahamwe* launched their genocide with the slogan “*Rubanda nyamwinshi*,” ‘we are the majority’ (Prunier 1995: 183). And why was the 2009 referendum in South Sudan yet another binary question? After all, “asking yes-or-no questions is very unAfrican.”<sup>9</sup> What is even more amazing is the fact that in Resolution 47, the UN actually calls for a referendum to be held in Kashmir; thank God it has never been held – it could cause a bloodbath!

In a nutshell, on too many occasions, majority voting does not work well: not in NI in 1972, not in Scotland in 1997 and 2014, not in Wales in 1997, and definitely not in the UK in 2016. It allows the author(s) of the question too much influence. It restricts the choice of the voters. It is divisive. It is, to use Professor Vernon Bogdanor’s phrase, “a blunt instrument.” Furthermore, in any (former) conflict zone, binary ballots have been seen to be totally inappropriate if not downright dangerous. So let us now turn our attention to multi-option voting.

## 3 Ai) A PLURALITY VOTE

The voter casts just one preference. The system is Orwellian in its simplicity: in the opinion of the voter, one option is ‘good’ and all the other options are ‘not so good’ or even ‘bad’ – whatever they are, the voter as it were tars them all with the same brush. And if every individual voter’s opinion is thus so crudely expressed, little wonder that the outcome, the collation of all this unreliable data, may itself be hopelessly inaccurate or, to use a contemporary term, fake. Its one saving grace is that it is marginally better than the even more Orwellian binary ballot.

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<sup>7</sup> A truism first noted in the year 105 by Pliny the Younger.

<sup>8</sup> The de Borda Institute issued a press release in February 2016 to propose a multi-option ballot, admittedly of only three options. The suggestion was ignored by every news medium.

<sup>9</sup> Dr. Ephraim Kanyarukiga, speaking at a press conference on the *gacaca* in Kigali in 2003; the present author was in attendance.

### 3.1 SWEDEN

Nevertheless, it is argued (but not by this author) that some political controversies are definitely dichotomous. One obvious example is perhaps the following: “Which side of the road shall we drive on?” The only country ever to hold a referendum on this controversial topic was Sweden in 1955, but the number of options on the ballot paper was not two but three: ‘left’, ‘right’ and ‘blank’. So anyone who was a committed democrat but who on this particular topic was indifferent could nevertheless participate in the decision-making process, vote ‘blank’ and, as it were, go with the flow.

The ballot was held in November; nevertheless, some 40,000 Swedes put on their boots to vote ‘blank’. And the lesson is this: even on what should be those very rare occasions when there are indeed only two options on the table, there may well be more than two ways of voting, so maybe there should indeed be more than two options on the ballot paper.

### 4 Aii) TRS

TRS, a plurality vote followed by a majority vote, is a huge improvement on the plurality vote, even though it too uses the above simplistic procedure. Allow me please an example.

In 1992, New Zealand held a sort of TRS five-option referendum<sup>10</sup> on their electoral system: the first round was non-binding, and this was followed one year later by a binding majority vote. They established an independent commission to consider the problem – there are, after all, over 300 different electoral systems in the world – and thus, in stark contrast to the 2016 Brexit poll in the UK, NZ held a multi-option debate *before* their referendum. Some years earlier, many people might not have known what AMS was, (see below), but “chaired by the Chief Ombudsman...complex advertising and public relations campaigns were carried out,” (Harris 1993: 55), so that by the time the referendum was conducted, many people had a pretty good idea about what all these acronyms actually meant. The five options chosen were FPTP (the status quo) at one end, PR-STV at the other, and three as it were in the middle: AV, MMP and AMS. So – ah, at last – people were *free* to choose; with a selection of five options, they were free to choose whichever best took their fancy.

