



# Journal of Social and Political Sciences

---

**Emerson, P. (2024). Politics, its Science, and the Prevention of Wars. *Journal of Social and Political Sciences*, 7(2), 1-15.**

ISSN 2615-3718

DOI: 10.31014/aior.1991.07.02.483

The online version of this article can be found at:  
**<https://www.asianinstituteofresearch.org/>**

---

Published by:  
The Asian Institute of Research

The *Journal of Social and Political Sciences* is an Open Access publication. It may be read, copied, and distributed free of charge according to the conditions of the Creative Commons Attribution 4.0 International license.

The Asian Institute of Research *Social and Political Sciences* is a peer-reviewed International Journal. The journal covers scholarly articles in the fields of Social and Political Sciences, which include, but are not limited to, Anthropology, Government Studies, Political Sciences, Sociology, International Relations, Public Administration, History, Philosophy, Arts, Education, Linguistics, and Cultural Studies. As the journal is Open Access, it ensures high visibility and the increase of citations for all research articles published. The *Journal of Social and Political Sciences* aims to facilitate scholarly work on recent theoretical and practical aspects of Social and Political Sciences.



ASIAN INSTITUTE OF RESEARCH  
Connecting Scholars Worldwide



# Politics, its Science, and the Prevention of Wars

Peter Emerson<sup>1</sup>

<sup>1</sup> Director, the de Borda Institute, 34-6 Ballysillan Road, Belfast BT14 7QQ, Northern Ireland.  
Email: pemerson@deborda.org

## Abstract

Majority voting and majority rule – in a word, majoritarianism – have been a cause of division in both parliamentary votes and binary referendums, and sometimes, subsequently, in societies as well. Indeed, at worst, such binary decisions have led to violence and war. Other, more inclusive voting procedures have been developed over the years, as often as not first used in Asia, and their adoption worldwide could lead to decisions, which more accurately reflect the common good. Furthermore, if decisions were based on a methodology which identified, not the more popular of just two options, but the most popular of a few – the option with the highest *average* preference – governance by a single party or a majority coalition could give way to that which is advocated for conflict zones: all-party power-sharing. Indeed, if such were the norm, consensus in international gatherings could more effectively be achieved, and maybe many violent conflicts could be at best prevented and at least resolved peacefully.

**Keywords:** All-Party Power-Sharing, Consensus, Modified Borda Count MBC, Preferential Decision-Making

## 1. Introduction

Today's war in the Middle East is exacerbated by Israel's most extreme right-wing *majority* coalition. The Russian invasion of Ukraine in 2022 followed the *majority* vote referendums in Crimea, Donetsk and Luhansk eight years earlier. In the Balkans, "All the wars in the former Yugoslavia started with a [*majority* vote] referendum," (*Oslobodjenje*, Sarajevo's famous newspaper, 7.2.1999). In 1994 in Rwanda, the *Interahamwe* launched their genocide with the slogan, "*Rubanda nyamwinshi*," 'we are the *majority*'. A major cause of 'The Troubles' in Northern Ireland, 1969-94, was the practice of *majority* rule. In 1964, Máo Zédōng declared, "We must win over the *majority*, oppose and smash the minority." And in 1919, nineteen Russians declared (incorrectly), "Мы – Большевики," (*mwe – bolsheviki*), 'we are the *majority*'.

A more detailed account of these events follows in Sect. 3; suffice for the moment to say that, common to all is the word 'majority'. In some instances, a binary vote was taken; in others, a majority was sometimes, perhaps mistakenly, assumed. Throughout, it seems, a majority opinion was considered to be democratic, by at least the given majority if not by others as well. It is as if the world is mesmerised by "the mystique of the majority,"

(Dummett 1997: 71). It is in business, politics and law, in democracies, theocracies and autocracies; it's even enshrined in North Korea's constitution, in Article 97.<sup>1</sup> (Juche 2017: 22.)

Accordingly, this article considers the origins of binary voting and its inherent weaknesses. It is a critique, not of majority rule – no, that principle is fine – but of majority voting, the notion that, even in a multi-option debate, a majority opinion can be identified in one majority vote, or in a series of majority votes, each a choice of only two options. The article then compares this methodology with some of the other more sophisticated voting procedures devised over the centuries, and concludes with a description of a more consensual polity.

## 2. A Binary World

The world, it seems, is binary. Land and sea; flora and fauna; night follows day; tides ebb and flow; hands and feet are left and right. The pairs continue: facts are true or false; theories are correct or mistaken, and so on. But not everything is black or white, and not every pair consists of two opposites. Indeed, a male and female couple cannot be (pro)creative unless both complement, compliment, and at best love each other!

In like manner, this article argues, democracy is for everybody, not just a majority. It is for Hutu *and* Tutsi, Arab *and* Jew, black and white, left-wing and right-, and so on. Democratic decision-making should therefore not divide people, 'these' against 'those'. Rather, it should try to identify the *common* good.

Furthermore, Covid and Climate Change are telling everybody that we must work *with* each other. We can't do that very well by taking decisions ('for' or) '*against*' each other. Maybe a preferential voting procedure could enable everyone to talk *with*, and then vote *with* each other, each stating in their order of preference not only what they wanted but also their compromise option(s). In such a voting procedure, people may vote 'yes' to something or, in their order of preference, 'yes' to a few things... but nobody votes 'no'.

Secondly, most of the world's professions use precision instruments: doctors' thermometers read temperatures, not as 'high' or 'low', but in degrees; pilots' speedometers are not binary, 'fast' or 'slow', and velocities are measured in kms/hr. Politicians however use a blunt tool: decisions are made in a binary, or a series of binary votes, and opinions are summated, 'yes' or 'no'. More precise measures are calibrated in preferences.

### 2.1 A History of Binary Voting

As is well known, democracy was first devised in Greece, some 2,500 years ago. A couple of centuries later, majority voting was also used in China. In both settings, only men were involved, but otherwise it worked quite well. In the former, "sovereign power was held to reside in the Assembly, and was exercised by majority vote, by counting hands." (De Ste Croix 2004: 75.) In the latter, in 'the Court Conference of the Former Hân Dynasty (202 BCE-23CE), decisions were based on the opinions of the majority regardless of the position or rank of the individuals on either side. As a rule, [these decisions] were accepted by the Emperor." (Wang 19698: 176.)

