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Fairness and Equality in Electoral Redistributions

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Abstract

This paper asks what equality and fairness mean in relation to election districts, and how aiming for equality or fairness affects the redistribution process.

The paper defines a fair map as one which will translate votes into seats equally effectively for either major party. It shows that equality suffers when legislation fails to ask for equality on election day, and when tolerances are fully used to accommodate other criteria, and most particularly when maps stay in place for too long. But it finds that inequality has not generated a substantial or reliable advantage for either of the major parties at an election.

But equality has not guaranteed fairness. Factors other than inequality can distort the way that votes translate into seats and some federal maps for South Australia have generated a reliable advantage to one party.

Fairness and Equality in Electoral Redistributions

What do equality and fairness mean in relation to election districts, and how does aiming for equality or fairness affect the redistribution process?

When election districts are drawn up for Australia's federal or state and territory parliaments, the process is quite remarkable by world standards. The most impressive aspect is that election district maps, like the electoral system as a whole, are designed to translate votes into seats without adding in an unearned advantage for one of the parties. Just how that is done, and to what extent the aim is achieved, varies between the jurisdictions. So while legislation in each Australian jurisdiction asks for districts with equal elector numbers, there is no agreed standard for just how close to equality those districts must be, and when. Neither is there any agreement on what would constitute a *fair* redistribution. In the 1970s and 1980s many of Australia's one vote one value reformers understood a fair electoral system as one that would translate votes into seats equally effectively for either of the major parties, and they considered that if they could end malapportionment then equal districts would generate that fair translation. So they used the terms equality and fairness interchangeably. These days redistribution authorities refer to their 'fair process' and mean that they treat the parties impartially. In academic literature 'fairness' is used more-specifically to define the absence of bias caused by the geographic overconcentration of one party's support: a set of districts with no

malapportionment is referred to as 'equal' or 'equitable' whereas a system without bias is called 'fair'.¹

So when electoral legislation asks for a redistribution that 'is fair to prospective candidates and groups of candidates'² or for an electoral structure that will 'provide fair and equitable representation'³, or for 'fair and impartial procedures for honest redistributions'⁴ there is room for clarification about what redistribution authorities must provide. This paper considers the muddled area of equality and fairness in relation to electoral systems. *It concludes that the most useful understanding of electoral fairness relates to performance more than process – that is, an electoral system or a set of districts should be called fair if it will translate a given share of votes into the same number of seats for both major parties.* We already have adequate terms for equal districts and impartial or apolitical process.

A short history of inequality

Australia's colonial legislatures always drew their election districts with very unequal numbers of electors, originally with an idea to represent different industries and commercial 'interests'. From the 1890s, as parties coalesced and voting blocs formed, groups in power found ways to co-opt the electoral system to generate an advantage for themselves at elections, and the most effective mechanism was malapportionment.⁵ They drew, or commissioned, election districts with fewer voters in areas where they knew their own party support was stronger, in such a way that the electoral system translated the governing party's support into seats most efficiently. The disadvantaged party was almost always the Australian Labor Party because even when Labor candidates did win government they could rarely gain passage of electoral reform bills through the more-conservative Upper Houses.⁶ But from the late 1960s 'one vote one value' reformers campaigned to redesign state and federal electoral systems so that votes would be translated into seats *without* adding in any advantage to a party during that process. They did recognise that other factors could also skew the translation: if a map over-concentrated one party's support in safe seats

¹ Colin A Hughes 1978, 'Fair and Equal Constituencies: Australia, Jamaica and the United Kingdom', *Commonwealth and Comparative Politics*, vol. 16, no. 3, pp 256-71; Hughes, Colin A. 1983, 'Fair and Equal Electoral Districts - the Problem at the State Level', paper presented at *ANU Research School of Social Sciences Third Federalism Series Conference*, Australian National University, Canberra, 10 February.

² *Constitution Act 1934 (SA)*, s. 83(1).

³ *Local Government Act (Vic)*, s. 219D.

⁴ K.C. Beazley, *APD-HR*, 2 Nov. 1983, p. 2215.

⁵ Others include franchise restrictions, contingent or non-preferential counts, and multimember districts with different numbers of members.

⁶ Nick Economou 2007, 'What happened to rural weightage? Malapportionment and the reform of Australian electoral systems under Labor', *paper presented to Australian Political Studies Association annual conference*, Melbourne 24-26 Sept.

or a set of districts had no marginal seats on one side of the pendulum, or if districts had quite different rates of turnout or informality. But malapportionment had by far the biggest effect and to the reformers achieving *equality* would make the electoral system *fair enough*.

The reformers had Australian models at hand. Malapportionment was never used federally to the same extent as in the states, and House of Representatives election districts had always been drawn by independent commissioners according to a set of criteria, including equal enrolments. The Commonwealth's original 1902 electoral legislation elevated other criteria (community of interest, means of communication, physical features and existing district boundaries) above equality, and at 20% the allowable tolerance was high, but the process was intended to treat the parties equally and the legislation provided for submissions and objections from members of the public as well as from the parties.⁷ From the mid-1970s the states began to follow the federal independent commission model. South Australia was the first, though the SA parliament went further and relinquished its power over redistributions, so that redistributions would be triggered at regular intervals, an independent authority would conduct the process and its maps would come into effect without reference to the parliament. In order to achieve equality, and to maintain it, they specified that equality would be the overriding redistribution criterion and that districts should be within 10% of the average at the time of the redistribution. In 1983 the federal parliament adopted a series of changes including relinquishing its redistribution powers. The objective was a redistribution process that could not be influenced to provide an advantage to the government of the day or to a party. Introducing the bill, Kym Beazley said:

This government is determined once and for all to establish fair and impartial procedures for honest redistributions. We owe this to the Australian people.⁸

Adopting an impartial or an apolitical stance

In the last quarter of the twentieth century jurisdictions around Australia established an impartial redistribution process,⁹ but only one state has issued a parallel instruction to ensure that the electoral maps should perform in a way that will treat the parties equally. The way that maps would translate votes into seats was regularly raised in the 1970s in the South Australian parliament. In that state the Liberal and Country League had used an egregiously-malapportioned set of districts to retain government from the 1930s until the late 1968s, and Members on both sides of the parliament were aware that once election districts were drawn with equal enrolments the Liberal

⁷ *Commonwealth Electoral Act 1902 Part III- Electoral Divisions.*

⁸ K.C. Beazley, *APD-HR*, 2 Nov. 1983, p. 2215.

