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David Charnock

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Electoral Bias in Australia 1980–1993: The Impact of the 1983 Electoral Amendments

DAVID CHARNOCK

Curtin University

This paper examines the amount and sources of electoral bias at federal elections in Australia from 1980 to 1993. The main conclusion reached is that the changes to electoral legislation introduced between the 1983 and 1984 elections did not, as has previously been widely accepted, merely act to neutralise the then-existing bias towards the Liberal and National coalition parties but actually resulted in a bias towards the Australian Labor Party. Most of the bias arose from the differential geographic concentration of voters, to which a contributing influence was a 'size effect' caused by increasing the number of members of parliament. However, the introduction of a boundary redistribution criterion which requires equality in electorate enrolments over time (rather than immediately) has also introduced an inbuilt bias arising from differential enrolment levels into the post-1983 electoral system. This bias has favoured the ALP at every one of the four elections held under the new system.

It used to be common wisdom among students of politics in Australia that the Australian Labor Party (ALP) was disadvantaged electorally at a federal level, partly by the system of drawing electoral boundaries and partly by a geographical overconcentration of its voters. However, prompted mainly by the result of the 1990 election (at which the ALP obtained a comfortable working majority of seats despite having obtained only 49.9% of the two-party preferred vote), a number of recent authors (eg Rydon 1993, Gruen and Grattan 1993, Economou 1993) have observed that this conclusion may need to be reconsidered. With a slightly different emphasis, some earlier work by Bean and Mughan (1988) had also suggested that electoral competition in the 1980s differed from the earlier postwar period. However, it has not been much of an issue since the 1993 election, perhaps because the ALP once again had a clear majority of the two-party preferred vote.

Suggested explanations for the change to a situation where the ALP was advantaged rather than disadvantaged range from the more technical (eg Rydon's (1993) fairly subtle suggestions that levels of turnout and informal voting need to be considered) to more strategic ones (eg the suggestion that the ALP has been more effective in pursuing a marginal seat strategy than the Liberal-National coalition (cf Warhurst 1988, Gruen and Grattan 1993). The electoral system itself, however, is widely regarded as being as fair as is possible for a single-member system and given the constitutional requirements (eg Hughes 1990, Rydon 1993), although Mackerras

(1990, 183) did claim that '... the 1989 redistribution for Western Australia produced a Labor gerrymander', but did not provide any explanation as to why this might have happened. Nor did he suggest that it was a widespread problem; to the contrary, he specifically says that the electoral maps of the other states are fair.

This is a very different position to the one which was perceived to hold until the early 1980s. Until then, the smaller (on average) enrolments in coalition-held seats (especially rural seats) were regarded by many as giving an unfair advantage to the coalition. The discrepancies in enrolments arose from either allowing deviations of up to 20% or, after this was reduced to 10% during the Whitlam years, by requiring that (at the time of drawing new boundaries) all electorates with an area of 5000 sq km or more should have smaller enrolments than all other electorates. Hughes (1990) provides a description of these aspects of the electoral system, and also of the changes which were introduced in 1983. Among other changes, the '5000 sq km' rule was abandoned, the numbers of members in the Senate and the House of Representatives were increased (the latter from 125 to 148, although there can be small variations due to rounding effects in establishing the seat entitlements of the states) and the timing of, and the criteria to be used in, redistributions were altered.

Although an examination of individual elections can give some useful information, my purpose in this paper is to provide a study of electoral outcomes for the whole series of elections from 1980 to 1993. One of the main advantages of extending the analysis over this period is that it will be possible to gauge the impact of the 1983 modifications to the electoral system by looking at all of the elections held since their introduction (ie 1984/87/90/93), using information from the two previous elections (ie 1980 and 1983) to provide points of comparison.

Without going into detail at this stage, my analyses demonstrate that since the changes were introduced there has consistently been a bias (albeit not large) towards the ALP due to differentially-small enrolments in ALP-held, as compared to coalition-held, seats. This appears to be probably due to the properties of the new redistribution criteria. In this respect, the belief that the existing system is a fair one is open to question.