Considerable progress was made in Greece, where all the male citizens could go to the forum to debate the issues of the day, and there too, matters were resolved by majority votes. There were no political parties in those days, so individuals could vote with each other on one day, and against on the next, without falling into parties locked forever in opposition.

What's more, serious efforts were made to understand the complexities which can and do emerge whenever persons with different viewpoints meet to make a collective decision. According to Pliny the Younger, those concerned learned "the powers of the proposer, the rights of expressing an opinion... when to give way and when to stand firm, how long to speak and when to keep silence, how to distinguish between conflicting proposals and how to introduce an amendment, in short, the whole of senatorial procedure." (McLean and Urken 1955: 67).

There are, of course, two types of majority voting: a singleton offering just one option is of the "Option X, yes or no?" variety; while a pairing offers a little more choice, "Option X or option Y?" With singletons, on very

---

<sup>1</sup> Article 97 stipulates that decisions in parliament shall be taken in simple or weighted majority voting, but Article 92 says that parliament shall meet only once a year.

contentious topics, it may be that there is a majority against everything.<sup>2</sup> With pairings, however, even if a decision requires the casting vote of a chair, there will always be a definite answer.

Unfortunately, in those days of yore, only one voting procedure was known: majority voting. So the Greeks devised a procedure based on pairings. If and when a problem occurs, some may move a motion, others could propose amendments, and the procedure devised was – and still is! – as follows:

- + choose the preferred amendment:
- + adopt or reject this to get the substantive;
- + decide: either the substantive or the status quo.

Even though other more inclusive voting procedures have been devised over the intervening centuries, this ancient procedure is still used by many of today's politicians, and endorsed by many contemporary academics. Indeed, "there is a surprisingly strong and persistent tendency in political science to equate democracy solely with majoritarian democracy." (Lijphart 1999: 6.) Furthermore, "the method of majority voting [satisfies many] conditions when there are only two alternatives." (Arrow 1951: 46.) In a court of law, there might indeed be only two – guilty or not guilty? – but in politics, on any controversial topic, in any democracy aspiring to be plural, there are invariably more than two options 'on the table'... at least initially. All too often, however, policy aspirations are distilled and distorted into two supposed yet often artificial opposites: to take an extreme example, communism and capitalism are both creeds based on greed.

But maybe one political question is indeed dichotomous. "Which side of the road shall we drive on?" It's surely either 'left' or 'right'. Yet when put to the Swedish electorate in a referendum in 1955, there were not two but three options on the ballot paper: 'left', 'right' and 'blank'... so the committed democrat who on this particular topic was indifferent could still participate in the political process and, as it were, go with the (traffic) flow.

The conclusion, then, is stark: in politics, (almost) nothing should be binary. (Nearly) every vote should be multi-optional. And as this text will demonstrate, pluralism is possible.

## 2.2 The Multi-option Scenario

Consider then the scenario when a dozen citizens have different ideas as to what might be best: 5 want option **X**, 4 prefer **Y** and 3 choose **Z**; and let it be assumed that their preferences are as shown in Table 1. If their democratic decision is to be based on singletons, there may indeed be majorities of 7, 8 and 9 respectively against these three options. So singletons are inadequate.

Pairings can also be problematic. In this instance, there are three pairings – **X:Y**, **X:Z**, **Y:Z**. As shown in pink and yellow tints, (5+3) prefer **X** to **Y**, while 4 prefer **Y** to **X**, so **X** is more popular than **Y**, **X > Y**, by 8:4.

Table 1: A Voters' Profile

Preferences	Number of Voters		
	5	4	3
1 <sup>st</sup>	<b>X</b>	<b>Y</b>	<b>Z</b>
2 <sup>nd</sup>	<b>Y</b>	<b>Z</b>	<b>X</b>
3 <sup>rd</sup>	<b>Z</b>	<b>X</b>	<b>Y</b>

In all,

$$\mathbf{X} > \mathbf{Y} = 8:4$$

$$\mathbf{Y} > \mathbf{Z} = 9:3$$

and

$$\mathbf{Z} > \mathbf{X} = 7:6$$

<sup>2</sup> A similar situation may occur whenever adults try to get a group of children to decide, democratically, which vegetable they would like for lunch. A vote on turnips would doubtless be rejected by a majority; a bigger number might oppose parsnips; while swedes and broccoli could be even more unpopular. Choosing a pudding, however – ice-cream, chocolate cake, blancmange – might also be a trifle difficult, with majorities in favour of everything. In a nutshell, binary voting on multi-option topics can be rather meaningless.

which means, of course, (Le Marquis de Condorcet’s famous paradox of binary voting):

$$X > Y > Z > X > Y \dots\dots\dots$$

and it goes round and round for ever. In this (and many another) instance, therefore, pairings are also inadequate.

If the status quo, option *S*, is now included, the profile might well be as shown in Table 2.

Table 2: Another Voters’ Profile

Preferences	Number of Voters		
	5	4	3
1 <sup>st</sup>	<i>X</i>	<i>Y</i>	<i>Z</i>
2 <sup>nd</sup>	<i>Y</i>	<i>Z</i>	<i>S</i>
3 <sup>rd</sup>	<i>Z</i>	<i>S</i>	<i>X</i>
4 <sup>th</sup>	<i>S</i>	<i>X</i>	<i>Y</i>

Accordingly, the original Greek – and today’s! – procedure of decision-making shall be:

$$\begin{array}{ccccccc}
 & Y & & & & & \\
 & v & = & \dots & & & \\
 & Z & & & v & = & \dots \\
 & & & & X & & v & = & \dots \\
 & & & & & & S & & 
 \end{array}$$

or

$$\{(Y \ v \ Z) \ v \ X\} \ v \ S = \dots$$

Referring back to Table 2, the result therefore is

$$\begin{array}{ccccccc}
 & Y & & & & & \\
 & v & = & Y & & & \\
 & Z & & & v & = & X \\
 & & & & X & & v & = & S \\
 & & & & & & S & & 
 \end{array}$$

or

$$\{(Y \ v \ Z) \ v \ X\} \ v \ S = \{Y \ v \ X\} \ v \ S = X \ v \ S = S$$

So having decided initially, verbally, that they don’t like *S*, they then decide, democratically, that they like *S*.