{MMP, by the way, multi-member proportional, a mixture of FPTP and PR-list, is used in Germany; the voter gets two ballots, one for an FPTP election in a small constituency, and one for a PR-list election in a regional constituency, the Länder. The overall PR element determined in the second election is the overall proportionality that determines representation in the Bundestag. AMS, the additional member system, is two election counts based on only the one ballot.}

Another example of a TRS referendum was the constitutional plebiscite held in Guam in 1982, when there were six options on the ballot paper; and just in case that wasn’t enough, a seventh option was left blank, so anyone(s) wishing to (campaign and) vote for another suggestion could do exactly that... and 1% did so. Did all this make the vote more complicated? Not at all; the invalid vote was 0.86%.<sup>11</sup>

### 4 Bi) AV

PR-STV is often called the Irish system, but it was invented in Britain in 1821, and its principal advocates, the Electoral Reform Society ERS, was originally a British-Irish organisation. Partly as a consequence, whenever an organisation in the UK wants a multi-option procedure, they often choose to use AV, as in Scotland, para 2.3. But as we shall see in a simple comparison (para 8), AV can be rather capricious.

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<sup>10</sup> The world’s first multi-option referendum was in 1894, again in NZ.

<sup>11</sup> Correspondence from the Guam Electoral Commission.

In its PR-STV form, it works pretty well (although the Quota Borda System, QBS would be even better). This is partly because any capricious elements tend to be ironed out as the count proceeds from one successful candidate to the next. In AV however, where there is only one outcome, it is not so reliable.

## 5 Biv and Bv) BORDA COUNT AND MODIFIED BORDA COUNT

In an  $n$ -option MBC ballot, the voter may cast  $m$  preferences, in which case of course,  $n \geq m \geq 1$ . Points shall then be awarded to (1<sup>st</sup>, 2<sup>nd</sup> ... last) preferences cast according to the rule:

$$(m, m-1 \dots 1).$$

*rule (i)*

And this is the original formula, albeit expressed in different words. Unfortunately however, and in M de Borda's lifetime, this was changed to:

$$(n, n-1 \dots 1)$$

*rule (ii)*

and even

$$(n-1, n-2 \dots 0)$$

*rule (iii).*

Mathematically, these two  $n$ -formulas produce the same social ranking, of course; so they are both called a Borda count BC. But these  $n$ -rules, especially the latter, cannot best cater for partial voting; what's more, if everyone casts only a 1<sup>st</sup> preference, the procedure decays into a plurality vote.

Admittedly, if everyone casts a full slate of  $n$  preferences, then no matter which of the above rules is used, the social choice will be the same. {This explains why many people do not distinguish between the BC, which can go wrong (see below) and the MBC which is much more reliable.} If, however, some voters have cast only partial ballots, the BC and MBC outcomes can be hugely different, as we shall see.

In an MBC, then,

- + he who votes for only a 1<sup>st</sup> preference gets only 1 point for his favourite;
- + she who casts two preference gets her favourite 2 points (and her 2<sup>nd</sup> choice 1 point);
- and so on;
- + so those who cast all  $n$  preferences get their favourite  $n$  points, (their 2<sup>nd</sup> choice  $n-1$  points, etc.).

In effect, then, while a BC might incentivise the voter to cast just a 1<sup>st</sup> preference; the MBC in contrast encourages the voters to cast full ballots.

## 6 Bvi) CONDORCET

The Condorcet rule can be compared to a football league. To identify which is the best team, (the most popular option), every team (option) is compared with every other team (option), and the team (option) which wins the most matches (pairings) is then declared the champion (winner). In football, every team plays every other team in a season of matches. A Condorcet count is much quicker: the people cast their preferences on let us say four options, **A**, **B**, **C** and **D**, and in the count, option **A** is compared with **B**, next with **C** and then with **D**; **B** is compared with **C** and then **D**; and **C** is compared with **D**; and the Condorcet winner is the option which wins the most pairings.

Problems occur, however, if there's a draw; and an even bigger problem arises, as Le Marquis de Condorcet himself recognised, if and when there is a paradox, namely, when the champion (most popular option) gets beaten by another team (loses a majority vote pairing).

Consider Table 1,<sup>12</sup> where three voters have the preferences shown:

**TABLE 1**                      **A PARADOX**

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<sup>12</sup> Taken from (Emerson 2020: forthcoming).