In addition to this source of bias, there has also been a generally much larger amount of advantage to the ALP arising from differential geographic concentrations of voters; the exception to this was the 1993 election, when the ALP suffered a noticeable disadvantage from this source. The fact that the shift in this source of bias from ALP disadvantage to advantage also coincided with the 1983 changes suggests that the effect of these changes may have been much broader than simply to introduce a process apparently giving more equal enrolments, and that they may also have been (at least partly) responsible for this shift as well.

Another interesting observation is that, although most attention was focused on the issue after the 1990 election (because the side with a majority of the two-party preferred vote did not win a majority of seats), it was actually in 1987 that the ALP was most over-represented.

The Seats-Votes Relationship, 1949-1993

Initially, in order to establish that a significant change in what had been longstanding partisan effects of the electoral system occurred in the early 1980s, I will begin by briefly examining the overall nature of the relationship between votes

and seats won over the period from 1949 to 1993. Because of the well-known effect which single-member electoral systems have of giving a 'winner's bonus', it is necessary to establish some sort of standard for assessing under- and over-representation which takes this property into account. The standard used here is the so-called 'cube law' (see, for example, Hughes 1977, Soper and Rydon 1958, Taagepera and Schugart 1989).

With the fairly unimportant (because the ALP vote was so low) exceptions of 1955 and 1966, Table 1 shows that the ALP was under-represented in terms of the ratio of votes to seats won at every election from 1949 until 1980, but has not been under-represented since that time; in fact, at the 1987 and 1990 elections it was considerably over-represented (especially in 1987).

Table 1: Votes-Seats Relationship, Australia, House of Representatives 1949-93

Election Year	ALP 2-Party Preferred Vote (per cent)	Actual ALP-Won Seats (per cent of total)	'Cube Law' ALP Seats (per cent)
1949	49.0	38.8	47.0
1951	49.3	43.0	47.9
1954	50.7	47.1	52.1
1955	45.8	38.5	37.6
1958	45.9	36.9	37.9
1961	50.5	49.2	51.5
1963	47.4	41.0	42.3
1966	43.1	34.1 ^a	30.3
1969	50.2	47.2	50.6
1972	52.7	53.6	58.0
1974	51.7	52.0	55.1
1975	44.3	28.3	33.5
1977	45.4	30.6	36.5
1980	49.6	40.8	48.8
1983	53.2	60.0	59.6
1984	51.8	55.4	55.3
1987	50.8	58.1	52.5
1990	49.9	52.7 ^a	49.7
1993	51.4	55.1 ^a	54.3

^a Independents allocated to 1 ALP (1966), 1 non-ALP (1990), 1 ALP and 1 non-ALP (1993).

Sources: APSA Data File No. 1 (1949-80); Australian Electoral Commission *House of Representatives Full Distribution of Preferences* (1983-93).

Without discussing the extent to which the cube law is strictly applicable in Australia,¹ what is quite clear from Table 1 is that there was a significant shift from 1983 onwards in the way in which overall votes were translated into seats won. Therefore, in searching for explanations, it is obviously necessary to look for general ones which transcend particular individual elections. We begin by examining the nature and extent of bias present in the electoral boundaries at each of the elections from 1980 to 1993. The approach used is one due to Soper and Rydon (1958) (also described in a simple fashion in Johnston 1979), which allows for the

¹ See Taagepera and Schugart (1989, especially chaps 14 and 16) for a discussion of the more general power-law, of which the cube law is a particular case.

overall measure of over- (or under-) representation² to be decomposed into two components, one which measures bias due to differential enrolment levels and one which measures bias due to differential geographic concentrations of voters. The first of these components measures the extent to which a party is disadvantaged by having higher than average enrolment levels in the seats it wins; the second component measures the extent to which a party is disadvantaged because its voters tend to be excessively spatially concentrated, and hence the party generates wasted votes or excess votes because its majorities are unnecessarily high.³ Table 2 shows the levels of bias in favour of the ALP, both in total and divided into each of these two components, at each election from 1980 to 1993. Bias against the ALP is indicated by a negative sign in the Table.