If instead they had decided that *Y* was the motion with *X* and *Z* the two amendments, the procedure would have been:

$$\{(X \ v \ Z) \ v \ Y\} \ v \ S = \{Z \ v \ Y\} \ v \ S = Y \ v \ S = Y$$

or again

$$\{(Y \ v \ X) \ v \ Z\} \ v \ S = \{X \ v \ Z\} \ v \ S = Z \ v \ S = Z$$

In other words, whenever there’s a majority against everything, the chair can adjust the order of voting and get pretty well any outcome. And when there’s a majority for something which he/she doesn’t like, they simply introduce other variations, options *W* and maybe *V*, whatever, to split that majority, and adjust the voting procedure accordingly.

In a nutshell, majority voting is manipulable; some politicians are manipulative; majority voting is often manipulated; and “majority decisions... cannot be fair in a democratic sense because the imposition of binary alternatives is itself unfair.” (Riker 1988: 64.) Instead, “it must be demanded that there be some sort of consensus,” (Arrow 1963: 83), and a consensus cannot be identified in a process in which, while some vote ‘for’, others are ‘against’!

### 3. Tales of Woe

In democracies, the belief in majority voting often causes newly-elected parliaments to divide into two: a single large party or a majority coalition forms the government, and the others become the opposition. Hence the rather bizarre fact that open and transparent elections are often followed by the very opposite: the curtains are drawn, the door is closed, and the politicians go upstairs to negotiate... until eventually a majority government is formed.

In India, for example, in 1996, despite its use of the British style first-past-the-post FPTP elections – (which often leads to a two-party state, as in the UK and USA) – over 30 parties were represented in parliament. The number of majority permutations was huge, and it took 77 days to sort something out. Another election two years later led to a majority coalition of 41 parties. It then collapsed, whereupon a vote of confidence was taken – a majority vote, of course – and it lost, 269–270. The Bharatiya Janaja Party BJP then led a 15-party coalition, which lasted a full term! In 2014, it won an overall majority, and some would say India is now very divided.

#### 3.1 The Middle East

Returning to the examples summarised in the introduction, Israel has a single-preference closed-list system of PR. The country is about 20% Arab so, in theory, for as long as ethnicity is of overwhelming importance, parliament should include about 20% Arab members; the current figure is of the order of 10%. With majority rule, in theory, any majority will do; as long as its MPs include 50% + 1 (as happened in 2015) or more of them, it shall be regarded as democratic. So Benjamin Netanyahu can form the most right-wing extremist government in their history, and it is still regarded as democratic. Democracy, as currently practiced, can be a cause of war.

#### 3.2 Ukraine

When Mikhail Gorbachev came to power in Moscow in 1985, western advisers promoted a polity based on majority voting and majority rule, in a word, majoritarianism, (despite the fact that in Russian translation, the word is ‘bolshivism’ *большевизм*, from ‘bolshinstvo’ *большинство* meaning ‘majority’). Six years later, the same advice was given to the newly independent Ukraine. Viktor Yushchenko won the 2004 presidential election, albeit by a whisker, and he was pro-West. So that was ok. But in 2010, he who had lost the binary run-off six years earlier, Viktor Yanukovich, was now victorious, again by a whisker. Alas, in majority rule, a whisker can win. There followed the riots in Maidan. In 2014, the West changed its advice: democracy was no longer majority rule, no no, it was now power-sharing. A delegation rushed over to Kiev. Too late. It arrived on the very day Yanukovich ran into exile.

Vladimir Putin doesn't like losing. So he organised a referendum in Crimea (with little ‘green men’ and so on). Back in 1991, a majority had voted in favour of Crimean independence, albeit by a whisker, but they had now changed their mind, apparently. Referendums followed in Donetsk and Luhansk. When Ireland opted out of the UK, Northern Ireland opted out of Ireland; when Georgia opted out of the USSR, Abkhazia opted out of Georgia; and when Bosnia opted out of Yugoslavia, Republika Srpska tried to opt out of Bosnia. In 1991, Ukraine opted out of the USSR. In 2014, Donetsk tried to opt out of Ukraine, but part of Donetsk tried to opt out of opting out and get back into Ukraine: Krasnoarmiisk; (it is bigger than Northern Ireland); of nearly three million people who voted, 69.1% chose Ukraine. This vote was ignored.

2014 was also the year of Scotland's referendum, and the word ‘Shotlandiya’ *Шотландия*, Scotland, was used by Russian separatists in Luhansk.<sup>3</sup>

#### 3.3 The Balkans

“I hope I do not live in exciting times,” an old Chinese proverb warns. In 1985, with the collapse of the old Soviet Union, the times were indeed exciting. It started to go wrong in August 1988, with the first ethnic clashes in Nagorno-Karabakh... whereupon the headline in a Moscow newspaper read, “Вот наш Ольстер,” ‘Vot nash Ulster,’ This is our Northern Ireland. The excitement of 1985 soon changed to wars in Nagorno-Karabakh, Abkhazia and South Ossetia. Likewise in the Balkans: in Bosnia, the 1990 election (or sectarian headcount)

---

<sup>3</sup> The author, a Russian speaker, was an OSCE election observer in 2014, his sixth such deployment in Ukraine.

divided the country 40:30:20, Orthodox:Muslim:Catholic, so there was no majority! Following referendums and then wars in Slovenia and Croatia, it was obvious that Bosnia would be next. Despite all this, the EU's Badinter Commission advised, and the EU then "insisted" (Woodward 1995: 271) on a referendum. On the day of the vote, "barricades were thrown up [in] Sarajevo," (Glenny 1996: 166).

Kosova also held a referendum, in 1991, and a huge majority voted for independence. It was not recognised. Eight years later, with tensions rising, the western powers met in Rambouillet and called for a referendum. Slobodan Milošević refused to sign. The war started. Russia intervened. The referendum clause was removed. Milošević now signed, and the war ended.