Preferences	Ms <i>i</i>	Mr <i>j</i>	Ms <i>k</i>
1 <sup>st</sup>	<b>A</b>	<b>B</b>	<b>C</b>
2 <sup>nd</sup>	<b>B</b>	<b>C</b>	<b>D</b>
3 <sup>rd</sup>	<b>C</b>	<b>D</b>	<b>A</b>
4 <sup>th</sup>	<b>D</b>	<b>A</b>	<b>B</b>

When we consider the pairings, we see that  $A:B = 2:1$ , that  $A:C = 1:2$ ;  $A:D = 1:2$ ;  $B:C = 2:1$ ;  $B:D = 2:1$ ; and  $C:D = 3:0$ . So  $A$  is more popular than  $B$ , which we write as  $A > B$ ; and  $B > C$ ,  $C > D$  and  $D > A$ , so in total, even though the social ranking is  $B/C-D/A = 2-1$ , a draw for  $B$  and  $C$ , we nevertheless find that

$$A > B > C > D > A > B \dots\dots\dots$$

and it goes round and round, for ever! Needless to say, it's called a cycle, that or the paradox of binary voting. In summary, when there is no majority for any one option, there will indeed be a majority against every option, and there may also be a paradox; in which case, no matter what the outcome, there will always be at least one other option which a majority prefers to that result.

## 7 MULTI-OPTION PROCEDURES, A SUMMARY

The question of which decision-making procedure is best has long raged. Many Liverpool fans would support the league (Condorcet) system; Manchester City might argue the winning criterion should be the goal difference (a sort of MBC); while others, Arsenal supporters perhaps (and many politicians) would prefer a simple binary system, a knock-out, the FA cup (and majority voting).

Nothing is perfect, as Kenneth Arrow suggested in his famous impossibility theorem. Now in an MBC analysis of Table 1, the MBC social ranking is  $A$  7,  $B$  8,  $C$  9 and  $D$  6. Some might argue that option  $D$  is irrelevant, because all three voters prefer option  $C$ . However, if we remove option  $D$  – the irrelevant alternative, as it is called – from Table 1 to get the simpler Table 2,

**TABLE 2 THE IRRELEVANT ALTERNATIVE**

Preferences	Ms <i>i</i>	Mr <i>j</i>	Ms <i>k</i>
1 <sup>st</sup>	<b>A</b>	<b>B</b>	<b>C</b>
2 <sup>nd</sup>	<b>B</b>	<b>C</b>	<b>A</b>
3 <sup>rd</sup>	<b>C</b>	<b>A</b>	<b>B</b>

the ranking is now  $A$  6,  $B$  6 and  $C$  6, so what had been a victory for option  $C$  is now a draw for  $A$ ,  $B$  and  $C$ .

The Condorcet rule is vulnerable to the paradox, but not an MBC. An MBC may be vulnerable to an irrelevant alternative but not the Condorcet rule. As others have suggested (Emerson 2007: 17), therefore, maybe the best methodology for decisions in a parliament would be a combined MBC/Condorcet count, and if the social choice from both is the same, all concerned may know that the outcome is 99% accurate. For the purposes of this paper, it is suggested that any binary ballot could be dangerous; that TRS or any of the above preferential procedures would be far wiser; and that an MBC would be best of all, for it could help to heal divisions in society, (see below).

Admittedly, the authors of the Belfast Agreement were probably thinking that any future referendum would be similar to the 1998 poll in that it too would probably be a binary referendum. After all, most politicians, many journalists and even some academics think, while elections should definitely offer the voter a range of candidates, that in stark contrast, decision-making can be based

on a dichotomy, on an “Option X, yes-or-no?” ballot. They would not say that the 1992 plebiscite in NZ was undemocratic; they would probably just ignore it.<sup>13</sup>

Even if the MBC were considered to be the most appropriate methodology, given society’s fixation on binary voting, it might be thought prudent to have such an MBC procedure as an initial and non-binding procedure, prior to a majority vote ratification. But such a two-round procedure has obvious risks, as some people may decide not to support their 2<sup>nd</sup> preference, or at worse, revert once more into a binary mind-set.

In a nutshell, this paper suggests we should have pluralism both in our elections *and* in our decision-making. Suffice to say at this stage that in holding any future referendum in Ireland and/or Northern Ireland, the methodology could be TRS or AV, and be in complete compliance with the Belfast Agreement. Condorcet, yes, can be problematic. And the case for an MBC, a non-majoritarian procedure, may be difficult to argue. But I’ll try. First of all, let us see which of these methodologies is the most robust.

## 8 A COMPARISON

To compare the six decision-making procedures described above, consider the following voters’ profile in which 18 voters cast their preferences on six options, as shown in Table 3; 15 voters cast full ballots, and 3 voters, the supporters of option *E*, cast only partial ballots.

