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Consensus and Climate Change

Peter Emerson

The de Borda Institute, Belfast, Northern Ireland
Email: pemerson@deborda.org

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Abstract

Covid and Climate Change are telling us all that we have to cooperate. Well we can't do that very well if, whenever we make decisions, we are forever voting ("for" or) *"against"* each other! *With* a system of preferential points voting, however, people can indeed work *with* each other. Secondly, life these days is fairly complex, and in almost every sphere, use is made of precision instruments: speedometers in cars, altimeters in aircraft, thermometers in ovens, and so on. These tools are not binary, marked "fast" or "slow", "high" or "low", "hot" or "cold"; rather, they are all calibrated, in kms/hour, metres, degrees, whatever. The one obvious exception is the tool used in political decision-making, the 2,500-year-old majority vote in which opinions are labelled "yes" or "no". There are some precision instruments in which opinions are calibrated in preferences, but many politicians as we shall see, prefer the blunt *binary* ballot. Accordingly, this paper reviews some of the historical work done in the science of social choice. The text first proves that majority voting can be inaccurate, before then focusing on multi-option, and later preferential-points voting procedures. This shows that people could indeed cooperate if they agreed to a multi-option procedure in which can be identified the option *with* the highest average preference, and an average, of course, involves everyone (who votes). For decisions to be based on such a preferential procedure, computers would need to be introduced into the world's decision-making chambers, in order to cater for electronic, multi-option, preferential voting. If this were to happen, it could be that the political structures of countries which today regard themselves as competitors if not indeed as opponents, could merge into a commonality, to result in a more peaceful worldwide milieu, such as is so necessary to tackle the problems of climate change.

Keywords

Binary Ballots, Climate Change, Multi-Option Voting, Preferential-Points Voting, Consensus, Modified Borda Count MBC

1. Introduction

In many countries—autocratic, theocratic and democratic—decisions are taken by majority vote, the oldest, most divisive, most primitive and sometimes most inaccurate measure of collective opinion ever invented. Firstly, in the autocratic Soviet Union, the word "bolshevik" actually meant "member of the majority" (even though the Bolsheviks were *never* the majority)[1] (Shub, 1966: p. 315). Secondly, the theocracy Iran became Islamic in 1979, in a referendum which was binary (Emerson, 2012: pp. 148-149). And thirdly, in many a Western democracy, its parliament divides into two, a supposed majority against the rest.

Given that we human beings have two arms—one right, one left—it was long since thought that questions on policies should indeed be taken in binary ballots: right or wrong? In a process which was itself binary, it was also thought, given that monarchies and other forms of minority rule often led to tyrannies, that it's opposite—majority rule—was bound to be good. That indeed may be true. But majority rule as defined in current political practice is often a myth: in a protracted procedure which is binary in more than one phase, Donald Trump may perhaps gain majority support amongst the Republicans to thus become the presidential candidate; and in an election which is almost binary, he may then win the presidency[2]—but a half of a half is a quarter, and a majority of a majority is often only a minority. After all, 51% of 51% is only 26%!

2. The History

Many years ago, nearly every society devised a form of decision-making based, if only in theory, on consensus. People in Africa, Asia, Europe and America invariably sat in circles, and hence the pow-wows of the American Indians, the Chinese words 圆坐 yuán zuò and 圆议 yuán yì, the *barazas* and *gacacas*[3] of sub-Saharan Africa, and the round table of King Arthur in medieval England.

Debates were often protracted if not indeed inconclusive, so some countries resorted to voting, first in the city states of Greece about 2,500 years ago, and a little later on in China, among the ministers in the Imperial Court of the former Hán Dynasty 汉朝 (Wang, 1968: p. 176). In both settings, there were no formal groupings let alone political parties, so those concerned could vote "with" each other in one debate and "against" in another, without falling into blocks of permanent opposition. Overall, history relates that the system in both settings worked fairly well.

Binary voting had its limitations, however, and one of the first to realise this was Pliny the Younger in Rome, in the year 105. A local Consul had been found, dead... murdered! His manservant was accused, and in the subsequent trial, the jury had three options: ***A***, acquittal; ***B***, banishment; ***C***, capital punishment.

[1]In the November 1917 election, the Bolsheviks won only 23.6% (and the Mensheviks a mere 3.0%), while the Socialist Revolutionaries gained 42.0%. So it was that the latter won a clear majority, 370 of the 707 seats, to the Bolsheviks 175.

[2]Not necessarily in the election itself, but in the Electoral College.

[3]The two words in Kiswahili and Kinyarwanda describe the traditional East African get-togethers.

Whereupon Pliny realised, if there is no majority *in favour* of any one option, if support for the three options is 30:30:30, or let's say 20:30:40, that then there are majorities *against* every option (McLean & Urken, 1995: p. 15).

In other words, if the question is "Execute, 'yes' or 'no'?" the ***A*** and ***B*** supporters oppose the ***C*** crowd; or if the question is "Innocent, 'yes' or 'no'?" ***B*** and ***C*** gang up against ***A***; and so on.