### 3.4 Rwanda

In 1960, when the "winds of change" were blowing in Africa, the colonial powers in Rwanda, like others elsewhere in Africa, replaced a form of minority rule by imposing the opposite. Earlier, the Belgians had issued ID cards to classify everyone as either Tutsi or Hutu (and a third group, the Twa, was just ignored). The distinction was based on the binary question, "Are you tall or small?" and, for those of average height, there was a further query, "Do you have ten or more cows, yes or no?" The 'tall' and 'yes' people were classified as Tutsi, and they were the middle class; 'small' and 'no' folks were the Hutu, the workers; (Reader 1998: 616), while the upper class were the colonials. Then, after independence, the losers of yesterday could become the winners of tomorrow. Majority rule – a most unAfrican polity – was imposed. And the *Interahamwe* used the slogan, "*Rubanda nyamwinshi*," 'we are the majority', (Prunier 1995: 183), to launch their genocide.

### 3.5 Northern Ireland

According to the law, if two people want to live together, both must consent. In contrast, according to the Belfast Agreement, if two communities are to live together, only the bigger one need consent.

For years, people here have been fighting over the question, "Are you British or Irish?" Today, the same question is now 'peace-ful', apparently. For reasons unstated, the authors of the peace agreement decided, while everyone in democratic elections should be able to cast their preferences on a range of candidates, that in democratic decision-making, the choice should be a stark 'either/or'; other options, apparently, like a compromise, are just not allowed!

### 3.6 China

Article V of the Chinese Communist Party statutes stated, "The whole Party must obey a uniform discipline; the individual must obey the organisation; the minority must obey the majority," (Schram 1969: 329). Later, when the CCP was in control and then in power, "opinions within the party were resolved through discussion in which the minority ultimately submitted to the majority." (Yang 2008: 488.) Then, in 1959-60 in what was a very binary process, "some 3.6 million party members were labelled or purged as rightists," (Dikötter 2011: 102). It got worse. In rural assemblies in many villages, which everyone "had to attend," (Chang and Halliday 2006: 385), "the violence was carefully orchestrated as the poor tallied their votes to decide who should die." (Dikötter 2017: 73-4). "One by one, potential names were read and votes were tallied." (Su 2011: 65.) It was all so horribly binary.

## 4. Multi-option Voting

One of the first to realise at least some of the limitations of majority voting was the same Pliny the Younger, quoted earlier. In a murder trial in Rome in the year 105, the jury had three options on the table: **A**, **B** and **C**, acquittal, banishment or capital punishment. Yet again, there was a majority against everything. If asked, "Is the accused innocent, yes or no?" the **A** supporters would be outvoted by the combined forces of **B** and **C**. If, "Should the prisoners be executed, yes or no?" **A** and **B** would oppose **C**. Hence the new voting procedure of plurality voting, and Afranius Dexter's manservants were banished to an island... which is what Pliny the Younger had wanted.

#### 4.1. Plurality Voting, Approval Voting and the Condorcet Rule

The first government to use plurality voting was Chinese. In 1197, the Jurchen Jin Dynasty felt threatened by its northern neighbours, the Mongolians. The question was war or peace. But the ballot offered three options: ‘attack’, ‘defend’, or ‘alternate between the two’, and the 84 government officials voted 5:46:33 respectively.<sup>4</sup> (Franke and Twitchett 1994: 266.). Alas, the peace did not last long: in 1206, a Mongolian assembly or *Khuriltai* elected Chingis Khan whose grandson, Kublai Khan conquered all of China... but then adopted the authoritarianism of the emperors.

At this time, Europe was emerging from the Dark Ages. In 1268, approval voting was used for the election of the Doge in Venice; in this procedure, there are no preferences as such: persons may vote for an option (or candidate) if they think it is brilliant, good or maybe just tolerable; and in the analysis, the option with the most ‘approvals’ is the winner.

The Spanish Catalan Ramón Llull was the first to talk of preferential voting, in 1299, and he proposed the forerunner of today’s Condorcet rule – a multi-option vote which analyses all the pairings to see which wins them all.

#### 4.2 The Modified Borda Count MBC

Cardinal Nicholas Cusanus then devised that which is now called the Borda Count BC, another preferential vote but this one is a points system. “[B]elieve me,” he wrote, “no more perfect system can be found.” (Sigmund 1963: 212.) He was almost right. In 1770, Jean-Charles developed the Modified Borda Count MBC.

Apart from the Chinese in 1197, other governments have sometimes resorted to multi-option voting. The first such referendum was in New Zealand in 1894. One of the best was in Guam in 1982, a ballot based on the two-round system TRS. This constitutional plebiscite offered the voters a choice of six options, while another option was blank; so anyone(s) with a different proposal could (campaign and) vote for that. Too complicated, some might complain; the invalid vote was a mere 0.85%.

In New Zealand in 1992, an independent commission received submissions, held public hearings, issued press statements... and eventually drew up a ballot paper of five options for another TRS referendum. In the second-round majority vote, the winner of the first-round plurality vote (multi-member proportional MMP) was set against, not the runner-up but the status quo, FPTP, which MMP won on an 83% turnout.

But back to the MBC; it works like this. In, say, a five-option ballot:

- + he who casts just one preference gets his favourite only 1 point,  
(he says nothing about the other options, so they get nothing);
- + she who casts two preferences gets her favourite 2 points,  
(and her 2<sup>nd</sup> choice 1 point);

and so on; accordingly,

- + he who casts all five preferences gets his favourite 5 points,  
(his 2<sup>nd</sup> choice 4, his 3<sup>rd</sup> 3, etc.).

So the system encourages the voter to cast a full ballot; to state not only her favourite but also her compromise option(s); and if (nearly) everyone does that, it will be possible to identify the collective compromise, everyone’s most acceptable option, the winner, the option with the most points. At best – i.e., if everyone does cast a full ballot – it is the option with the highest *average* preference. And an average, of course, involves *every* voter. The MBC is inclusive, literally.