**TABLE 3 A VOTERS’ PROFILE**

Preferences	Number of voters					
	5	4	3	3	2	1
1 <sup>st</sup>	<i>A</i>	<i>F</i>	<i>E</i>	<i>B</i>	<i>C</i>	<i>D</i>
			<i>2</i>	<i>I</i>		
2 <sup>nd</sup>	<i>B</i>	<i>E</i>	<i>D</i>	-	<i>C</i>	<i>D</i>
3 <sup>rd</sup>	<i>C</i>	<i>D</i>	-	-	<i>D</i>	<i>B</i>
4 <sup>th</sup>	<i>D</i>	<i>C</i>	-	-	<i>E</i>	<i>E</i>
5 <sup>th</sup>	<i>E</i>	<i>B</i>	-	-	<i>F</i>	<i>F</i>
6 <sup>th</sup>	<i>F</i>	<i>A</i>	-	-	<i>A</i>	<i>A</i>

The debate is contentious. 5 *A* supporters have preferences which are almost exactly opposite to those of the 4 *F* fans. And none of the other 9 like either *A* or *F*. Opinions on *E* are also somewhat divided. So maybe *B*, *C* or *D* best represent the voters’ collective opinion. Let’s now see what happens in practice.

### Ai) Plurality voting

Option *A* gets the most 1<sup>st</sup> preferences, 5 of them, so it wins; the fact that it gets the most bottom preferences, 9, is ignored.

### Aii) TRS

Options *A* and *F* on 5 and 4 go into the second round, which *F* then wins, 9 - 6. Ah, if only the moderates had joined forces? TRS is of course multi-optional, but there is often a tendency for the media and others to reduce that which should be an open contest to a battle between two favourites, and in practice, TRS may be little better than a binary ballot.

<sup>13</sup> In his Commission on the Voting System 1998 report, Lord Jenkins, did exactly that; he sent two of his commissioners to NZ, but said not a word about the latter’s five-option referendum! So too, the UK’s Electoral Commission refuses to consider multi-option referendums – despite numerous ‘de Borda’ submissions.

**Biii) AV**

Option **D** is out in stage (i), and its vote is transferred to **B**. Option **C** is the next to go, stage (ii), and its 2 votes go (not to **D** which has been eliminated but) to **B**. But if **C**'s voters – just the 2 of them – had given their 3<sup>rd</sup> preference to **F** and not to **B**, then the final winner would have been **F**! AV can indeed be very capricious. Meanwhile, of course, the 3<sup>rd</sup> preferences of options **A** and **F** are not taken into account, at all! AV can indeed be capricious, sometimes inaccurate and often unfair.

**Biv and Bv) MBC**

In an MBC, (see para 5), the single voter who gives only a 1<sup>st</sup> preference for his favourite option **E**, gets just 1 point, and the 2 voters who gave **E** a 1<sup>st</sup> and **D** a 2<sup>nd</sup>, get 2 points for **E** and 1 for **D**.

But in a BC, using the rule (ii) formula, each of those 3 voters get 6 points for **E**, and in addition, the 2 voters get 5 points for **D**. In other words, a ballot according to the rules for a BC encourages intransigence, whereas an MBC is much more inclusive. With a BC count, the intransigent **E** supporters have gained their prize and **E** wins, just, on 67, whereas in an MBC, **E** finishes 4<sup>th</sup> in the social ranking.

With **C** coming out on top on 66, and with options **B** 64 and **D** 57 coming 2<sup>nd</sup> and 3<sup>rd</sup>, the MBC, it seems, gives a more accurate representation of the collective will.

**Bv) CONDORCET**

The result is a draw between the three options **B**, **C** and **D**, all three wining 4 pairings. And in fact, there is a paradox in that:

$$B > C > D > B \dots\dots\dots$$

That said, a draw between these three options may also be regarded as a pretty accurate reflection of the 18 voters' consensus.

The results under all these methodologies, both the various social choices and the social rankings, are shown in Table 4.

