**ELECTING AN ALL-PARTY, POWER-SHARING, GOVERNMENT OF NATIONAL UNITY**

**Report of a role-play conducted on-line ‘in’ IFAMD**

**on 4.10.2021 in Munich.**

***“And the winner is………… everyone!”***

**RESULT**

The ‘mini-Bundestag’ elected a ‘Cabinet’ consisting of 5 CDU, 4 SPD, 3 GP, 2 FDP, 1 AfD and 0 DL, 8 men and 7 women. Richard Habeck (GP) topped the matrix poll in Environment, Olaf Scholz was in second place, and the AfD came bottom.

**INTRODUCTION**

Politics is adversarial, not least because decisions are taken by an adversarial methodology – majority voting. But just as there are many electoral systems in the world, so too there are quite a few decision-making systems. One of the most accurate ways of identifying the collective will, the democratic majority opinion, is the Modified Borda Count MBC, (Annex I); it can identify the option with the highest *average* preference – and an average, of course, involves every MP in the Bundestag, not just a majority of them. If, then, the MBC were the democratic norm, the newly elected Parliament would not need to divide into two opponents, a majority coalition and a minority opposition.

The question, then, is how could a Parliament choose an inclusive Cabinet, a Government of National Unity, GNU? And the answer is a matrix vote. This two-dimensional ballot, as shown in Table I, would enable the MPs to choose, in order of preference, not only those whom they wanted to be in Cabinet, but also the Ministry in which they wished each of their nominees to serve. In a role-play conducted ‘in’ Munich, just eight days after the German general election on 26th Sept., ‘MPs’ of the six parties in the Bundestag elected a GNU.

**THE ROLE-PLAY**

In casting a matrix vote, the MP chooses 15 different MPs in the left-hand shaded column, and indicates with the letter ‘A’ the Ministry in which this nominee is to serve; so a full ballot would consist of an ‘A’ in each column and an ‘A’ in each row. A matrix vote count is conducted in two parts: Part I identifies the fifteen most popular MPs in a Quota Borda System QBS analysis (Annex II), while in an MBC analysis of the matrix (Annex III), Part II appoints these fifteen to the various Ministries in descending order of points received. QBS prompts the parties to nominate only as many candidates as they think might get elected; the MBC incentivises the MPs to cast all fifteen preferences; in effect, therefore, the matrix vote encourages the MPs to vote across the party divide – an essential element, it is argued, of a good power-sharing structure.

The quota for electing a 15-member Cabinet in the main Bundestag of 735 MPs is 46, and for the role-play’s ‘mini-Bundestag’ of 58 MPs, it is 4. Hence each ‘party’ has a certain number of quotas, and those quota numbers (shown in reverse in Table II) were roughly the same in both the main Bundestag and the role-play’s ‘mini-Bundestag’ rows. Accordingly, in theory, any group of MPs 46 (main) or 4 (mini), if they all cast a 1st preference for one particular candidate, could ensure the latter gets a quota and thus gets elected, albeit in an as yet unknown Ministry.

Now in real life, every MP should have a ballot. In the role-play, however, because a ‘party’ which wished to give a quota to one particular candidate would need to fill out four ballot papers, the ballots were divided into two categories: a BIG ballot, which would be counted four times, and a small ballot to be counted just the once.

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| **TABLE I The Ballot** | | **MINISTRIES** | | | | | | | | | | | | | | |
| **THE CABINET**  Names of candidates in  order of preference | | Chancellor | Finance | Interior | Foreign  Affairs | Economy | Justice | Labour | Defence | Food | Health | Transport | Environment | Education | Development | Special Tasks |
| **1st** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **2nd** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **3rd** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **4th** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **5th** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **6th** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **7th** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **8th** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **9th** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **10th** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **11th** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **12th** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **13th** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **14th** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **15th** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

After an introduction to the matrix vote, every ‘party’ entered its break-out room with two documents on a google.doc. The first, listing all 58 MPs in the ‘mini-Bundestag’, was a nomination form on which each ‘party’ could nominate one or more of its members for a particular ministry; and the second document contained the requisite number of ballot papers.