⁹ Western Australia's legislation was only passed in 2005.

Party would be disadvantaged because its support was inefficiently concentrated in rural areas.¹⁰ Perhaps not surprisingly, the ALP was not moved by that prospect. In 1975 Premier Dunstan argued that bias due to the overconcentration of support was

remote, but it could conceivably happen. How precisely do we then draw electoral boundaries to see that under a single-member electorate system it does not happen? ...It is one of the criticisms of that system but it is not something that we can overcome by drawing boundaries according to concentrations of particular points of view. In fact, specifically, Electoral Commissioners should not draw boundaries according to the political points of view of the electors. That is just what they ought not to be doing, because, if they do that, they will introduce Party politics into their consideration of electoral boundaries.¹¹

Perhaps because the parliamentary parties had opposing views on this point, the independent South Australian redistribution authorities appointed in 1976 and in 1983 refused to consider any arguments made in political terms or the political effect of the lines they drew.¹² They retained the apolitical stance adopted by each previous commission.

Federally the appropriate stance for a redistribution authority was addressed in debate on the 1983 *Commonwealth Electoral Legislation Amendment Bill*, when a Liberal Member from South Australia argued that

although the electoral commissioners are expected to be politically impartial, the paradox is that the Electoral Commission will not be able to perform its task clearly unless it takes into account and has some regard for voting patterns. The Electoral Commission, in drawing up its plans for a redistribution, should take care to ensure that a disproportionate influence is not given to one party. Therefore, it needs to take account of overall voting patterns if changes in electoral boundaries are to bring about, from the voters' point of view, a fair result rather than the reverse.¹³

But these views were not official Liberal Party policy and - as in South Australia - Labor Ministers were clearly opposed to commissioners considering the political effects of the maps they drew, so the parliament did not provide the commissioners with a directive to consider the likely

¹⁰ For the history of this debate see Jenni Newton-Farrelly 2012, *Why did South Australia adopt the fairness clause?* Research Paper No. 33, SA Parliament Research Library, Adelaide, available at <http://researchbank.swinburne.edu.au/vital/access/manager/Repository/swin:29664?queryType=vitalDismax&query=Newton-farrelly&y=10&x=18>

¹¹ D. Dunstan, *SAPD* 8 Oct. 1975, p. 1209, my emphasis.

¹² The 1983 commission also refused to interpret voting patterns as indicating a community of interest. SA, Electoral Districts Boundaries Commission 1983, *Report*, Government Printer, Adelaide, p. 10.

¹³ I.B.C. Wilson, *APD-HR*, 9 Nov. 1983, p. 2525.

performance of their maps. A federal redistribution commission was soon required to resolve the question: in 1984 the Liberal Party appealed against newly-drawn Western Australian divisions in terms of the 'political effects' of the redistribution. The party accepted that the commissioners were 'individually and collectively scrupulously non-partisan public officials', asserted that it would be 'unrealistic for the commissioners not to be conscious of the political effects of a redistribution' and argued that they had drawn a map which, with a 50:50 result, would be likely to give the Liberal Party just four of the state's 13 federal seats.¹⁴ Colin A. Hughes, newly appointed as Australian Electoral Commissioner, sought legal advice on

whether it will be (a) in order (b) obligatory, for the augmented Electoral Commission to decline to hear arguments on 'political effects' at an enquiry into objections against a proposed redistribution.¹⁵

Advice from the federal Attorney General's Department was that the *Commonwealth Electoral Act* neither requires redistribution authorities to consider these matters nor prevents them from doing so. It would be

open to the Commission to take these considerations into account in making a determination. Whether the Commission should take such considerations into account and what weight, if any, should be given to them is within the discretion of the Commission. The Commission is required to consider the objection.¹⁶

Further, it was

open to the Commission to take into account, for example, considerations of the political fairness of the proposed redistribution. A redistribution is carried out for the purposes of election to the Parliament and is therefore obviously carried out in a political context. To construe the legislation as preventing the Commission from having regard to considerations of political fairness would not merely be to give the legislation an artificially narrow construction, it could inhibit the objective of a 'fair and impartial' redistribution (cf. *Commonwealth Parliamentary Debates*, 2 Nov. 1983, p. 2214). Of course the extent to which the Commission has regard to considerations of 'political fairness' and the weight to be given to such considerations is within the

¹⁴ Liberal Party of Australia 1984, *Submission to the WA federal redistribution 1984*, p. 2, (microfiche attachment to AEC, 1985, *1984 Redistribution of Western Australia into Electoral Divisions*, Commonwealth Parliamentary Paper No. 177 of 1985).

¹⁵ Australian Electoral Officer for South Australia, 1990, *Evidence to the Select Committee of the House of Assembly on the Constitution (Electoral Redistribution) Amendment Bill*, House of Assembly, Adelaide.