**TABLE 4 THE RESULTS**

Voting procedure		Social choice	Social ranking					
			5	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>
Ai)	Plurality voting	<b>A</b>	<b>A</b> - 5	<b>F</b> - 4	<b>B/E</b> - 3		<b>C</b>	<b>D</b>
Aii)	TRS	<b>F</b>	<b>F</b> - 9	<b>A</b> - 6	-			
Biii)	AV	<b>B</b>	<b>B</b> - 10	<b>A</b> - 5	-			
Biv)	BC	<b>E</b>	<b>E</b> - 67	<b>C</b> - 66	<b>D</b> - 65	<b>B</b> - 64	<b>A</b> - 41	<b>F</b> - 40
Bv)	MBC	<b>C</b>	<b>C</b> - 66	<b>B</b> - 64	<b>D</b> - 57	<b>E</b> - 54	<b>A</b> - 41	<b>F</b> - 40
Bvi)	Condorcet	<b>B/C/D</b>	<b>B/C/D</b> - 4.0			<b>E</b> - 2	<b>F</b> - 1	<b>A</b> - 0

So, if voting is democratic, then with this particular voters' profile, the totally democratic outcome is..... anything at all! It depends on the methodology used. In advocating any voting procedure, we must therefore be specific about the proposed voting procedure.

Please note, the social rankings for MBC and Condorcet are similar, as indeed they are in practice in many other voting profiles. This is hardly surprising: unlike AV, they are both methodologies which take all the preferences cast by all the voters into account, and they are both pretty accurate – the league champion does indeed have a pretty good goal difference. Furthermore, that which is the most popular in plurality voting and TRS is actually the least popular in both MBC and Condorcet.

We did say that a fair result would probably be either **B** or **C** or **D**; well, only the MBC and Condorcet have delivered on this supposition.

## 8 THE RECOMMENDATION

Binary voting can be and often is divisive, if not indeed dangerous, especially in conflict zones. In effect, the very use of this 2,500-year-old methodology can divide any harmonious society, as happened in England over Brexit, or exacerbate existing divisions in conflict zones, as in the 1972 Border Poll and the referendums of the 1990s in the Balkans and the Caucasus.

Furthermore, the Belfast Agreement contains a few dubious statements. In its para 1 (ii) quoted at the head of this paper – quote I – it talks of people’s votes “freely... given,” but in many instances – in NI in 1972, in Croatia in 1991, in Scotland and Wales in 1997, in the UK in 2011, in Scotland again in 2014, and in the UK for a second time in 2016 – the voters are not free to choose what they want, i.e., their 1<sup>st</sup> preference, and this is especially true if the referendum has been restricted to a binary contest.

In addition, the principle of consent is often said to be subject to the wishes of a majority – quotes I and II. When it comes to sexual relationships, both partners have to agree. But in politics, apparently, only a majority is required; it’s like a marriage without a bride.

In practice, of course, NI is in the UK, because a majority want it that way. Let us assume it is 51% of the population. If 2% change their minds, or emigrate, or have fewer children, or whatever, that majority may become a minority. The opinions of 98% of NI’s population may remain exactly the same, but it’s all change, and what was British now becomes Irish. There’s no compromise option; there’s no joint authority, no Anglo-Irish Federation or whatever, the choice is stark: is NI to be British or Irish? And the very question which was a cause of the Troubles has somehow morphed into a peace process?

One further observation is necessary. The right of self-determination suggests that a large country – the UK, (USSR or Yugoslavia) – may be just that, if a majority so wills. If however, a majority in a particular part of that territory wishes to opt out, then it may, apparently: Ireland, (Georgia, Bosnia). If however, a majority in one particular bit of that particular part wishes to opt out of opting out and to opt back in again, then that too is OK, apparently: NI, (Abkhazia and South Ossetia in Georgia, *Republika Srpska* in Bosnia). In effect, the right is a wrong; it is a cause of conflict. What’s more, as a principle of international diplomacy, it is often contradicted by that other principle, the inviolability of borders.

For any future referendum in NI, therefore, a multi-option approach would be wiser. The possibilities are several. While arguing strongly against any binary poll, or any multi-option procedure which could morph into a binary poll, such as plurality voting (between two favourites) or a BC (which could incentivise the intransigent) or approval voting (which more likely would incentivise them), this paper suggests the next constitutional decision-making process could be either:

- a) TRS
- b) AV
- c) MBC
- d) Condorcet

and that any one of these would comply totally with the wording of Annex A of the Belfast Agreement. Even if some argue that a more pluralist approach does not comply, it could still be pursued: after all, para 36 of the Agreement outlines its review arrangements, so it should nevertheless be possible for any future referendum to be a multi-option or even a preferential poll.