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| **TABLE II The Quotas and Ballots** | | | PARTIES | | | | | | TOTALS |
| SPD | CDU | GP | FDP | AfD | DL |
| Number of MPs  =  (in theory)  number of ballot papers | | BUNDESTAG | 206 | 196 | 118 | 92 | 83 | 39 | 734 (735) |
| % of Bundestag | 28% | 27% | 16% | 13% | 11% | 5% | 100% |
| MINI-BUNDESTAG | 16 | 16 | 9 | 7 | 6 | 3 | 57 (58) |
| % of mini-Bundestag | 28% | 28% | 16% | 12% | 10% | 5% | 99% |
| Number of quotas | 46 | BUNDESTAG | 4 + | 4 + | 2 + | 2 . | 1 + | 0 + | 13 (< 15) |
| 4 | MINI-BUNDESTAG | 4 . | 4 . | 2 + | 1 + | 1 + | 0 + | 12 (< 15) |
| Number of role-play ballots | | 4 BIG | 4 BIG | 2 BIG  and  1 small | 1 BIG  and  3 small | 1 BIG  and  2 small | 3 small | 12 BIG + 9 small  = 12 x 4 + 9  = 57 |

**THE TASKS**

Participants in the role-play could act either as voters or as observers. The former were allocated into the six ‘parties’ – SPD, CDU, GP, FDP, AfD and DL – always in numbers to reflect the actual make-up of the newly elected Bundestag. (The numbers of ballots per ‘party’ did not therefore vary, even if the number of voters in any one ‘party’ did go up or down.) The tasks of each ‘party’ were as follows:

+ firstly, on the basis of its number of quotas, to nominate one or more MPs to be its candidates, each for a certain Ministry, on the nomination form. This information was then available to all the other ‘parties’. So any of those other ‘parties’ which wished to give some of their lower preferences in support, could do exactly that – cross the party divide – to maximum effect.

+ secondly, to decide how best to cast its top preferences, either evenly between all its nominees, or with emphasis on one or more nominees whom the ‘party’ wished to be in a particularly important and/or strongly contested Ministry.

+ thirdly, to consider negotiating with another ‘party’. The CDU, for example, knowing that it was slightly smaller than the SPD, could sacrifice one of its quotas in exchange for lots of preferences for its candidate for the Chancellorship. Or a smaller party like the Greens, with 2 and a bit quotas, could perhaps join forces with the FDP which had 1 and a bit quotas, because their two bits made up another quota; accordingly, if they could agree on a joint candidate…

+ and finally, to fill in its ballots. Ideally each ballot would contain 15 different names in the shaded left-hand column, and 15 different ‘A’s – as stated earlier, one ‘A’ in each column and one ‘A’ in each row in the matrix – so to identify a particular Ministry for each nominee. They could also use the letter ‘B’ to indicate a second priority: if two parties were both competing for the post of Chancellor, for example, the party which loses would doubtless want its candidate to nevertheless be appointed to another senior Ministry – Finance or Foreign Affairs, whatever. So the party which gave an MP an ‘A’ for Chancellor could also have given it a ‘B’ for, let us say, Finance.

**LIMITATIONS**

The biggest limitation was that of time. In 2017, the Bundestag took 136 days to form a grand coalition of only two parties; the role-play voters formed an ‘all-party coalition’ in just one hour. The time, then, was far too short. As a result, one ‘party’ did not cast any ‘A’s for some of its lower preferences, and nearly all ‘parties’ failed to cast any ‘B’s.

The number of participants was small, but given the novelty of the exercise, maybe this was an advantage.

The MPs in the ‘mini-Bundestag’ contained only 58 of the 735 MPs in the newly elected Bundestag, a gender-balanced list of the more well-known MPs. Doubtless, therefore, many individuals with particular talents relevant to one or other Ministry were omitted.

The ‘parties’ were allowed only one negotiation whereas, in real life, most parties would probably want unrestricted possibilities, exploratory talks prior to more detailed discussions, subject at most to only a constitutional time-limit. Furthermore, if one set of talks was not fruitful, one of the ‘parties’ concerned might have wanted a second meeting with another different ‘party’, but that was beyond the scope of this role-play.

As shown in PR-STV elections in Ireland, politicians are very quick to learn how a sophisticated voting procedure works. Nevertheless, in real life, it will take a little time before the MPs and others fully understand the workings of a matrix vote. Suffice to say that every MP has a choice of (735 x 15 >) 11,000 ways of casting a 1st preference, of 10,000 ways of casting a 2nd, and in all, of billions of ways of filling in a full 15-member matrix ballot. Such freedom of choice implies, of course, that the ability of a party leader to dominate and re-shuffle is close to zero.