Technically, in a ballot of  $n$  options, a voter may cast  $m$  preferences, and in an MBC, points are awarded to (1<sup>st</sup>, 2<sup>nd</sup> ... last) preferences cast according to the rule:

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

Unfortunately, even during Jean-Charles’s life time, this was changed to what is called the BC: either

<sup>4</sup> This result suggests, perhaps, that the use of better decision-making processes may well lead to better decisions.



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

or

$(n-1, n-2 \dots 0).$  (3)

There is no difference, mathematically, between the social choices and rankings of these two  $n$  rules; but there’s a huge psychological difference between giving your last preference one point, and giving it nothing. The MBC allows the voters to do exactly as they please, without any advantage one way or the other. A voter’s  $(x)$ <sup>th</sup> preference always gets 1 point more than her  $(x+1)$ <sup>th</sup> preference, regardless of whether or not she has cast that  $(x+1)$ <sup>th</sup> preference.

For any one party, success in a five-option ballot may depend not only on a good number of 1<sup>st</sup> preferences, but also a fair degree of 2<sup>nd</sup> and 3<sup>rd</sup> preferences... and very few 4<sup>th</sup> and 5<sup>th</sup> preferences. In other words, just as the alternative vote AV electoral system prompts Australian parties to cooperate a little, so too the MBC encourages parties to work together with their ‘political neighbours’. In so doing, every party will want its own supporters to submit full ballots, so parties will be enticed, when campaigning, (not so much to issue promises, but) to declare their preferences.

Furthermore, unlike the blunt binary ballot – “option A, yes or no?” or at best “A or B?” – this instrument gives the voters more choice:

+ with 3 options, there are six different ways of casting a full ballot:

**A-B-C, A-C-B, B-A-C, B-C-A, C-A-B and C-B-A.**

+ with 4 options, 24 different opinions or nuances may be expressed;

and

+ with 5 options, with 120 possible permutations – or 14 different single-peaked sets (sect. 7) – those concerned may relish in the diversity of our species. The MBC is a precision instrument.

**5. A Comparison**

To compare the MBC with other voting procedures, which also include ranked choice voting RCV,<sup>5</sup> consider Table 3. There’s an increasing degree of voters’ choice on the x-axis, while increasing inclusivity is displayed on the y-axis.

Table 3: Decision-making

		CLOSED QUESTIONS		SEMI-OPEN QUESTIONS		OPEN QUESTIONS	
C O U N T	All prefs					MBC	
						Condorcet	
	Some prefs					Approval voting	BC <sup>6</sup>
						AV, PV RCV, STV	
1st prefs only	Weighted majority EU, Finland	Power-sharing NI, Belgium			TRS Norway, NZ		
	Simple majority Ireland, UK	Twin majority Switzerland	Plurality Denmark				
		1 of 2 options	1 of some options	1 or some of several options	1 or some or all of all options		
		1 <sup>st</sup> preference only		Preferential			
		BINARY		MULTI-OPTIONAL			
		VOTERS’ CHOICE					

<sup>5</sup> Also known in Europe as the single transferable vote STV and in Australasia as preference voting PV. It is often used proportionally in multi-member constituencies as PR-STV, most notably in Ireland and Tasmania. In decision-making, it is the same as AV.

<sup>6</sup> The BC is rarely used in political decision-making, but it is used in Slovenia for electing minority representatives. It is also used in elections in Papua New Guinea with a unique points system – when a voter casts five preferences, points are awarded, not 5-4-3-2-1, but 1-1/2-1/3-1/4-1/5.

To compare the accuracy of them all, consider the voters' profile shown in Table 4, now with 6 options and 21 voters.

Table 4: A Third Voters' Profile

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

The topic is controversial. 6 people have preferences *A-B-C-D-E-F*, and the next largest grouping of 5 has the very opposite. Option *A* is very divisive, with 6 thinking it is the best while 12 regard it as the worst! Option *F* is not much better. So maybe the option which best represents the collective will is in the *B-C-D-E* set; nobody regards any of these as the worst, while options *C* and *D* don't even get a 5<sup>th</sup> preference. So maybe *C* or *D* should be the fair answer.

The analyses of the Table 4 profile are shown in Table 5 and depending on the voting procedure used, the outcome could be anything at all: *A* or *B* or *C* or *D* or *E* or *F*!

Table 5: The Analyses

Voting System	Social Choice	Social Ranking					
		First	second	third	fourth	fifth	sixth
Plurality	<i>A</i>	<i>A</i> -6	<i>F</i> -5	<i>B</i> -4	<i>E</i> -3	<i>C</i> -2	<i>D</i> -1
TRS	<i>F</i>	<i>F</i> -12	<i>A</i> -9				
AV, PV, RCV, STV	<i>E</i>	<i>E</i> -15	<i>A</i> -6				
Approval voting	1 <sup>st</sup> -2 <sup>nd</sup>	<i>B/D</i>	<i>B/D</i> -10	<i>E</i> -9	<i>A</i> -6	<i>F</i> -5	<i>C</i> -2
	1 <sup>st</sup> -3 <sup>rd</sup>	<i>C</i>	<i>C</i> -16	<i>D</i> -15	<i>E</i> -11	<i>B</i> -10	<i>A</i> -6
BC/MBC	<i>D</i>	<i>D</i> -89	<i>C</i> -83	<i>E</i> -80	<i>B</i> -79	<i>F</i> -56	<i>A</i> -54
Condorcet	<i>D</i>	<i>D</i> -5	<i>C</i> -4	<i>E</i> -3	<i>B</i> -2	<i>F</i> -1	<i>A</i> -0

In plurality voting, the winner may have, not majority support, only the backing of the largest minority, as here with option *A* on a score of 6.

TRS ensures that the winner does have majority support: if nothing gets a majority in the first-round plurality vote, a second-round majority vote is held between the two leading options – here *A* and *F* – and if everyone's preferences stay the same, option *F* now wins on a score of 12... which is a majority.

RCV – a knock-out series of plurality votes – also ensures the winner has a majority in favour. After each round, the least popular option is eliminated and its votes go to its 2<sup>nd</sup> or subsequent preference. In this example, option *D* is out, and its 1 vote goes to *E*. Next out is option *C*, but its two votes can't go to *D* because *D* has been eliminated, so they go to *E* instead. And so on, until one option does get a majority: *E* on a score of 15.