¹⁶ As above.

discretion of the Commission.¹⁷

History shows that this invitation to consider the political effects of the lines they drew, was declined by the newly independent federal commission. My interpretation of this material is that because the political parties had expressed opposing views, and in the absence of a specific direction in the legislation, the commissioners would have felt that considering the performance of a map may have compromised their impartial position. Each of the state redistribution commissions constituted after this point followed that example and adopted an apolitical stance rather than an impartial one, and current commissioners strongly support that position. The most recent NSW state redistribution report states: 'The Commissioners did not consider the political effects of electoral boundaries.'¹⁸ Victoria's recent report made the position clear:

One factor that the EBC does not consider is the political effects of electoral boundaries. Any change to a boundary will have a political impact, and political parties, Members of Parliament, the media and academics are naturally interested in this aspect of a redivision. In South Australia there is an 'electoral fairness' criterion, requiring the Electoral Districts Boundaries Commission to "ensure, as far as practicable, that the electoral redistribution is fair to prospective candidates and groups of candidates so that, if candidates of a particular group attract more than 50 per cent of the popular vote (determined by aggregating votes cast throughout the State and allocating preferences to the necessary extent), they will be elected in sufficient numbers to enable a government to be formed". There is no such provision in Victoria, and the EBC does not take account of any possible political effects of the boundaries it proposes.¹⁹

The effect of this apolitical stance is that commissioners cannot be accused of intentionally advantaging one party when drawing up a new set of districts.²⁰

¹⁷ As above. Reference to the 1983 debate was to the Minister's second reading speech: 'The Government is determined once and for all to establish fair and impartial procedures for honest redistributions'.

¹⁸ NSW, Electoral Districts Commissioners 2013, *Redistribution of Electoral Districts 2013*, The Commissioners, Sydney, p.vii.

¹⁹ Victoria, Election Boundaries Commission 2013, *Proposed Victorian Electoral Boundaries June 2013*, The Commission, Melbourne, p.v.

²⁰ More correctly, the accusations are sometimes made but cannot be sustained. A 1995 JSCEM inquiry into the federal redistribution process did provide a different forum to air complaints about the partisan outcome, and two emerged. One federal member alleged that the augmented commission conducting a redistribution of federal divisions in Victoria had been supplied with estimates of the political effect of their proposed map. Another alleged that the Australian Electoral Officer for Queensland had manipulated population projections for the state in order to make it possible for a larger number of Labor-held divisions to be made more marginal. The AEC defended itself against both allegations, the aggrieved members' parties gave them no support and the inquiry rejected both matters. The members apologised and withdrew their allegations.

The aim of a redistribution

Throughout Australia, it is assumed that equality will guarantee a map that will be fair enough, so most of Australia's redistribution commissioners understand their task as providing a set of districts with equal enrolments, ensuring that the districts are meaningful, and refraining from introducing any changes which might generate new advantage to either party. All of this they can do while holding the parties at arms' length, and without considering the performance of the new set of districts. Their map is *correctly-apportioned*, districts are *equal*; the process is *impartial* and *apolitical*.

In South Australia, equality did not guarantee that the map would translate votes into seats without distortion. The state has a very complex geography and few regional centres big enough to have many Labor voters, so rural areas have always been solidly Liberal. In 1976 and again in 1983 independent redistribution authorities drawing districts to tight equality over-concentrated the Liberal vote in several ultra-safe districts not matched by similarly-safe Labor districts in the city, so the maps did not translate votes into seats equally effectively for both parties. The fairness requirement adopted in 1991 requires the commissioners to do more than treat the parties impartially – they also need to produce a map which will perform fairly. It must not be distorted by malapportionment or bias caused by the geographic concentration of one party's support, or indeed by any other factors. The Constitutional requirement is:

s. 83—Electoral fairness and other criteria

(1) In making an electoral redistribution the Commission must ensure, as far as practicable, that the electoral redistribution is fair to prospective candidates and groups of candidates so that, if candidates of a particular group attract more than 50 per cent of the popular vote (determined by aggregating votes cast throughout the State and allocating preferences to the necessary extent), they will be elected in sufficient numbers to enable a government to be formed.²¹

Similar requirements have been proposed elsewhere but none has been implemented.²²

South Australia's redistribution authority originally understood this clause to mean it should produce a map that would give either major party the same chance of winning the median seat if the statewide two party preferred result was tied at 50:50. It was assumed that campaigns would not

²¹ *Constitution Act 1934 (SA)* s. 83(1).

²² See *Electoral and Administrative Review Commission 1990, Submission 241*, cited in C.A. Hughes, 1990, 'Fair elections and the Puplick Amendment' Departmental Seminar, Department of Government, University of Queensland, 13 June; C.G. Puplick, *APD-S*, 26 Oct. 1989, pp. 2296-7; WA, Commission on Government 1995, *Report No. 1: Origin of the Commission; our present system of government; our present electoral system*, The Commission, Perth, pp. 303-7; J.P. Hannaford, *NSWPD-LC*, 15 Oct. 1997, pp. 800-1.

be so differently-effective that they could skew the translation. More recently the commission has determined that its task is to create a set of districts that will not advantage either party at a subsequent election – it must provide a level playing field for competition at the next election.²³

Equality

The over-riding criterion in every piece of electoral legislation around Australia is equality of enrolments. Even federally, where the apportionment guarantees mean that Tasmania and the two territories always have average divisional enrolments that vary quite markedly from the average enrolments in larger states, the requirement for equal divisional enrolments *within a state or territory* is very tight. The *Commonwealth Electoral Act* calls for enrolments within 3.5% of the state or territory's average, at a future time, half way through the expected life of the map. So how well do Australian electoral systems achieve this aim of equality?

A standard for equality

There are various ways to assess equality: Colin A Hughes had a preference for the Gini Index;²⁴ other measures include the Dauer-Kelsay index;²⁵ the David-Eisenberg index, or the ratio of the largest to smallest. Whichever measure is used, a judgment still needs to be made about how much remaining inequality is acceptable. In the absence of an agreed standard for equality it is reasonable to propose one: *a set of districts will be regarded as equal if a majority of the districts have enrolments within 5 per cent of the jurisdiction's average at the time of an election.* That is not a tight requirement - in jurisdictions where redistribution authorities aim for equality at a future time they aim for enrolments within 3 per cent of the average (NSW), 3.5 per cent (federally and in South Australia) and 5 per cent (ACT).²⁶ Certainly 10 per cent would be too loose, because malapportionment triggers activate in several states if enough districts pass that point.²⁷ Queensland and Western Australia allow districts covering large areas to have far fewer electors than the state average, but those allowances only apply to five districts in each state so the jurisdictions could still comply.