**THE PARTIES**

Every role-play ‘party’ had a facilitator, trained in the workings of a matrix vote. Some of them played a big role in their party’s deliberations, not least because there were not very many voters in each party.

Now in theory, a party with X% of the vote should get X% of the Bundestag. But if some small parties fail to pass the 5% threshold, then every party which does gain representation can expect to get a little more than its X%, let’s say Y% of the seats in the Bundestag, and therefore about Y% of the Cabinet. Or perhaps, because Der Linke for example, was probably not going to get anyone elected to Cabinet, each of the other parties might even hope to win more than Y% – except for the AfD, of course. The Greens, for instance, got 15% of the vote, 16% of the Bundestag and 20% of the mini-Cabinet. So in theory, the SPD and CDU could expect 4 or maybe 5 Cabinet Ministers; the Greens could aim for 3; the FDP for 2; and because the AfD was unlikely to get any cross-party support from the other parties, it would probably get just the 1 Minister.

The actual result was SPD 4, CDU 5, GP 3, FDP 2, AfD 1 and Der Linke 0. So, the CDU did well. The SPD should have had had more success, and at the very least it should have given Olaf Sholze lots of ‘B’s. The Greens and FDP both succeeded, and AfD did what they could. No one ‘party’ won everything, but every ‘party’ won something.

Many of the ‘party’ tactics were sensible. Indeed, the matrix vote enables parties either to co-operate when they want to, or to be less concerned on some appointments, or again to compete in other instances. Knowing that the SPD and CDU would be in a battle for the Chancellorship, and the competition was going to be close, the GP, for example, gave lots of support (36 points) for Olaf Scholz’s bid for Chancellor… but the FDP gave even more support for Markus Söder (101 points); and so the CDU won, by a mere 4 points! All very competitive. But in a nice way. The CDU, for example, gave some support to Olaf Scholz, but not for the Chancellorship, rather for Finance. And knowing that the AfD’s policies on immigration were, in their view, unwholesome, four parties – SPD, GP, DL and CDU – combined to give Lars Klingbeil the Ministry of Justice, and this ensured that Alice Weidel (AfD) would not get this post. All very cooperative. In like manner, the GP, CDU, FDP and DL joined together to get Robert Habeck (GP) into the Ministry of the Environment: while a different set of GP, SPD and DL supported Annalena Baerbock (GP) for Education. Indeed, Der Linke used its ballots to support candidates of pretty well every other ‘party’ – except the AfD.

But the SPD should have won the Chancellorship. If instead of giving Olaf Scholz 339 points for Chancellor and 220 for Finance, the SPD had given him 559 points as ‘A’s for Chancellor and the same number of ‘B’s for Finance, then he would have won the Chancellorship, easily. And even if he hadn’t, he would certainly have won Finance. A second observation relates to AfD and the fact that it topped the QBS poll but came bottom of the MBC analysis. If any of the other parties (apart from Der Linke which did not have a quota) had decided that such a QBS result was undesirable, they could easily have put themselves ahead of AfD. Sure enough , however – the MBC is the basis of the matrix analysis – the AfD finished with that which every ‘mini-Bundestag MP’ considered to be the least important post, the Food Ministry.

In summary, the outcome was a power-sharing ‘Cabinet’, with the SPD having 4 Ministers, the CDU 5, GP 3, FDP 2, AfD 1 and Der Linke 0; 7 were female, and 8 male, an almost perfect gender balance; and top of the (matrix) poll was Robert Habeck for Minister of the Environment! The consensus, it seems, from all ‘parties’ was a focus on Climate Change.

The results are shown below. Table III is the full set of initial results, showing in the left-hand shaded column, the QBS analysis of all the preferences. Top of the list are those who got the most 1st preferences and, in the event of a tie, for many candidates got just the 1 quota, the order is determined by the candidates’ MBC scores (in the right-hand shaded column). So this table shows 11 candidates were elected in stage (i) on the basis of their 1st preferences; none were elected in stage (ii) in the pairs, because in the two pairs which were achieved, both candidates had already acquired a quota of 1st preferences; the last 4 candidates were elected in stage (iii) on the basis of their MBC scores.