Table 2: Bias in Favour Of ALP, 1980–1993^a

Election Year	Total Bias	Due to Differential Enrolments	Due to Differential Concentration of Voters
1980	- 0.86	- 0.11	- 0.75
1983	- 1.08	- 0.20	- 0.88
1984	+ 0.39	+ 0.19	+ 0.20
1987	+ 2.41	+ 0.15	+ 2.26
1990	+ 1.23	+ 0.13	+ 1.10
1993	- 0.99	+ 0.07	- 1.06

^a All in percentage points.

Sources: Australian Electoral Commission *Full Distribution of Preferences* (1983–93); APSA Data File No.1 (1980).

Several important features are to be seen here. Firstly, the overall change from bias against the ALP to bias in its favour initially took place at the 1984 election (not at the 1983 election) and was maintained and, in fact, extended at the 1987 and 1990 elections. At the 1993 election, however, the situation was reversed. Since there is a random element to the way in which votes (or voting swings) are translated into seats (see Charnock 1993), these findings are not inconsistent with the above examination of the votes-seats relationship: after both the 1983 and 1993 elections the ALP was left with a very large number of highly marginal seats (eg in 1983 the ALP won 15 seats with margins of below 2.5%; in 1993 they won 17 seats with margins of below 2.5%, including 10 with margins of below 0.7%), thus leaving them very vulnerable to small changes in voting behaviour.

Secondly, the ALP has benefited from having differentially-low enrolments at every one of the elections held after the changes came into effect at the 1984 election, whereas it was previously disadvantaged by this factor. This finding will be explored in more detail below.

Thirdly, mirroring the overall situation, although the ALP was significantly disadvantaged by the differential geographic concentration of its voters prior to the electoral changes, after those changes it benefited from this factor in 1984, 1987 and

² This is essentially the same as what is usually known as the (partisan) bias of the electoral boundaries (eg Mackerras 1980, 205). Differences may arise if the 'effective vote' (see Soper and Rydon 1958) is estimated by something other than the median. In this paper, I have used the median.

³ See Johnston (1979, 63–9) for an explanation of the details of how the two components are calculated.

1990 (and by significant amounts in 1987 and 1990) before returning to a situation of disadvantage in 1993. As research on the earlier period before 1980 (eg Soper and Rydon 1958, Rydon 1973) had also shown, the size of this component was generally much larger than that of the component arising from differential enrolment levels.

All three of these conclusions seem to point to the role of the 1983 electoral changes as being crucial and it is to these that I next turn.

The 1983 Alterations

The alterations which were passed in 1983 had their first impact at the 1984 election and are discussed in Hughes (1990). More detailed arguments about the changes can be found in the *First Report of the Joint Select Committee on Electoral Reform* (JSC 1983). A number of the changes, such as those to donation disclosure requirements and the introduction of public funding, are beyond the scope of this paper since, although they are obviously of potential importance in determining election outcomes, their effects are diffuse and would be very difficult to demonstrate in any convincing manner. What I will concentrate on are the changes which affected the drawing of electoral boundaries.

As mentioned above, one of these changes was to remove the '5,000 square kilometre' rule. According to Hughes (1983, 222), this rule (which was introduced by Malcolm Fraser) was '... extracted by the National Country Party as the price for accepting the Liberal Party's retention of the 10% permissible deviation ...', but he also suggests that the rule had little political influence at the 1980 election. While this may not have been the opinion of the National Party, judging from the JSC's Report (1983) they did not publicly object to the removal of the provision in 1983.

Part of the explanation for the National's acceptance may lie in another of the main changes which took place in 1983, viz the increase in the number of Senators to 12 in each state, with a consequent increase in the total number of members in the House of Representatives from 125 to 148. Of course, this had the effect of reducing the number of electors in each House of Representatives division, this being in fact one of the main arguments used in support of the change. The National Party argued strongly in favour of such an increase; Liberal Party objections seem to have been rather half-hearted (eg JSC 1983, 235, 243) and the issue did not generally appear to be controversial.

From the overall point of view of the coalition, this might very well have been a mistake. I say this because of the quite noticeable way in which the bias moved from being against the ALP to being in its favour between the 1983 and 1984 elections. Although the removal of the 5000 sq km rule might have been expected to have an impact, the shift was not simply due to alterations relating to differential enrolments (whose contribution actually amounted to only 0.4 percentage points out of the total change of 1.5 percentage points), but was primarily due to the change in the contribution arising from the differential concentration of voters.