²³ SA, Electoral Districts Boundaries Commission. "Report " Adelaide: Electoral Districts Boundaries Commission, 2012.

²⁴ Hughes, C.A. 1977, 'Malapportionment and gerrymandering in Australia', in *People, Places & Votes*, ed. R.J. Johnston, University of New England, Armidale.

²⁵ Neal Blewett also mentions the Schubert-Press apportionment score and Kaiser's index of quality, neither of which is widely used: Blewett, N. 1973, 'Redistribution procedures', in *Australian Politics: A Third Reader*, eds H. Mayer & H. Nelson, Cheshire, Melbourne.

²⁶ The NT requirement is simply 'as near as practicable'.

²⁷ And in NSW even 5 per cent from the average might be considered too wide of the mark, given that a redistribution is triggered on malapportionment grounds in that state if more than a quarter of the districts are more than 5 per cent from the average.

Table 1 shows the percentage of federal divisions which were within 5 per cent of average enrolments at the time of recent federal elections. It shows that, on federal election day, electors in each of Australia's eight states and territories do vote in election divisions that are quite equal. It could *not* be said that district enrolments were equal on election day in Western Australia in 2007 (where only 40 per cent of divisions had enrolments within 5% of the state average on election day) and in Victoria in 2010 (only 45.9 per cent). In both cases the federal maps were being used for the third time since a redistribution, and it seems clear that in the larger states equality is badly compromised when federal divisions stay in place for three elections.

Table 1: Equality of enrolments at federal elections from 2001 to 2013
(percentage of divisions with electoral enrolments within five per cent of the average)

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
2001	90.0	86.5	70.4	86.7	100.0	80.0	100.0	100.0
2004	84.0	86.5	89.3	93.3	81.8	100.0	100.0	100.0
2007	87.8	67.6	100.0	40.0	100.0	100.0	100.0	100.0
2010	93.8	45.9	70.0	93.3	100.0	100.0	100.0	100.0
2013	93.8	83.8	76.7	86.7	100.0	100.0	100.0	100.0

A dotted line indicates a redistribution.

SOURCE: calculated from data available at AEC Election Results Archive <http://results.aec.gov.au>.

Table 2 shows the same calculations for election districts for state and territory elections. It shows that many of Australia's electors have been voting at state and territory elections in districts that have startlingly low equality.

Table 2: Equality of enrolments at state and territory elections from 2001 to 2013
(percentage of enrolments within 5 per cent of the state or territory average)

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
2001			50.6	0.0			100.0	68.0
2002		73.9			91.5	100.0		
2003	67.7							
2004			48.3				100.0	
2005				0.0				84.0
2006		63.6	41.6		93.6	100.0		
2007	96.8							
2008				55.9			100.0	92.0
2009			68.5					
2010		40.9			95.7	100.0		
2011	91.4							
2012			66.3				100.0	80.0
2013				57.6				

A dotted line indicates a redistribution.

(a) Tasmania and the ACT have multi-member districts so data are calculated as enrolments per MLA.

SOURCE: calculated from data available at state and territory electoral commission websites.

Until Western Australia's one vote one value legislation began to operate in 2008 not one WA elector voted at a state election in a district with enrolments within 5% of the state average, and even since the reforms only three in five districts could be called equal. In 2010 Victoria was

particularly poorly served by its election districts - both the federal map and the state map were in use for the third time and neither provided a majority of districts within 5% of the state average.

In 2006 Queensland's state map was being used for the third time too and the districts could not have been considered equal, but that map started life with only a bare majority of districts within 5% of the state average and equality deteriorated from that point. At the first election after Queensland's 2008 redistribution of state district boundaries, five districts had enrolments well below 5 per cent because of the large district allowance, another 23 of the state's 89 districts were either too big or too small to be within 5 per cent of average enrolments, and by the time of the next election in 2012, 30 districts were more than 5 percent from the state average. Something similar happens in Western Australia. After the passage of that state's one vote, one value legislation, state election districts were redrawn radically in 2007, and the subsequent election in 2008 was the first held without malapportionment. Five districts were drawn very low with the assistance of the large district allowance but another 26 also had enrolments that were more than 5 percent from the state average. In a jurisdiction of 57 districts, setting just the large-area districts outside a 5 per cent tolerance would mean compliance of 91 per cent, but Table 2 shows that WA managed just 56 per cent. The new map drawn for the 2012 state election was similar. It is clear that, despite legislation in both Queensland and Western Australia states specifying that the over-riding criterion is equality, the existence of the large district allowance has influenced the redistribution process to the extent that there is a lower priority placed on equality for other districts as well.

The political effect of inequality

How important is this remaining inequality? Who benefits from unequal enrolments? Fifty years ago CS Soper and Joan Rydon developed a set of measures for the political effect of distortions in the way that votes translate into seats in two party systems.²⁸ They reasoned that if every district in a jurisdiction had the same number of electors, the simple average of each district's ALP two party preferred results should be the same as the statewide ALP two party preferred vote; any difference could only be due to one party's support being made less effective by winning districts with larger numbers of electors. Tables 3 and 4 apply the Soper and Rydon measure to federal and state/territory elections around Australia.

²⁸ Soper, C.S. & Rydon, J. 1958, 'Under-representation and electoral prediction', *Australian Journal of Politics and History*, vol. 4, no. 1, pp. 94-106.

Table 3: Labor advantage due to unequal enrolments at federal elections from 2001 to 2013
(Soper and Rydon measure)

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
2001	0.3	-0.1	0.0	0.1	0.1	0.0	0.0	0.1
2004	0.3	0.1	-0.1	0.0	0.1	0.0	-0.1	0.3
2007	0.1	-0.1	0.0	0.0	0.1	0.1	0.0	0.3
2010	0.3	-0.2	0.1	0.0	0.1	0.0	0.0	0.2
2013	0.2	-1.5	0.1	0.0	0.0	0.0	-0.1	0.1

A dotted line indicates a redistribution.