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| **TABLE III The Count** | | | | | **MINISTERS** | | | | | | | | | | | | | | | MBC  Scores  and  analysis | |
| **THE CABINET**  Candidates in order of preference | | | | |
| Chancellor | Environment | Finance | Development | Education | Justice | Economy | Defence | Foreign Affairs | Interior | Labour | Transport | Special Tasks | Health | Food |
| QBS analysis | | Party | 1st prefs  quotas | 1st/2ndprefs  quotas |
| **1st** | Alice Weidel | **AfD** | **1.5** |  |  |  |  |  |  | **90** |  |  |  |  |  |  |  |  |  | 90 | 15th |
| **2nd** | Robert Habeck | **GP** | **1.25** | **2.25** |  | **601** |  |  |  |  |  |  |  |  |  |  |  |  |  | 631 | 1st |
| **3rd** | Olaf Scholz | **SPD** | **1** | **2** | **339** |  | **220** |  |  |  |  |  |  |  |  |  |  |  |  | 559 | 2nd |
| **4th** | Lars Klingbeil | **SPD** | **1** |  |  |  |  |  |  | **411** |  |  |  |  |  |  |  |  |  | 420 | 4th |
| **5th** | Markus Söder | **CDU** | **1** |  | **343** |  |  |  |  |  |  |  |  |  |  |  | **16** |  |  | 359 | 7th |
| **6th** | Ye-One Rhie | **SPD** | **1** |  |  |  |  | **314** |  |  |  |  |  |  |  |  | **48** |  |  | 362 | 6th |
| 7th | Saskia Esken | **SPD** | **1** | **2** |  |  | **288** |  |  |  |  |  |  |  |  |  |  | **32** |  | 320 | 8th |
| **8th** | Christian Linder | **FDP** | **1** |  |  |  | **48** |  |  |  | **420** |  |  |  |  |  |  |  |  | 468 | 3rd |
| **9th** | Anna Baerbock | **GP** | **1** | **2.25** |  | **24** |  |  | **290** |  |  |  |  |  |  |  |  |  |  | 314 | 9th |
| **10th** | Peter Altmaier | **CDU** | **1** |  |  |  |  |  |  |  |  |  |  | **240** | **64** |  |  |  |  | 304 | 10th |
| **11th** | Dorothy Bár | **CDU** | **1** |  |  |  |  |  |  |  |  |  |  |  |  | **212** | **9** |  |  | 221 | 13th |
| **12th** | Anton Hofreiter | **GP** |  |  |  |  |  |  |  |  |  |  | **357** |  |  |  |  |  | **27** | 384 | 5th |
| **13th** | Ralph Brinkhaus | **CDU** |  |  |  |  |  |  |  |  |  | **269** |  |  |  |  |  |  |  | 269 | 11th |
| **14th** | Yvonne Magwas | **CDU** |  |  |  |  |  |  |  |  |  |  |  |  | **176** |  |  |  | **80** | 256 | 12th |
| **15th** | Linda Teuteberg | **FDP** |  |  |  |  | **18** | **153** |  |  |  |  |  |  |  |  |  | **32** |  | 203 | 14th |
| **MBC scores** | | | | | **760** | **625** | **622** | **605** | **544** | **534** | **492** | **450** | **420** | **390** | **390** | **347** | **187** | **165** | **124** | 6840  6655 | |

57 ‘MPs’ voted, and all of them cast 15 preferences (although a few did not specify a Ministry for some of their lower preferences). A full ballot of 15 preferences exercises a total of (15 + 14 + … + 1 =) 120 points; and 57 x 120 = 6840 (as in the bottom right=hand corner) – the total of all the MBC scores of the 15 ministries, but not the total of all the MBC scores of the 15 Ministers (because other candidates also received quite a few points for one or other Ministries).

The table shows, in the shaded left-hand column, the candidates in descending order of QBS popularity; while in the right-hand shaded column are their MBC scores. The fact that the AfD came last in the MBC needs no explanation – it got no (preferences or) points from any other ‘party’. Either the SPD or CDU could have topped the QBS analysis if they had wanted to, and both the Greens and the FDP could have been elected ahead of the AfD.

The results of the MBC analysis of the points in the matrix are shown in Table IV, with the ministries now arranged, left-to-right, in descending order of their MBC scores, and any sums rendered redundant now eliminated.