In this voters' profile, the TRS social choice majority is not the same as the RCV majority winner. Maybe one of these methodologies is therefore inadequate. Maybe both are capricious.

Approval voting can be analysed in different ways: either by assuming all 1<sup>st</sup> and 2<sup>nd</sup> 'preferences' are approvals, or all 1<sup>st</sup> – 3<sup>rd</sup> 'preferences', or whatever. But if the analysis is different, so too might be the outcome. As seen in orange, in the 1<sup>st</sup>/2<sup>nd</sup> analysis, the least popular option is *C*; with 1<sup>st</sup>/3<sup>rd</sup> 'preferences', *C* is the winner!

Of the methodologies listed, the BC/MBC and Condorcet are the only procedures which take *all* preferences cast by *all* voters into account, *always*. They are the most accurate. What's more, their social ranking – *D-C-E-B-F-A* – is the exact opposite of the plurality vote social ranking – *A-F-B-E-C-D*. So, if the MBC and Condorcet are accurate, in this and many another profile, plurality voting is wrong and couldn't be more wrong!

The MBC and Condorcet procedures may be compared to a sports league. The champions, the team which wins the most matches (or pairings – the Condorcet winner) is usually the team with the best goal difference (or points – the MBC social choice).

## 6. Partial Voting

In majority voting, the majority votes because they know they can win. While the minority is inclined to abstain or even boycott the ballot... or in the worst instances, some of which are shown in Table 6, to resort to violence. Virtually the only time that there is a high turnout is when the vote is very close, as was the case in Quebec in 1995, where the vote ‘for’ independence was 49.4% and ‘against’ 50.6, whereupon the indigenous Cree Indians, whose aspiration was not even listed, were blamed by the losers.

Table 6: Majority Vote Referendums

YEAR	JURISDICTION	The Minority	The Result
1973	Northern Ireland	Catholics	Boycott. The Troubles continued.
1991	Yugoslavia: ‘Krajina’ and one week later, Croatia	Catholics Orthodox	War
1991	Kosova	Orthodox	Not recognised.
1991	The Soviet Union	Numerous	6 of 15 Republics boycotted. 78% voted to keep the USSR, which then collapsed.
1992	Bosnia	Orthodox	War
1994	Nagorno-Karabakh	Muslims	War
1999	Abkhazia	Georgians	War
1999	East Timor	Muslims	Violence, and independence in 2002.
2006	South Ossetia and Akhgori	Georgians S Ossetians	War
2014	Ukraine, Crimea	Ukrainians	War
2014	Ukraine: Donetsk and Krasnoarmiisk	Ukrainians & separatists	War
2022	Ukraine: Donetsk, Luhansk		War

With the MBC, however, everybody is encouraged by the mathematics of the count to participate fully in the democratic process which, as noted, can identify the *average* opinion. And that *average* social choice/ranking will more accurately reflect the *common* good if everyone – majority, minorities, everyone – participates.

Consider then what might happen if the 4 option *B* supporters decide to abstain, or to cast just a 1<sup>st</sup> preference only, as shown in Table 7.

Table 7: A Voters’ Partial Profile

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

The Borda analyses are shown in Table 8. If the four *B* voters abstain, then option *B*’s points total – all the points received from the other voters – is 55 (shown in orange). If they do submit a partial vote of just their four 1<sup>st</sup> preferences, then in an MBC they will get their favourite option just 4 points, for a total of 59 (in light green). With the BC, however, they would get 6 points for each 1<sup>st</sup> preference, without giving any other points to any of

the other options, so that would be a total of  $55 + 24 = 79$ . So their intransigence would bring them victory (light blue).

This is not what Jean-Charles de Borda wanted! His hope was that every voter would cast a full ballot. “My scheme is only intended for honest [voters]” he declared! (Black 1987:182.) And what should happen, as shown in pink in the bottom row, is a repeat of the MBC row in Table 5.

Table 8: The Fortunes of Option *B*'s Supporter

Voting System	Option <i>B</i> supporters	Social Choice	Social Ranking					
			first	second	third	fourth	fifth	sixth
BC/MBC	abstain	<i>D</i>	<i>D</i> -69	<i>E</i> -68	<i>C</i> -67	<i>B</i> -55	<i>A</i> -50	<i>F</i> -48
MBC	a partial vote	<i>D</i>	<i>D</i> -69	<i>E</i> -68	<i>C</i> -67	<i>B</i> -59	<i>A</i> -50	<i>F</i> -48
BC	a partial vote	<i>B</i>	<i>B</i> -79	<i>D</i> -69	<i>E</i> -68	<i>C</i> -67	<i>A</i> -50	<i>F</i> -48
MBC	a full vote	<i>D</i>	<i>D</i> -89	<i>C</i> -83	<i>E</i> -80	<i>B</i> -79	<i>F</i> -56	<i>A</i> -54

## 7. An Inclusive Polity

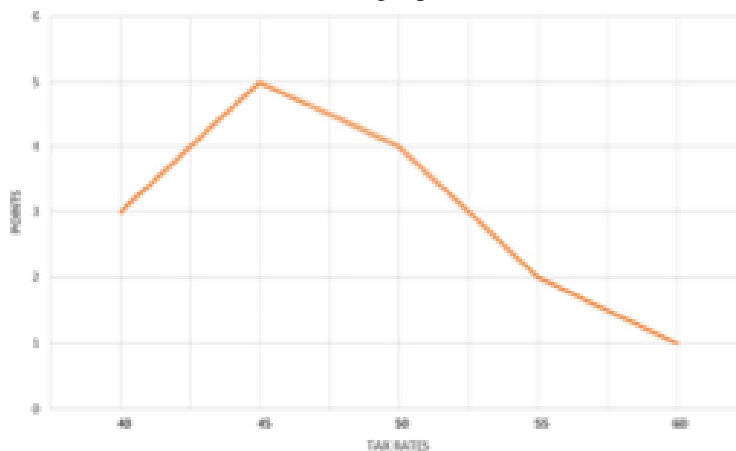
Given that democracy is for everybody (and not just a majority); given that decisions in any parliament or referendum should be based on an average opinion, and that governance should therefore be (non-majoritarian and) inclusive, it is time to establish a few criteria, based on the way the MBC works.