### 8.1 CONSENSUS VOTING

In preference voting, the voter may cast not only a 1<sup>st</sup> preference, but also a 2<sup>nd</sup> and subsequent preferences. In other words, he may state not only his aspiration, but also his compromise option(s). And if everyone states their compromise option(s), it is indeed possible to identify the collective compromise – the appropriate methodology is the MBC.

The voter is encouraged to cast all his preferences. More importantly, the protagonist is incentivised to persuade her supporters to do exactly that. And not only that, but because success in an MBC depends upon the total number of points received, she will probably need lots of 1<sup>st</sup> preferences (ideally cast in full ballots) from her immediate supporters, but also lots of 2<sup>nd</sup> and 3<sup>rd</sup> preferences from other members of society. So it will be to her advantage to campaign throughout NI, not only amongst her most immediate supporters, but also, across the inter-face, amongst those of a different persuasion.

The MBC is ideally suited to be part of a healing process. As in NZ, first establish a commission; let it receive submissions on whatever options the public might wish to propose, (as long as their constitutional options comply with the UN Charter on Human Rights); secondly, let it draw up a 4 – 6 option referendum; and thirdly, (although this did not happen in NZ), let the voters cast their preferences in an MBC. Ideally, if the winning option surpasses a sufficiently high threshold, a threshold that signifies the said option has not only majority but also cross-community support,<sup>14</sup> then that outcome could be regarded as binding; if not, then nothing changes. Others may wish to regard such an MBC as a non-binding procedure, the outcome of which could then be subject to a binding majority vote ratification. This paper would prefer the former approach.

## 9 PLURALISM

A binary vote can divide. An MBC can heal. A binary vote is exclusive. An MBC can be inclusive. NI has already shown the world so much; with a multi-option or better still a preferential ballot, we could do so much more.

An MBC is, yes, inclusive. It can identify the option with the most points or, in other words, the highest average preference. And an average, of course, includes every voter (not just a majority of them).

Now admittedly, the debate is complex. Does NI want to be in the UK, or in a more decentralised UK, or maybe a UK without Scotland? Or does NI want to be in a United Ireland, in which case what sort of a United Ireland, a centralised or a more devolved arrangement of two entities (to use the Bosnian word) or one which recalls the historical four fields, or whatever? And what about a Nordic Union style of Anglo-Celtic Federation? Would some like an independent NI? The debate is indeed multi-optional. A short list of about 5 options should be able to cover most of the arguments.

In binary voting, the choice is “A, yes or no?” or at best, “A or B?” and that’s that: there are only two ways of voting. With multi-option voting, pluralism becomes possible. In a three-option debate, A, B and C, there are 6 different full viewpoints which can be expressed: A-B-C, A-C-B, B-A-C, B-C-A, C-A-B and C-B-A. With four options, A, B, C and D, there are 24. And with five, it rises to 120.

In dealing with a Covid-19 patient, the doctor uses an instrument which is calibrated in degrees. Sadly, in politics, we still use a very blunt tool, one which has only two calibrations, ‘hot’ or ‘cold’. As noted above, a binary vote restricts the choice of the voter to “freely” choose. With a five-option preferential vote, voters would have 120 different ways of expressing the degree to which

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<sup>14</sup> The threshold is calculated purely on numbers; it is ethno-colour blind: either an option gets lots of very high preferences from one section of society plus some albeit lower preferences from other sections, or better still, it gets lots and lots of 2<sup>nd</sup>/3<sup>rd</sup> preferences from right across the electorate.

they regard the various options. So the vote may be (not an exact, perhaps, but) a pretty accurate expression of the voter's opinions. So the collation of everyone's votes could indeed be an accurate reflection of "the will of the people."

A binary vote can leave many people disgruntled. As noted above, in the NI Border Poll of 1972 and in many instances since, not least in the Balkans and the Caucasus, minorities have rejected the outcome of such polls; in the worst cases, some have then resorted to the most dangerous of all binary decision-making processes, war. A preferential vote, in contrast, would seek to identify the collective consensus, and the vote itself plus the campaign which precedes the poll could actually be part of the healing process.

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