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| **TABLE IV The Result** | | | | | **MINISTERS** | | | | | | | | | | | | | | | MBC  Scores  and  analysis | |
| **THE CABINET**  Names of candidates in  order of preference | | | | |
| **Chancellor** | Environment | Finance | Development | Education | Justice | Economy | Defence | Foreign Affairs | Interior | Labour | Transport | Special Tasks | Health | Food |
| QBS analysis | | Party | 1st  prefs  quotas | 1st/2nd  prefs  quotas |
| **1st** | Alice Weidel | **AfD** | **1.5** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | **0** | 90 | 15th |
| **2nd** | Robert Habeck | **GP** | **1.25** | **2.25** |  | **601** |  |  |  |  |  |  |  |  |  |  |  |  |  | 631 | 1st |
| **3rd** | Olaf Scholz | **SPD** | **1** | **2** |  |  |  |  |  |  |  |  |  |  |  |  | **0** |  |  | 559 | 2nd |
| **4th** | Lars Klingbeil | **SPD** | **1** |  |  |  |  |  |  | **411** |  |  |  |  |  |  |  |  |  | 420 | 4th |
| **5th** | Markus Söder | **CDU** | **1** |  | **343** |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 359 | 7th |
| **6th** | Ye-One Rhie | **SPD** | **1** |  |  |  |  | **314** |  |  |  |  |  |  |  |  |  |  |  | 362 | 6th |
| 7th | Saskia Esken | **SPD** | **1** | **2** |  |  | **288** |  |  |  |  |  |  |  |  |  |  |  |  | 320 | 8th |
| **8th** | Christian Linder | **FDP** | **1** |  |  |  |  |  |  |  | **420** |  |  |  |  |  |  |  |  | 468 | 3rd |
| **9th** | Anna Baerbock | **GP** | **1** | **2.25** |  |  |  |  | **290** |  |  |  |  |  |  |  |  |  |  | 314 | 9th |
| **10th** | Peter Altmaier | **CDU** | **1** |  |  |  |  |  |  |  |  |  |  | **240** |  |  |  |  |  | 304 | 10th |
| **11th** | Dorothy Bár | **CDU** | **1** |  |  |  |  |  |  |  |  |  |  |  |  | **212** |  |  |  | 221 | 13th |
| **12th** | Anton Hofreiter | **GP** |  |  |  |  |  |  |  |  |  |  | **357** |  |  |  |  |  |  | 384 | 5th |
| **13th** | Ralph Brinkhaus | **CDU** |  |  |  |  |  |  |  |  |  | **269** |  |  |  |  |  |  |  | 269 | 11th |
| **14th** | Yvonne Magwas | **CDU** |  |  |  |  |  |  |  |  |  |  |  |  | **176** |  |  |  |  | 256 | 12th |
| **15th** | Linda Teuteberg | **FDP** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | **32** |  | 203 | 14th |
| **MBC scores** | | | | | **760** | **625** | **622** | **605** | **544** | **534** | **492** | **450** | **420** | **390 =** | | **347** | **187** | **165** | **124** | 6840  6655 | |

The appointment of ministers is based on an MBC analysis of the sums in the matrix. The biggest sum, 601 (green) gives Robert Habeck the Environment, and any other sums in his row or column, like the 24 for Anna Baerbock (in Table III), now redundant. Next, 420 (yellow) appoints Christian Linder to Economy; 411 (red) puts Lars Klingbeil into Justice; and 357 (green) sees another GP success, as Anton Hofreiter takes on Foreign Affairs. Now comes some contention, in the appointment of the Chancellor. Markus Söder gets 343 points (grey) which is more than Olaf Scholz, so the CDU gets the job, and Olaf Scholz’s 339 (as was in Table III) is now also redundant.

The next appointments are 314 (red), 290 (green), and 288 (red), to give, respectively, Ye-One Rhie Development, Annalena Baerbock Education, and Saskia Esken Finance. And yet again, with no ‘B’ priorities, Olaf Scholz loses by a narrow margin. These are followed by 269, 240, 212 and 176 (all grey), so that’s Ralph Brinkhaus in Defence, Peter Altmaier in Interior, Dorothy Bár in Transport and Yvonne Magwas in Labour.