As noted, it encourages the voters to cast a full slate of preferences. If the subject is complex, the number of options on the ballot paper should normally be from 4–6, a balanced list representing the entire range of valid proposals expressed in debate. Consider the simple example of higher tax rates: if the options proposed varied from 40–60%, then maybe the best range of options would be 40-45-50-55-60, but it could just as easily be 40-44-48-52-56-60.

If, however, because many high and very few low rates had been proposed, a range of 40-54-56-58-60 were suggested, such would obviously be unfair. The MBC result on such a choice would almost inevitably be in the high 50's.

So let's return to the balanced scenario of 40-45-50-55-60. In such a choice, he who had a 1<sup>st</sup> preference of 60, would probably have a 2<sup>nd</sup> choice of 55, a 3<sup>rd</sup> of 50, and so on. In like manner, she whose 1<sup>st</sup> preference was 45 would perhaps have a 2<sup>nd</sup> choice of 50, a 3<sup>rd</sup> of 40, and so on. Indeed, in all such instances where the options can be arranged in a spectrum – from ‘high’ to ‘low’, ‘cheap’ to ‘expensive’ or whatever – voters will probably have single-peaked preferences, as they are called. The set – 45-50-40-55-60 – is shown in Table 9.

Table 9: A Single-peaked Curve



Suffice to say, very few persons would have a twin-peaked curve such as 45-55-40-60-50. Indeed, if a member of parliament did vote in this way, the constituents might well have some questions to ask, let alone any journalists.

### 7.1 The Joys of Science

If (nearly) every voter does cast a single-peaked set of preferences, the collated set – the collective will – will also be single-peaked. Always. Pluralism is not only possible. It can be an accurate measure of the common good. What's more, with the MBC, with every member of parliament's voting pattern in the public domain, it would be very difficult to manipulate. The MBC, however, does have a weakness: it is prone to an irrelevant alternative. Let us recall Table 2, here repeated as Table 10.

Table 10: Another Voters' Profile

Preferences	Number of Voters		
	5	4	3
1 <sup>st</sup>	<i>X</i>	<i>Y</i>	<i>Z</i>
2 <sup>nd</sup>	<i>Y</i>	<i>Z</i>	<i>S</i>
3 <sup>rd</sup>	<i>Z</i>	<i>S</i>	<i>X</i>
4 <sup>th</sup>	<i>S</i>	<i>X</i>	<i>Y</i>

Option *S* is always less popular than option *Z*, so it could be regarded, mathematically, as irrelevant. In an MBC analysis however, Table 1 gives the result of *X/Y*-25, *Z*-22, whereas, in Table 2, the scores are *X*-30, *Y/Z*-34, *S*-22. In effect, a joint winner in Table 1, option *X*, is a loser in Table 10.

The good news is that the MBC does not suffer from a paradox, while the Condorcet rule is not vulnerable to an irrelevant alternative. So maybe the best answer is to conduct a combined MBC/Condorcet analysis, and if both social choices coincide, all concerned may have complete faith in the accuracy of the result.

### 7.2 The Debate

Mindful of the MBC's qualities, it is possible to establish some guidelines for the conduct of the debate.

- + any party may move a motion;
- + anyone(s) with a different aspiration may propose (not an amendment to this or that section, but) a complete package, in the manner of a German 'constructive confidence' vote; (the original text may be used, with any differences highlighted), and all options may be shown on a dedicated webpage;
- + if they comply with the United Nations' Charter on Human Rights, all suggested options will be allowed 'on the table' and, in summary, on a computer screen;
- + as the debate proceeds, proposals may be tweaked, amended, composited or even deleted, but only if the original proposer agrees to such a change;
- + accordingly, the number of options 'on the table' may vary. Indeed, if it comes down to just the one, it's a verbal consensus. More frequently perhaps, differences will remain, whereupon the Speaker may draw up a balanced ballot of about 5 options to represent those options still in contention. If all concerned are assured that their particular proposal has been accepted – verbatim, in composite, or as amended – the Speaker may call for a vote.

### 7.3 The Analysis

Assuming the 12 voters submit a full ballot, in a 5-option ballot, the top score will be a dozen 1<sup>st</sup> preferences, which is  $12 \times 5 = 60$  points. The bottom score, all the 5<sup>th</sup> preferences, will give a result of  $12 \times 1 = 12$  points. And a mean score – all 3<sup>rd</sup> preferences, or an equal number of 2<sup>nd</sup> and 4<sup>th</sup> preferences, whatever – will give a total of 36 points.

Now some voters may cast a partial ballot, and it is always possible that one option gets no preferences at all, from anyone. (This is highly unlikely, of course, because the said option would not be on the ballot paper if no-one had proposed it.) But the absolute minimum score is of course 0.

Because some people may cast partial votes, and because in some ballots the number of voters is very large, a different measure is used, the consensus coefficient  $CC$ . For any one option  $A$  say, it is defined as follows:

$$CC_A = \frac{\text{option } A \text{'s MBC score}}{\text{The max possible MBC score}}$$

Accordingly, assuming that everyone has submitted a full ballot:

$$CC_{MAXIMUM} = \frac{\text{The maximum MBC score}}{\text{The max possible MBC score}} = 1.00$$

$$CC_{MINIMUM} = \frac{\text{The minimum MBC score}}{\text{The max possible MBC score}} = \frac{12 \times 1}{12 \times 5} = 0.20$$

$$CC_{AVERAGE} = \frac{\text{The average MBC score}}{\text{The max possible MBC score}} = \frac{12 \times 3}{12 \times 5} = 0.60$$

Therefore, before the vote takes place, the Speaker may rule that if

0.60	<	$CC_{WINNER}$	≤	0.70	there is no consensus and no decision shall be taken; if however
0.70	<	$CC_{WINNER}$	≤	0.80	this is the best possible compromise; or if
0.80	<	$CC_{WINNER}$	≤	0.90	there is consensus; and if
0.90	<	$CC_{WINNER}$	≤	1.00	this can be termed the collective wisdom.