SOURCE: calculated from data available at AEC Election Results Archive, <http://results.aec.gov.au>.

Table 3 shows that ALP candidates contesting federal seats in NSW at the federal elections of 2001, 2004 and 2010 had an advantage equivalent to a swing of 0.3 percentage points because Labor support was stronger in districts with fewer electors, and the advantage does not seem to have been affected by redistributions over that period. In a tight contest the parties value any assistance, but an advantage of that size would not have been big enough to hand the ALP a coalition-held seat at any of these elections. The table shows that Labor was disadvantaged by the equivalent of a 1.5% swing, at the federal election of 2010, but five federal divisions are missing from this calculation because we don't yet have 2PP recount results, so this figure is tentative.

Table 4: Labor advantage due to inequality of enrolments at state and territory elections from 2000 to 2013 (Soper and Rydon measure)

	NSW	Vic	Qld(a)	WA(b)	SA	Tas(c)	ACT(c)	NT(d)
2001				-1.1				0.7
2002		0.1			0.1			
2003	-0.3							
2004								
2005				-1.6				0.7
2006		0.0			0.1			
2007	-0.3							
2008				0.3				0.7
2009								
2010		-0.3			0.0			
2011	0.2							
2012								0.1
2013				-0.2				

A dotted line indicates a redistribution.

(a) Queensland data are not reliable as they would need to exclude too many districts which did not return a 2PP result and for which notional counts are not available (21 districts in 2001; 5 in 2004; 7 in 2006; 3 in 2009 and 18 in 2012).

(b)WA 2001 excludes two districts which did not return a 2PP result; notional counts are not available.

(c)Tasmania and the ACT use multi-member districts with a proportional representation count.

(d) NT 2008 excludes two districts which were not contested.

Table 4 shows the same calculations for state and territory elections and it is apparent that inequality disadvantaged Labor at the WA elections in 2001 and 2005 by an amount equivalent to swings of 1.1% and 1.6% which certainly could have been enough to swing a seat or even two, but the next redistribution was governed by the state's one vote one value legislation. Meanwhile Labor has been consistently advantaged in the Northern Territory – but not by a large amount, and most recently not at all.

If Tables 2 and 3 indicated a degree of complacency about inequality, Tables 3 and 4 indicate that neither major party receives a reliable advantage from it.

Fairness

This paper considers a fair map as a set of districts which translates both parties' votes into seats equally effectively. If either party won the support of a majority of voters they should then win a majority of seats – and government. To operationalize its fairness criterion South Australia's Electoral Districts Boundaries Commission - EDBC - needed a measure of party support, a measure of the distortion caused by inequality and bias, and a standard to assess whether a map is likely to be fair. These tools have been developed over the past 20 years.

Measuring support

The EDBC measures party support by the two party preferred vote at the most recent election. Results from that election are allocated to the new districts and then a hypothetical uniform swing is applied to each of the new districts to generate a hypothetical 50:50 statewide result. But it is likely that future maps will be assessed against a set of results from several recent elections.

Using a single set of results was brought into question by the state election result in 2010, when Labor retained government with just 48% of the two part preferred vote. Labor understood that result as indicating that its campaign had produced quite non-uniform swings and had skewed the way that votes translated into seats; Liberals understood the result as indicating that the map had been biased. But bias is caused by the overconcentration of one party's support, and a four-seat bias could hardly have sprung up overnight. Differentiating between campaign effects (which a commission should not adjust for) and bias (which it should address) is relatively simple if a map is assessed against results from several elections, because campaigns are only rarely so differently-effective that they can skew a result. The commission accepted a submission which assessed the map used in 2010 against voting data from several previous elections, and which found that the map

was not biased.²⁹ The question of just how the commission will measure support in the future has been left for the parties to consider in their next round of submissions, and it is likely that future maps will be assessed against a set of results from several recent elections, even if the most recent results may be given more emphasis.

NSW and Queensland use an optional preferential ballot which does not produce a full statewide two party preferred count, nor full two party preferred results for each district. So support would need to be measured differently, perhaps along the lines of the UK's plurality count. Ron Johnston has calculated bias in that context, using an adaptation of Brookes' calculations, which are essentially the same as Soper and Rydon's. Johnston expresses bias in terms of seats rather than a swing, and found that the districts in use for the NSW 2001 state election were biased towards Labor by 7 or 8 seats.³⁰

Calculating bias in federal maps is simpler because two party preferred results are available, though the concept of bias may seem less relevant for federal elections because there are effectively eight separate federal elections and federal governments are only elected once the seats are aggregated. The difficulty of aggregation was highlighted in the US by Niemi and Deegan who queried whether, even if congressional maps in all 50 states each produced fair outcomes, they would necessarily produce a fair outcome when the result was aggregated to the federal level.³¹ Hughes also considered the task and pointed out the lumpiness of the way that votes translate into seats in the smaller states and territories.³² But the difficulty dissolves if the standard for a fair map is not that it should always generate fair outcomes but simply that the map should not give either party an advantage as it goes into the competition. Aggregating a series of unbiased and responsive federal maps must surely be accepted as providing a level playing field at a federal election. And if, after all, campaign effects produce a wrong winner election outcome, that result would not invalidate the maps nor the redistribution authorities' process.

Certainly, the parties do understand federal maps as capable of distorting their support and awarding them fewer seats than they should. The ALP began its suggestion to the federal redistribution commissioners in NSW in 2006 with a statement that

²⁹ Newton-Farrelly, J. 2011a, *Considering the Commission's Current Challenge: Submission to the 2011-12 EDBC*, Electoral Districts Boundaries Commission, Adelaide, available at <http://www.ecsa.sa.gov.au/electoral-boundaries/electoral-districts-boundaries-commission/edbc-submissions>.