The highest number which has not been rendered redundant is now 32, putting Linda Teuteberg in Health. Finally, with two ministries still to be filled and two appointments still to be made, the more popular MBC candidate, Olaf Scholz goes to the higher scoring Ministry, Special Tasks, so Alice Weidel of the AfD is given Food.

**CONCLUSION - PLURALISM IS POSSIBLE**

Politics is indeed adversarial. It need not be so. If decision-making were not based on the often inaccurate and always divisive binary vote, if instead decision-making were based on preferential points voting as in the MBC, cooperation, sometimes, would be in the vested interest of many. Covid and Climate Change are both telling the world that we humans must cooperate; the matrix vote is one of the voting methodologies which could facilitate such a greater degree of cooperation.

It could also be used in conflict zones. Realising that negotiations between parties can be difficult, and between former enemies even more problematic, many jurisdictions have concocted some sort of mathematical rule. Northern Ireland for example uses a d’Hondt interpretation of its election results, while Lebanon shares of some its Ministerial appointments in accordance with religious differences. But these arrangements tend to perpetuate the very sectarian divisions the respective Peace Settlements were meant to overcome. Likewise, the ‘magic formula’ used in Switzerland is based on party labels. The matrix vote, in contrast, is completely colour blind.

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+ Marian Farrel from Ireland,

+ Leo Joosten of The Netherlands, and

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Thanks are also due to Charles Stanley-Smith, who wrote the computer program for an electronic count at a matrix vote experiment in Dublin in 2016 but who now did everything by hand, and finally but especially to Eva Wolf, again of CCR, who did an amazing amount of work to ensure that, on the day, everything literally clicked into place. Perfect!

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**ELECTING AN ALL-PARTY, POWER-SHARING, GOVERNMENT OF NATIONAL UNITY - REPORT**

**ANNEX I**

**THE MODIFIED BORDA COUNT, MBC**

Invented in 1433 by Nicholas Cusanus (or Nicholas of Cusa, the latinised name of Kues in the Rhineland where he was born) and developed in 1770 by Jean-Charles de Borda, a leading member of *l’Académie des Sciences* in Paris, the MBC[[1]](#footnote-1) works as follows. In a four-option ballot,

+ he who casts just one preference exercises just 1 point;

+ she who casts two preferences gets her favourite 2 points, (and her 2nd preference 1 point);

and so on…

+ so those who cast all four preferences get their favourite 4 points, (their 2nd choice 3, etc.).

In mathematical terms, in an *n-*option ballot, the voter may cast *m* preferences, and obviously, *n > m > 1*. Points are awarded to (1st, 2nd … last) preferences cast, according to the rule:

*(m, m-1 … 1).*

Unfortunately, this formula was changed to *(n, n-1 … 1)* or *(n-1, n-2 … 0),* which tempted many in *l’Académie* to truncate their votes, so to get 4 points for their 1st preference and nothing to the rest. The *n*-formulae are unfortunately and mistakenly called the Borda Count BC, for Jean-Charles advocated the ‘*m*-rule’ (albeit in his own words). Suffice to say the ‘*m*-rule’ promotes consensus, while the *n*-rules do not.

Indeed, the very mathematics of the MBC encourages every voter to state, not only his/her favourite option, but also their compromise option(s). And if everyone does that, then of course it is possible to identify the collective compromise… which, they say, is what politics is all about.

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**ANNEX II**

**QUOTA BORDA SYSTEM, QBS**

The late Professor Sir Michael Dummett first proposed the QBS in 1984. He regarded the MBC as “the soundest method of identifying the [option which] is most generally popular,”[[2]](#footnote-2) but the MBC is not proportional. So he introduced a quota such that, in any constituency electing more than one candidate, any who get a sufficient number of top preferences are deemed elected, and only if seats are still to be filled are candidates elected on the basis of their MBC scores.

Another preferential and proportional system is called Proportional Representation – Single Transferable Vote, PR-STV, which is used in Ireland, North and South. As in QBS so too with PR-STV, any candidate with a quota of 1st preferences is deemed elected. One very popular individual in Northern Ireland was Rev. Ian Paisley. Under PR-STV, if he had more than a quota, his surplus was transferred to any candidate who received ‘his’ voters’ 2nd preferences, and sometimes the second most popular candidate was his son, another Ian. PR-STV thus involves lots of transfers and fractions, with counts often going to six, seven, eight stages. In QBS, the sums are a lot simpler. If daddy gets a quota of 1st preferences, he is elected. And if *x* people vote “daddy, sonny” as their 1st/2nd preferences, while *y* people vote “sonny, daddy” as their 1st/2nd preferences, and if *x + y > 2* quotas, or if *x > 2* quotas, then sonny gets elected as well.