Again, the joys of science.

## 8. An All-party, Power-sharing Cabinet

A coalition cabinet could best be formed democratically, that is, in an election. Accordingly, an open and transparent general election could be followed, a week or so later, by another equally democratic contest by which the newly elected members of parliament elect their cabinet.

Together, they will need to choose the best for each of several ministries. A two-dimensional ballot paper is therefore required, a simple example of which, for the election of five ministers, is shown in Table 11. The member of parliament first chooses five candidates and enters their names, in order of preference, in the shaded column. Next, the member shall decide in which ministry he/she wishes each of these nominees to serve: one ✓ in each column, and one in each row.

Table 11: A Matrix Vote

Preferences		Ministries				
	Names	Prime Minister	Foreign Affairs	Finance	Climate Change	Education
1 <sup>st</sup>	Jean				✓	
2 <sup>nd</sup>	Jane		✓			
3 <sup>rd</sup>	Jim					✓
4 <sup>th</sup>	Joan	✓				
5 <sup>th</sup>	John			✓		

The analysis is in two parts. The data in the shaded column is counted by PR to see who are the most popular candidates. Next, the matrix is analysed: the preferences are converted into points, by MBC, and in descending order, candidates are appointed to those ministries for which they get the most support.

Now PR-RCV prompts parties to nominate only as many as they think can get elected. In the above scenario, a party with 40% of the seats in parliament could expect two cabinet posts; so there would be no point in nominating others, lest the quota is split and only one or maybe none get elected at this stage. At the same time, the MBC used in the matrix encourages the members to submit full ballots. Overall, therefore, everyone is incentivised to vote across the party divide – an essential quality, it is argued, of any power-sharing polity.

## 9. Conclusion

Will it work? The US electoral system is divisive, and the US is now divided. As noted, Australia's system – AV – encourages some inter-party cooperation. The system in Papua New Guinea – AV with the proviso that, to be valid, a vote must consist of at least three preferences – ensures the vote is less tribal (Emerson 2012: 131.) The Lebanese system is an excellent adaptation of FPTP: (*Ibid*: 80): in any constituency where there are, let's say, 30% Shi'a, 30% Druze and 30% Maronite, three (or a multiple of three) representatives shall be elected, one of each, and any party wishing to contest the election has to have a triplet of candidates, again, one of each.

Politicians can and do adapt. All that is needed is the political will to change from an adversarial to a more consensual polity. This paper recommends the MBC in decision-making; a PR form of the MBC in elections in a system called the Quota Borda System QBS (Emerson 2022: 41-5); and all-party power-sharing, i.e., *real* majority rule.

If this were the international democratic norm, there would be no more binary referendums on matters controversial, be they in Baluchistan, Catalonia, Ireland, *Republika Srpska*, Scotland, Xinjiang or anywhere else. Elections would be both preferential and proportional, and the fairest of these systems is the multi-preference PR-list system used in Switzerland, or PR-RCV(STV) as in Ireland and Tasmania, or best of all, QBS.

And lastly, governance. If politics remains as majority rule, it will sometimes mean that an extremist is in total power: the likes of Bolsonaro, Modi, Netanyahu, Putin, Trump... the danger is existential.

As in Switzerland since 1959, however, every cabinet could be a form of all-party power-sharing. This could mean that extremists – Ireland's Sinn Féin, Germany's Alternative für Deutschland, The Netherlands' Party for Freedom PVV, the USA's Trump, India's BJP, and so on – would be at most, partners in government, taking decisions in consensus, by MBC. Consensus is a pre-requisite of our collective survival.

**Author Contributions:** All authors contributed to this research.

**Funding:** Not applicable.

**Conflict of Interest:** The authors declare no conflict of interest.

**Informed Consent Statement/Ethics Approval:** Not applicable.

## References

- Arrow, K. 1963, *Social Choice and Individual Values*, Yale University Press, New Haven and London.
- Black, D. 1958, *The Theory of Committees and Elections*, Kluwer Academic Publications, Boston.
- Chang, J. and Halliday, J. 2006, *Mao, the Unknown Story*, Vintage Books, London.
- de Ste Croix, G.E.M. 2004, *Athenian Democratic Origins*, Oxford University Press, Oxford.
- Dikötter, F. 2011, *Mao's Great Famine*, Bloomsbury Publishing, London.
- Dikötter, F. 2017, *The Tragedy of Liberation*, Bloomsbury Publishing, London.
- Dummett, M. 1997, *Principles of Electoral Reform*, Oxford University Press, Oxford.
- Emerson, P. 2012, *Defining Democracy*, Springer, Heidelberg.
- 1963; 2022, *The Punters' Guide to Democracy*, Springer, Heidelberg.
- Franke, H. and Twitchett, D. 1994, *Cambridge History of China, Vol 6*, Cambridge University Press.
- Glenny, M. 1996, *The Fall of Yugoslavia*, Penguin, London.

- Juche. 2017, *The Socialist Constitution of the Democratic People's Republic of Korea*, Foreign Languages Publishing House, Pyongyang.
- Lijphart, A. 2012, *Patterns of Democracy*, Yale University Press, New Haven and London.
- McLean, I. and Urken, A.B. 1995, *Classics of Social Choice*, The University of Michigan Press, Michigan.
- Prunier, G. 1995, *The Rwanda Crisis*, C. Hurst and Co., London.
- Reader, J. 1998, *Africa*, Penguin, London.
- Riker, W.H. 1988, *Liberalism against Populism*, Waveland Press Inc., Illinois.
- Schram, S.R. 1969, *The Political Thought of Mao Tse-tung*, Frederick A Praeger, New York.
- Sigmund, P.E. 1963, *Nicholas of Cusa and Medieval Political Thought*, Harvard University Press, Cambridge, Massachusetts.
- Su, Y. 2011, *Collective Killings in Rural China during the Cultural Revolution*, Cambridge University Press, Cambridge.
- 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, Cambridge, Massachusetts.
- Woodward, S. 1995, *Balkan Tragedy*, Brookings Institution, Washington.
- Yang, J. 2008, *Tombstone*, Allen Lane, London.