One possible explanation for this might be that the ALP was more effective than the coalition in winning marginal seats in 1984 and that this had not been true in 1983. This argument is not valid, however, since, as already observed, the ALP had won a large number of marginal seats in 1983. Whereas in 1983 they had won 15

seats with margins of below 2.5%, in 1984 they won only 11 by the same margin despite the fact that the size of the House of Representatives had been increased by 23 seats.

Another possible factor was the extremely high level of informal voting at the 1984 House of Representatives election (6.4% as against 2.1% in 1983), easily the highest on record and actually higher than that in the Senate election (Australian Electoral Commission (AEC) 1985). This was thought to have disadvantaged the ALP; it was attributed partially to confusion between the new ticket voting system for the Senate (which required only a single number 1 on the ballot paper) and the continuing system for the House (for which a complete set of preferences had to be provided by voters). However, although the AEC found that the level of informal voting was '... highest in Divisions with higher proportions of manual workers and more persons not fluent in English' (AEC 1985, 62), it also concluded that no actual change in seats could be attributed to (probably) inadvertent informal voting and that the ALP vote could be said to have been decreased by only 0.3 or 0.4% (AEC 1985, 55).

While it is not clear exactly how much effect this would have had on the bias towards the ALP due to the differential spatial concentration of voters (it could either be increased or decreased in size, depending on the precise distribution of the unintended portion of the informal vote), a decrease of such a small magnitude would still leave a large proportion of this component unexplained. Therefore we need to look elsewhere for the main source.

Although the apparently most influential change between 1983 and 1984 was to the nature of the rules governing the drawing of electoral boundaries, the primary change was actually that which increased the amount of representation. Although this issue does not seem to have been raised before, it is clear that such a change (ie a reduction in the average number of electors in each division) had the potential to modify the nature of the manner in which parties' voters were concentrated in electorates (this size effect is, after all, presumably the main reason for the strong support of the National Party for the increase). The outcome seems to have been that the ALP (rather than the coalition) was the main beneficiary of the change, although perhaps a more appropriate emphasis would be to say that the coalition overall lost the advantage that it had previously had from this source (turning a sizeable advantage of 0.9 percentage points in 1983 into a small disadvantage of 0.2 percentage points in 1984).

This improvement to the ALP's position in terms of the distribution of electoral boundaries is well illustrated by the following facts. After the 1983 election (and before the changes to the electoral legislation), a 2.2% uniform swing would have been enough to remove the ALP's majority; despite an overall loss by the ALP of 1.5% of the two-party preferred vote between the 1983 and 1984 elections, the uniform swing required to remove the ALP's majority after the 1984 election was still 2.2%.⁴

⁴ Unless stated otherwise, voting and enrolment information is derived from the Australian Electoral Commission publications *Election Statistics* and *Full Distribution of Preferences*, published after each election.

Although one can only speculate on the extent to which this impact was anticipated by the ALP, in view of the professionalism of the approach of the party organisation to elections (eg Gruen and Grattan 1993; Summers 1983), I think it is reasonable to suggest that they must have known, at least in a general sense if not in actually being able to predict the precise gains, that such changes would benefit them.⁵ It does not seem conceivable that such a change would have been allowed without an analysis of its likely effects on the party's electoral prospects.

Whatever the correct explanation for the change between 1983 and 1984 may be, the ALP's advantage from differential concentration of voters persisted, being very large in 1987, and was still significant in 1990, before reversing in 1993 to a significant disadvantage for the ALP. Part of the explanation for these findings lies in the better performance in marginal seats by the ALP, but this is not by itself a sufficient explanation, since the differential concentration of voters is essentially related to the degree and type of asymmetry of the complete voting distribution (see Soper and Rydon 1958), not simply to its central section (representing marginal seats).

Examination of the vote distributions in Table 3 shows that the source of the ALP's disadvantage in both 1980 and 1983 was their disproportionately large number of safe seats, whereas in 1984 the distribution was much more symmetrical. In 1987, by contrast, the central section of the distribution (between about 40% and 60% of the two-party preferred vote) was very heavily weighted in favour of the ALP; to a lesser extent, the same was true of 1990. The results in 1993 showed a similar pattern to that in 1983.