The routine for the role-play’s QBS is as follows, but in real political life, it can be a little more complicated:

+ stage (i) candidates with at least 1 quota of 1st preferences are elected;

[[3]](#footnote-3)

+ stage (ii) if any pairs of candidates get 2 quotas of 1st/2nd preferences, the second member is now deemed elected as well;

then, if seats are still to be filled:

+ stage (iii) those candidates with the highest MBC scores are deemed elected.

As in PR-STV, so too in QBS, each party is encouraged by the mathematics of the count to nominate only as many candidates as it thinks can get elected. But here’s the biggest difference between the two: while PR-STV *allows* the voter to cross the party divide, because of the MBC element, QBS actually *encourages* the voters so to do.

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**ANNEX III**

**THE MATRIX VOTE**

The matrix vote[[4]](#footnote-4) was devised by the author of this report in 1978. It was first put to the test in 1986 in a cross-community conference in Belfast, in which some 200 participants role-played an election of all the various chairpersons in Belfast City Council. It has been developed in several settings, sometimes for real, sometimes for research, both at home and abroad, not least in China.

The matrix vote might appear to be complicated; in this age of the computer, however, complexity is a relatively minor concern. Furthermore, in a political setting, it is designed for use only in parliaments and assemblies, mainly by the elected representatives therein, all of whom, they tell us, are clever.

In a full setting, when electing a Cabinet of ‘x’ Ministers, each MP may choose, in order of preference, ‘x’ fellow MPs, and can then indicate with a letter ‘A’ in which ministry he/she wishes each nominee to serve; this ‘A’ is the voter’s top priority. Just in case that ministry is already occupied by another successful candidate, the voter may also write the letters ‘B’ (in the role-play) and ‘C’ (in real life) in other ministerial columns, as second and third priorities for this nominee.

It is worth repeating that the MBC encourages the voter to submit a full ballot, that is, all 15 preferences. At the same time, QBS prompts every party to limit its number of nominees. So the matrix vote encourages all the MPs to cross, not only the gender gap and the party divide, but also, in conflict zones, the sectarian chasm.

It has one further huge advantage. While encouraging every MP to be consensual, it discourages any political leader from being dictatorial. Take, for example, the case of the SPD or CDU with four quotas, and let us assume the leader is Ms *i,* while its three other candidates are Mr *j,* Ms *k* and Mr *l.* So the party could decide to give each candidate a quota of 1st preferences, so to get all four elected in stage (i). Or it could decide to give all of its 1st preferences to Ms *i,* with two quotas of 2nd preferences to Mr *j* and the other two quotas to Ms *k*, so that Ms *i* gets elected in stage (i) with a massive MBC score, while *j* and *k* get elected in stage (ii) – so that’s a total of only three elected. It is not, therefore, in a party’s best interests, to have a party leader who is ‘power-crazy’!

\* \* \* \* \*

The matrix vote may be used whenever a group is choosing a certain number of individuals to form a team in which its members undertake different tasks: in electing an executive committee, for example, of a chairperson, a treasurer, a secretary, and so on. In such instances, the matrix vote may be conducted under much simpler rules, and both the election of the most popular and their subsequent appointments can be conducted according to MBC rules. In those circumstances where proportionality is important, however, and especially in political circles, the QBS election should be retained and perhaps even strengthened to include not just pairs of 1st/2nd, but triplets of 1st/2nd/3rd preferences.

1. *Democratic Decision-making*, 2020, Emerson P, Springer, Heidelberg. [↑](#footnote-ref-1)
2. *Principles of Electoral Reform*, 1997, Dummett M, Oxford University Press, p 71. [↑](#footnote-ref-2)
3. *Designing an All-Inclusive Democracy*, 2007, Emerson P, Springer, Heidelberg, p 39 *et seq*.. [↑](#footnote-ref-3)
4. *From Majority Rule to Inclusive Politics*, 2016, Emerson P, Springer, Heidelberg, 79 *et seq*.. [↑](#footnote-ref-4)