³⁰ Johnston, R 2007, 'Understanding Australian Exceptionalism with Electoral Systems - and Bringing Geography In', *Australian Geographer*, vol. 38, no. 3, pp. 367-74.

³¹ Niemi, R.G. & Deegan J. Jr, 1978, 'A theory of political districting', *American Political Science Review*, vol. 72, no. 4, pp. 1304-23.

³² Hughes, CA 1990, 'Fair Elections and the Puplick Amendment,' *Department of Government Seminar*, University of Queensland, 13 June, p.9.

'the current boundaries are the most biased against the ALP in the entire history of Australia.... On current electoral boundaries, for the ALP to win a majority (76) of Divisions it requires a uniform swing of 5% or 52.3% 2PP. In NSW, in 2004, on current boundaries, for the ALP to win a majority (26) it would have needed 53.4% of the 2PP vote in the State.³³

While the existing map was indeed biased against Labor, neither the committee nor the augmented commission responded to the point, and the new map not only increased that bias but reduced responsiveness as well.³⁴ The parties use the simplest calculation for bias – the difference between the support they gain across a jurisdiction (the statewide 2PP) and the support they have in the median seat. The calculation is based on Soper and Rydon's measures: if divisions have equal enrolments then malapportionment drops out of the equation and the remaining difference between a party's support across the board and its support in the median seat must be due to the overconcentration of one party's support, turnout and enrolment differentials and campaign factors. The parties interpret this calculation as a measure just of geographic bias - they dismiss the role of differently-effective campaigns because they argue that campaigns cannot provide a party with an advantage on a regular basis.

Table 5 shows the difference between the statewide and median-seat two party preferred results at federal elections since the 1983 reforms. The difference is expressed in terms of Labor advantage. (For example Labor's support across NSW in 1984 was 52.9% on a two party preferred basis, it only managed 52.4% in the median seat so there was a *disadvantage* to Labor of 0.5 percentage points.) With due respect to the parties, the calculation is interpreted here as a measure of advantage due to all factors other than malapportionment, including bias, campaign effects and differential turnout and informality.

³³ Australian Labor Party 2006, *Suggestion to the 2006 Redistribution of NSW*, Federal Redistribution 2006 New South Wales Public Suggestion No 26, p. 2 available at <http://www.aec.gov.au/Electorates/Redistributions/files/2005/nsw/sugg/NS26.pdf>.

³⁴ When results from the federal elections of 2001 and 2004 in the existing districts are adjusted to a hypothetical 50:50 outcome, Labor would have won just 23 of the 50 divisions, implying a two seat bias against Labor.

**Table 5: Labor advantage due to factors other than malapportionment,
at federal elections 2001 to 2010 (*Soper and Rydon* measure)**

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT(a)
1984	-0.5	-0.2	-0.5	3.1	2.7	-1.0	0.0	
1987	3.0	1.1	3.0	2.9	3.2	-0.6	0.0	
1990	1.3	0.4	1.3	3.4	2.9	0.0	0.1	
1993	-0.2	-2.5	-0.2	2.8	0.8	-0.9	0.0	
1996	-1.1	-2.4	-1.1	1.6	-1.0	-0.3	1.8	
1998	-2.8	-2.9	-2.8	0.0	-1.2	-0.7	0.1	
2001	-0.1	0.6	-0.1	1.2	-1.5	0.3	0.0	0.1
2004	-2.3	2.0	-2.3	-0.9	3.5	-0.5	0.0	0.3
2007	-0.3	1.9	-0.3	0.7	2.0	-1.7	0.0	0.3
2010	2.2	0.8	1.3	0.1	2.5	0.2	0.0	0.3
2013(b)	1.5	1.4	-0.2	-0.9	0.5	-1.9	-0.1	0.1

A dotted line indicates a redistribution of divisions.

(a)The Northern Territory had just one division until the 2001 election.

(b)Calculations for 2013 exclude the 11 seats where a notional 2PP result is not yet available. That particularly affects the Victorian result.

SOURCE: calculated from data available at AEC Election Results Archive <http://results.aec.gov.au>.

As in previous tables, a dotted line represents a redistribution, and again the advantage or disadvantage could be understood as the equivalent of a swing. The results for 2013 will need to be updated once recounts are available for the 11 divisions where the final result was not a Labor:coalition split, and because Victoria has five of those eleven divisions the 2013 result for Victoria should be treated with caution. But Table 5 does indicate that some redistributions have consistently provided an advantage to Labor or the coalition. Looking down the NSW column the various federal redistributions have not consistently disadvantaged one party by reliable amounts, though the map ordered into effect in 1992 does seem to have provided the coalition with a small advantage which increased over time, and the NSW federal map ordered into effect in 2009 is presently giving a similar advantage to Labor.

Western Australia's federal divisions advantaged Labor in the 1980s and 1990s by 2.5 to 3.5%, and the Liberal Party's protest against the 1984 redistribution seems to have been well-founded. But the maps produced since about 1997 have been fairer. Perhaps the most consistent results are for South Australia where both the 1984 and 2003 federal maps gave Labor a reliable advantage equivalent to a swing of 2.5% to 3%, for three elections; the 1992 federal map gave the Liberal Party a smaller advantage (of about 1%). Even taking into account the differences of scale between federal divisions and state districts, it seems that the geographic distribution of Labor and Liberal support has been capable of biasing federal as well as state maps in that state.

Meanwhile, federal redistribution authorities have managed to draw essentially fair maps for other states and territories while averting their gaze from the political. Perhaps that is because there is a much more homogeneous distribution of Labor and coalition support across those states and territories. Three other factors also protect them from drawing unfair maps even while effectively flying blind. One is that commissions start with the existing districts, which have a known political record.³⁵ That enables them to avoid inadvertently changing the notional status of existing districts. Indeed many commissioners believe that if a seat is to change hands from one party to another it should be the voters who make that happen, not the commission.³⁶ (Though that is hard to achieve when a state needs to lose a division.)