The ancient Greeks were aware of these sorts of problems, but unfortunately, they knew of only one type of voting procedure: the binary vote. So they devised the following rules which despite the existence of more accurate instruments are still in use today! Accordingly, in debate, if some are dissatisfied with the status quo, option ***S***,

+ they may propose an alternative, let us say, option ***X***;
+ if others want to suggest a variation to this ***X*** option, they may move an amendment; let us assume there are two such suggestions which, if adopted, would change the proposal to either option ***Y*** or option ***Z***.

In the debate itself:

+ they first choose their more preferred amendment;
+ next, they adopt or reject this amendment, to get the substantive;
+ and then, finally, they make the decision: this substantive or the status quo.

Let us assume that a group of 9 people have the preferences shown in Table 1.

So a majority of 7 doesn't want ***X***; another of 6 doesn't want ***Y***; yet another of 5 doesn't want ***Z***; and, of course, all 9 don't want ***S***. Therefore, the debate may ensue. According to the above procedures, they first choose their more preferred amendment, ***Y*** or ***Z***, shown in grey or yellow respectively; and (2 + 3 =) 5 prefer ***Y*** to ***Z***, whereas only 4 prefer ***Z*** to ***Y***; so ***Y*** is more popular than ***Z***, which we write as ***Y*** > ***Z***. Next, they decide whether or not to use this amendment or to stick with the motion, so it's ***Y*** or ***X*** (shown in grey or red), and (2 + 4 =) 6 prefer ***X***, so ***X*** > ***Y*** by 6:3. Then they move to the final stage, to go for ***X*** (in red) or retain the status quo ***S*** (in white), and 7 prefer option ***S*** to ***X***; so ***S*** > ***X***, and the answer is ***S***.

So initially, these 9 persons agreed, verbally, that they did not want the status quo, option ***S***; then they decided, democratically, that they did want the status quo, option ***S***. So the answer is wrong. In a nutshell, in a multi-option debate,

Table 1. A voters' profile.

Preferences	Number of Voters		
	2	3	4
1st	***X***	***Y***	***Z***
2nd	***Y***	***Z***	***S***
3rd	***Z***	***S***	***X***
4th	***S***	***X***	***Y***

majority voting is, sometimes, hopelessly inaccurate.

Interestingly enough, in the above profile, yes, ***X*** > ***Y***, and ***Y*** > ***Z***; so we could perhaps conclude that

$$X > Y > Z.$$

And ***Z*** > ***S***, and ***S*** > ***X***. Put them all together, and

$$X > Y > Z > S > X > Y > \ldots.$$

and it goes round and round in circles, for ever—the famous paradox of binary voting! Therefore, no matter what dubious process some devious politician has concocted—like Boris Johnson on Brexit—with some voters' profiles, regardless of what is the final outcome, there will always be a majority against it!

Needless to say, philosophers and others started to think of other voting methodologies. The first to actually practice a form of multi-option voting, plurality voting, were the Chinese, in 1197, 金朝, during the Jīn Dynasty (Franke & Twitchett, 1996: p. 266); while the first to suggest an even more accurate methodology, preferential voting, was the Spanish Catalan, Ramón Llull, in 1299. Hence, some five centuries later, the Frenchman Jean-Charles de Borda devised the modified Borda count, MBC, as it's called[4]. In a four-option debate, it works like this:

+ he who casts only one preference gets his favourite just 1 point;
+ she who casts two preferences gets her favourite 2 points (and her 2nd choice 1 point);

and so on; accordingly:

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

In effect, the system encourages every member of the congress or parliament to cast a preference for all the options on the ballot paper. At best, therefore, they all state not only their favourite option, but also their compromise option(s). And if everyone does that, it is of course possible to identify the collective compromise. In the above example, option ***S***, with none of the 1st, 4 of the 2nd, 3 of the 3rd and 2 of the 4th preferences, gets 0 + 12 + 6 + 2 = 20 points; ***X*** gets 2, 0, 4 and 3 of the 1st, 2nd, 3rd and 4th preferences, which is 8 + 0 + 8 + 3 = 19 points; ***Y*** gets 3, 2, 0 and 4 of these preferences, which is 12 + 6 + 0 + 4 = 22; and ***Z***, with 4, 3, 2 and 0 is the winner with 16 + 9 + 4 + 0 = 29.

3. The Modified Borda Count

Jean-Charles de Borda suggested this preferential-points system in 1770. It was adopted in the French Academy of Sciences, and it worked pretty well. But one very famous Frenchman did not like it; he wanted to control things, indeed, to control everything! So he reverted to majority voting; this meant that he could choose the option to be on the ballot paper and, as usually happens[5], that ques-

[4]Jean-Charles invented, not that which is called the Borda Count, BC, but the MBC; see "about us" on http://www.deborda.org/.

[5]One well-known exception to this generality was the UK's vote in 2016 on Brexit.

tion is then the answer. The man concerned was an autocrat if ever there was one: Napoléon Bonaparte; he held three such binary referendums and, supposedly always with 99% majorities in favour, he thus became the emperor!