Table 3: Voting Distributions 1980-1993^a

ALP 2-Party Preferred Vote (per cent)	Election Year					
	(per cent of seats)					
	1980	1983	1984	1987	1990	1993
30.00 or less	2	2	3	3	3	2
30.01-35.00	7	1	3	2	1	5
35.01-40.00	14	10	11	14	14	10
40.01-45.00	12	16	13	11	16	12
45.01-50.00	24	11	16	11	14	16
50.01-55.00	10	17	15	21	17	18
55.01-60.00	10	15	16	19	18	14
60.01-65.00	10	10	12	10	11	8
65.01-70.00	6	9	7	6	5	9
70.01 and over	5	9	6	2	1	6

^a Percentages may not total 100 because of rounding errors.

Sources: as Table 2.

What conclusions can be drawn from these voting distributions about sources of under- and over-representation from 1980 to 1993? Firstly, that one of the main effects of the changes to the nature of the system which occurred between 1983 and

⁵ The ALP members of the JSC were Dr R. Klugman (Chair), Senator R. Ray, Senator G. Richardson, Mr A. Griffiths and Mr J. Scott; the other members were Mr R.S. Hall and Senator Sir J. Carrick (both Liberals), Mr R. Hunt (National) and Senator M. Macklin (Australian Democrats).

1984 was to reduce (if not altogether remove) the previous disadvantage to the ALP arising from its having a disproportionately large number of very safe seats. At the same time, the number of very safe coalition seats increased.

Secondly, that the ALP over-representation after the 1987 and 1990 elections was the consequence not simply of being able to win marginal seats (although they were successful in that) but also derived from the fact that the number of their marginal seats increased at the same time as the number of their safe ones decreased. This is also the contention of Gruen and Grattan (1993, 76). From one point of view, winning many marginal seats indicates a successful strategy, but the other side of the coin is that a number of seats had become less safe for the ALP (a point also noted by Bean and Mughan 1988, writing after the 1987 election).

Thirdly, that while one obvious outcome of the 1993 election was that it resulted in a large increase in the number of very safe seats held by the ALP, to say that the election was a victory due to 'the true believers' is misleading. In fact, although there was more of a polarisation at both ends of the spectrum of seats, the victory of the ALP was still achieved only by obtaining successful outcomes in many marginal seats (eight seats were won by the ALP with margins of below 0.5%).

It is also interesting to note that the ALP has again become disadvantaged from this component at the same time as the average number of electors in each division returned to (in fact, passed) the level that obtained in 1983 before the electoral changes (the mean enrolment in 1983 was just under 75,000, dropped to just under 66,700 in 1984 and in 1993 it was almost 77,500). This can be seen as providing further support for the existence of a 'size effect', although this would obviously be unlikely to be the complete explanation for the changes in the size of this component.

Putting these observations together, I conclude that the 1983 electoral changes had a favourable effect on ALP over-representation in terms of the differential geographic concentration of voters. Some of this resulted from the above-mentioned size effect, but the impact of ALP policies which directed attention at marginal seats was also important. The outcome of the 1993 election raises the interesting possibility that there is no longer a size effect giving an advantage to the ALP. If this is the case, then the return in the ALP's position (in terms of over-concentration of voters, at least) to roughly the pre-1984 position may be more than temporary, thus making it easier for the coalition to win office at future elections.

Differential Enrolment Advantages

The differential concentration of voters is not, however, the only source of bias and it is clear from Table 2 that while this component is usually several times larger than that attributable to differential enrolments, the ALP has consistently had an advantage from the latter since the electoral changes which took effect from the 1984 election. Since there has been an advantage at every election since the changes, compared with a disadvantage at previous elections, it is an almost inescapable conclusion that it was the electoral changes themselves which were the cause. This clearly raises questions about their fairness.

Exactly what might be the features of the changes which have given this outcome? Firstly, let me observe that my later analyses will show that Rydon's

(1993) suggestion that it might, in a sense, be a 'technical problem' caused by differential levels of turnout and informal voting does not provide the explanation. When enrolment levels are directly examined, there has still been a shift between 1983 and 1984 from a coalition advantage to an ALP advantage.