A second aspect of the process which prevents the commissions from introducing advantage into their maps, is that they refrain from accepting any party's submission in its entirety. Third, individual commissioners (and especially the electoral commissioners) are personally politically knowledgeable. They may not be aware of the measured political effects of the lines they draw, but they will nonetheless know which party is likely to be disadvantaged by each change they make. Orr has concluded that

the unspoken criterion in every jurisdiction (except South Australia, where it is explicit) is that redistributions ought to minimise distortion or disruption of the likely translation of votes into seats, given an essentially two-party lower house.³⁷

A standard for fairness

In 1991 the SA parliament asked for a map that would translate a majority of support – for either party - into a majority of seats.³⁸ It articulated that requirement in terms of a *fairness at 50:50*

³⁵ Almost all state and territory redistributions and about half of the federal redistributions have retained the existing number of districts.

³⁶ By contrast, when South Australia's fairness requirement was introduced in 1991 the redistribution commissioners knew that they would need to transfer at least one seat from Labor to Liberal.

³⁷ Graham Orr 2010, *The Law of Politics, Elections, Parties and Money in Australia*, Federation Press, Annandale, NSW, p. 32.

³⁸ In producing a fair electoral system, we must consider two fundamental issues. First, the system must ensure the effectiveness and equality of local representation; equal numbers in electorates can achieve this. Secondly, we must also ensure that each vote has an equal influence on which Party governs, so that the party which obtains a majority of the vote does govern, with 50 percent of the two-Party preferred vote being the pivotal point.... Equal numbers in electorates by itself will not guarantee the second outcome...I want to make one point very clear. It does not really matter about the name of the Party, or who is being represented under what banner, but for the sake of democracy it is important that the winner does win: that we do not have an unfair system. If the people of South Australia say they desire to change the government, and that is reflected in the vote, the government should change: democracy should not somehow be prevented from operating. DS Baker, *SAPD* 10 April 1990, p. 1377-8.

outcome standard.³⁹ At the time, the parties and academics all considered that the electoral system was robust enough, and parties' campaign abilities were similar enough, that if the commission minimised geographically-embedded bias then fair election outcomes would occur. The redistribution authority was more cautious. It considered that even with a set of districts which provided neither of the parties with an advantage, there would always be a possibility that an election campaign could skew a result, so the commissioners could not guarantee a fair election outcome. Given that the clause requires the commission to 'ensure, *as far as practicable*, that the electoral redistribution is fair', commissioners judged that their task was to provide a set of districts which were not biased towards either party and which would be likely to provide a level playing field. Having drawn a new map on this basis for the first time in 1991, the EDBC reported that

[t]he "playing field" has now been made even. It is for the Parties to present their policies, candidates and campaigns to the electors at the next election. The Commission has no control over, and can accept no responsibility for, the quality of their candidates, policies and campaigns. Nor can the Commission accept responsibility for the issues arising at the next election and elector response thereto.⁴⁰

To draw a set of districts which will provide this level playing field for electoral competition at a subsequent election, the commission must minimise bias due to the differential concentration of party support. Assessing whether a new map would achieve that is relatively simple in Australia where everyone is familiar with the pendulum. At a 50:50 result the parties' seats would roughly mirror each other on the pendulum. This standard is known in the US as partisan symmetry.

Other sources of distortion - campaign effects

In 2010 in South Australia the Labor Party won 27 seats with only 48.4% of the statewide two party preferred vote and Liberals argued that the commission should redress the imbalance by drawing four Labor seats as notionally Liberal. But non-uniform swings had clearly skewed the result and Labor argued that the fairness requirement was not intended to reward a party which had campaigned poorly. The commission agreed - when parties with roughly equal voter support run campaigns which are more effective in some districts than in others, a wrong winner election outcome will always be possible, and because parties must be allowed to campaign and win seats as best they can, such an outcome cannot be held to invalidate a fair map.

³⁹ This was not an unreasonable understanding of the task. David Butler and Bruce Cain reported of the USA that '[t]he most common measure of bias used by political scientists is the share of seats a party would receive if it were to get 50 per cent of the vote'. Butler, D. & Cain, B. 1992, *Congressional Redistricting: Comparative and Theoretical Perspectives*, Macmillan, Toronto, p. 8.

⁴⁰ SA, Electoral Districts Boundaries Commission (EDBC) 1991, *Report*, Government Printer, Adelaide, p. 73.

It became important to separate out the effect of campaign effects from any effect of bias. Butler, Soper and Rydon and more recently Johnston, provided no help as they all discounted the idea that campaign effects could have much effect in distorting the translation of votes into seats.⁴¹ The solution was to assess the 2010 map against the results of several elections; party support in rural areas does not change much from one election to the next so the bias caused by a party's inefficient distribution of support is a long-term disadvantage. Therefore differences between the various sets of results could be attributed to campaign effects.

The public interest in redistributions - responsiveness

There is much said about parties' interests in redistributions and very little about the public interest. For most of Australia's redistribution authorities, protecting the public interest involves providing opportunities for individuals and community groups to lodge submissions or objections and perhaps for the commissioners to visit areas which are contentious. The South Australian process allows another aspect of the public interest in redistributions to be considered: the commission ensures that there will be enough marginal seats going into an election that if voters change their support some seats could change hands.

Measuring responsiveness

To reduce the risk of a party winning a majority of votes but not enough seats, the EDBC could either draw no seats that would be likely to change hands or create an abundance of them.⁴² In 1991 there was general agreement with Mackerras' argument that Australian election swings are roughly uniform, so that if a district was expected to change hands with a given swing but did not in fact move, then a safer one would.⁴³ But for that to happen there must be seats available. If too few districts were marginal or if all marginal districts belonged to one party, the electoral system's response to a change in voter support would be muffled or lagged, to the extent that a party might need to win much more than 50 per cent of the statewide two party preferred vote to win the median seat. That would create a bias as effectively as malapportionment or the differential concentration of party support. However, when marginal districts change hands they increase the winning party's share of seats more quickly than its share of votes, so there is a danger in creating a

⁴¹ Butler, D. 1952, *The British General Election of 1951*, Macmillan, London, p. 243; Soper & Rydon 1958, 'Under-representation' p. 98; Johnston, R., Rossiter, D. & Pattie, C. 1999, 'Integrating and decomposing the sources of partisan bias: Brookes' method and the impact of redistricting in Great Britain', *Electoral Studies*, vol. 18, no. 3, pp. 368.