With binary voting, as in France 200-odd years ago, or as today in Ukraine, the political leader may well be in total control. In May 2014, Putin decided that Donetsk was to be independent; so that was the referendum question… and that was the answer. In 2022, he changed his mind; so there was another referendum, a different question, and supposedly, a Donetsk majority now voted to be part of Russia. Yet again, the question was the answer[6].

Despite this obvious weakness of binary referendums, and despite the fact that "all the wars in the former Yugoslavia started with a referendum," (*Oslobodjenje*, Sarajevo's famous newspaper, 7.2.1999), many politicians still campaign for such a primitive voting procedure, not least some of those in Scotland, Catalonia, (Northern) Ireland, Republika Srpska and South Ossetia—the last three of which are all potential conflict zones. Surely, if only for the sake of Ukraine, these people should all be campaigning for multi-option polls. After all, in every instance, there are more than two options on the respective table: Scotland and Ireland, for example, could both be members of a W-I-S-E (Wales-Ireland-Scotland-England) federation. Preferential decision-making processes may invariably allow for some sophistication and at least one compromise!

Alas, however, binary voting is still used in the United Nations Security Council, in the American Congress, the CCP Congress, the British House of Commons, indeed in parliaments and councils everywhere, and as noted, in numerous referendums, even though the world's first *multi-option* referendum dates from 1894, in New Zealand (Emerson, 2022: p. 29)! Interestingly enough, binary voting was not used in the two recent COP conferences, COP26 and COP15; in both, in debate, efforts were made to reach a verbal consensus… but in effect, this procedure gave every country a veto… so no wonder the debates were problematic; for reasons unknown, the organisers did not consider preferential-points voting.

4. Consensus Decision-Making

One day soon (I hope), not least because of Covid and Climate Change, parliaments, councils and COP conferences etc. will realise that consensus is indeed possible. Either it can be done verbally, which as noted above was practiced years ago in many societies, but this procedure can indeed be protracted; or it can be done more efficiently in a calibrated voting procedure by those involved expressing their opinions in preferences. In both settings, with or without a vote, the goal is to identify either the best possible compromise, or the option most acceptable to all, or even the collective wisdom; in a nutshell, to identify the option which best represents the consensus. In mathematical terms, this is the option with the highest *average* preference.

[6]"Do you support independence (from Ukraine)?" was the first question; "incorporation into Russia?" was the second.

Accordingly, in congresses/parliaments or in international conferences, when debating budgets or CO_2 emissions or whatever, all concerned may propose an option, and every such proposal shall be allowed "on the table" (as long as it doesn't clash with the UN Charter on Human Rights). In the course of the debate, each proposal may be amended, composited or even deleted, but only if the original proposer(s) agree to such a change; when the debate is done, if a verbal consensus has not been achieved, a final balanced list (normally) of 4 - 6 options is chosen independently. Next, everyone casts their preferences for (one, some or ideally) all the options listed; now this cannot be done efficiently by hand, but with smart phones and computers, preferential voting is definitely possible. Finally, at best, the winner shall be the option with the highest *average* preference.

Now an average, of course, involves *every* (voting) member of congress/parliament. At the moment, with final decisions subject to binary voting, many "democratic" parliaments divide into two competing "halves"—government versus the opposition—and politics is often adversarial. It need not be so. Indeed, if the above MBC were adopted, the words "majority" and "minority" could fade from the political lexicon, not least in conflict zones like the Middle East. Instead, despite political differences (which exist in every forum), those chosen to govern their respective country could work together, always assuming *collective* responsibility to implement their *collective* will. Thus would it be possible for Catholics to work with Protestants in Northern Ireland, for the Hutus and Tutsis in Rwanda to cooperate in a computerised *gacaca*, for Sunnis and Shi'as to live side-by-side throughout the Middle East as well as for Arabs and Jews to do so in Israel/Palestine, and most importantly, for rich and poor countries everywhere to work together in future COP gatherings.

In effect, parliaments and congresses the world over would begin to have operating procedures which would become, in time, more and more similar. Secondly, if the politicians in every country in every debate (in which a verbal consensus proved itself to be elusive) always used preferential-points decision-making, always seeking to identify the option with the highest average preference; and if representatives of every country cooperated with each other in this way in our international forums, not only might we humans be able to ensure an end to ethnic and other wars, as in Ukraine, the very conduct of which must cease if we are to have any hope at all of tackling Climate Change, but also, so importantly, to expedite our collective survival.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

References

Emerson, P. (2012). Defining Democracy. Springer

Emerson, P. (2022). *The Punters' Guide to Democracy*. Springer.

Franke & Twitchett (1996). *Cambridge History of China*. Vol 6, Cambridge University

Press.

McLean, I., & Urken, A.B. (1995). *Classics of Social Choice*. University of Michigan Press. https://doi.org/10.3998/mpub.12736

Shub, D. (1966). *Lenin*. Penguin Books.

Wang, Y.-C. (1968). An Outline of the Central Government of the Former Han Dynasty. In Bishop, J. L. (Ed), *Studies of Government Institutions in Chinese History (Harvard-Yenching Institute Studies XXIII)*, Harvard University Press.