⁴² In Australia marginal districts are defined as those won with a two party preferred vote between 50 and 56 per cent. In South Australia the average statewide swing to Labor or to the Liberals since 1977 (the first election with equal-sized districts) has been 5.9 per cent, so a marginal district is one which might be at risk at an average election.

⁴³ 'It doesn't really matter if there are errors in individual seats because the errors cancel out.' M. Mackerras 1978, 'On Elaine Thompson and Tom Wheelwright', *Politics*, vol. 13, no. 2, p. 335.

map that is too heavily loaded with marginal districts: a swing can over-amplify that ‘winners’ bonus’ to the extent that effective opposition in the new parliament is made more difficult.⁴⁴

A responsiveness standard

The EDBC has formed the view that, so long as normal levels of party support are roughly equal, ‘the major party not elected to government should hold 12 – 15 seats with a safe margin’.⁴⁵ In a 47 seat house that would mean roughly 30 safe districts and 15 to 20 fairly safe or marginal districts, and in practice there are usually about eight marginal districts on each side of the pendulum. The 1998 EDBC wrote:

Section 83 cannot guarantee that an election result will be fair, but the purpose of the section is most likely to be achieved if there is an evenly graded series of marginal seats on both sides of the pendulum. That has been our object in this redistribution, as it was in 1994.⁴⁶

Conclusion

This paper has considered redistribution operations and what is intended when legislation calls for equality and fairness. It argues that a redistribution process which eschews political considerations is most usefully described as ‘apolitical’ and a process which treats the parties even-handedly as ‘impartial’. That leaves ‘fairness’ for a different aspect of the redistribution – how the set of districts will translate a given share of votes into the same number of seats for both major parties.

Australia’s one vote one value reformers considered that mandating districts with equal enrolments would provide an electoral system that would translate votes into seats equally effectively for both major parties – that equality would produce fairness. This paper has assessed whether we have achieved their aim. First it has considered whether district enrolments are *equal enough* and a standard for equality has been proposed: a map will be considered equal enough if a majority of its districts have enrolments within 5% of the jurisdiction average on election day. Tables 1 and 2 demonstrated that equality suffers when legislation fails to ask for equality on election day, and when tolerances are fully used to accommodate other criteria, and most particularly when maps stay in place for too long. But Tables 3 and 4 showed that even when states have used maps that

⁴⁴ The risk was demonstrated in South Australia in 1993 when a landslide election left the ALP with only 11 of the 47 seats, and it was argued that the party had too few members to maintain an effective opposition. EDBC 1994, *Transcript of Public Hearings*, vol. 1, The Commission, Adelaide, p. 22.

⁴⁵ SA, Electoral Districts Boundaries Commission (EDBC) 2003, *Report*, The Commission, Adelaide, para. 41.

⁴⁶ SA, Electoral Districts Boundaries Commission (EDBC) 1998, *Report*, Acting Government Printer, Adelaide, p. 15.

could not be considered equal, inequality has not generated a substantial or reliable advantage for either of the major parties at an election.

When equality fails it is no guarantee of unfairness, but has equality guaranteed fairness? It is not clear what the appropriate measures should be for some states but Table 5 has shown that, in general, federal maps have not generated reliable and substantial advantage to one party. In most states and territories asking for equality does seem to have been enough to ensure fairness. The exception is South Australia, where factors other than malapportionment have continued to provide a substantial advantage to the Labor Party in two of the most-recent five federal maps (and a small advantage to the Liberal Party in one map). Given that the geographic distribution of party support had biased State election districts, and the effects apply fairly consistently for the duration of each map, it seems clear that federal maps have sometimes been caught by the unusual distribution of party support in South Australia. Just why that effect does not appear in the other two maps is not clear. Perhaps the scale of federal divisions is relevant. Certainly it is not because the federal redistribution authority has been able to avoid it: without a specific direction federal redistribution commissioners are unlikely to feel able to approach the problem.

How fair would a map need to be, in order to be fair enough? The paper has considered two standards for fairness – ‘fairness at a 50:50 result’ assesses a map as fair if it provides fair election outcomes, and ‘partisan symmetry’ assesses a map as fair if it provides an unbiased map for a level playing field. In practice, differently-effective campaigns can skew election outcomes, so no redistribution authority can guarantee to provide a fair election outcome. That means the fairness at a 50:50 standard is unrealistic and a partisan symmetry standard is more practicable. A map is fair enough if it is likely to translate votes into seats equally effectively for both major parties. Importantly, the map must also be responsive.

A redistribution toolkit

A set of measures and standards can be offered to Australian parliaments and redistribution authorities.

The redistribution process should treat the parties equally and elevate the public interest over party interests.

The aim of a redistribution should be to provide a set of districts that will not advantage either party leading into an election and which will respond if voters change their support.

Each district should have an equal number of electors at the time of an election.

The standard for equality should be a majority of districts within 5 per cent of the average on election day.

Redistributions should take place after every one or two general elections.

A set of districts should be unbiased.

Party support should be measured using the results of several recent elections.

Bias should be measured using the proportion of a party's support tied up in safe seats.

The standard for fairness should be partisan symmetry: when a map is produced the two major parties should have the same proportion of their support in safe districts when the result is adjusted to a hypothetical 50:50 outcome.

A set of districts should be responsive. The standard should be that there will be enough marginal districts available to change hands that the opposition could win a majority of districts if it wins the support of a majority of voters.

A set of districts should be unbiased in its responsiveness. The acceptable standard should be equal numbers of marginal seats on both sides of the pendulum when support is equal.