The removal of the '5000 square kilometre' rule certainly had some effect on this component. However, while it could be argued that removing this rule would get rid of any disadvantage to the ALP, it was not envisaged that it should instead produce an advantage to the ALP. In any case, putting all electorates on an apparently equal footing should in principle lead to neither the coalition nor the ALP having any advantage from differential enrolments. The observed ALP advantage, I believe, results from another of the changes to redistribution procedures introduced in 1983.

In order that readers can follow the argument clearly, it is necessary to outline the circumstances under which redistributions now take place and how their timing is determined. Redistributions will take place in a state or territory when one of three conditions is met (AEC 1992, 11–12):

- (i) the state or territory's representation entitlement in the House of Representatives is altered because of population change,
- (ii) more than one-third of the Divisions in the state or territory deviate from the average divisional enrolment by more than 10% for three consecutive months, or
- (iii) seven years have passed since the state or territory was last redistributed.

Among the rules required to be applied when drawing up boundaries, there is a provision (one of the 1983 changes) which requires the Redistribution Committee to do so in such a way that 3.5 years after the redistribution no division within the state being redistributed should (as far as practicable) have an enrolment which varies by more than 2%⁶ from the average enrolment of that state's divisions (see AEC 1992, 13; Hughes 1990). This is a primary requirement and overrides, for example, the requirement to maintain 'community of interests' in drawing boundaries, although it does not override the requirement that no division's enrolment can initially deviate by more than 10% from the state average.

Reading through the various Redistribution Reports since this condition was introduced in 1983, it is clear that selecting boundaries in order to meet the requirements has often been an extremely difficult task.⁷ Forecasts of future enrolments in very small areas are required, and this is in itself a very difficult problem: interested readers could refer to a recent issue of the *Journal of the Australian Population Association* (1992), which was completely devoted to the topic of demographic forecasting and projections in Australia. Fortunately, the independence of Redistribution Committees is assured and the forecasts used are open for public comment. Otherwise, there would obviously be plenty of scope for manipulation of boundaries.

⁶ In the initial 1983 changes the requirement was stricter, viz to aim for 'equality', but, following the second JSC Report (1986) after the 1984 election, it was modified to 'within 2% of the state average'.

⁷ In fact, in the 1984 redistribution of New South Wales the Redistribution Committee was unable to satisfy both the '10% maximum initial deviation' and the 'equality over time' criteria for the Division of Phillip (see Australian Electoral Commission *Redistribution of New South Wales into Electoral Divisions* vol. 1, 1984, 114).

Following the 1987 election (which was held at a date fairly close to the projected midpoint of the seven year cycle after the initial redistribution under the new provisions), the AEC carried out a study of the extent to which equality of enrolments had been achieved by the redistribution changes and reported (1988, 11) that '... enrolment equality was achieved at the 1987 election to a degree unprecedented in Commonwealth electoral history'. However, the same report also notes (1988, 11) that '... only 77 Divisions [out of 147] were within 2 percentage points of their local average ... (and) ... 22 Divisions ... departed from their State average by more than 5 percentage points'. Neither did the AEC's report check for any apparent partisan bias.

On the surface, the requirement to aim for (approximate) equality of enrolments after 3.5 years seems to be a fair one (although, as we have just seen, the actual achievement of this aim is probably impossible), since the 'seven year rule' means that we would expect this to be the middle of the redistribution cycle. Since one of the immediately obvious results of the 'approximate equality after 3.5 years rule' is that divisions expected to have low (high) growth rates have to start with above (below) average enrolments, it is quite possible that the ALP could be advantaged overall by having lower average enrolments in their seats in the first half of the cycle. The expectation would be, however, that this would tend to be counterbalanced by their being disadvantaged in its second half. For example, population growth has tended to be high in outer suburbs and some areas of high physical amenity, and low (or even negative) in many inland rural areas (Bell 1992). A party with seats more concentrated in the former types of area would tend to be initially advantaged relative to a party which was more popular in the latter type of area. Obviously, though, one cannot characterise the ALP-coalition contest in terms as simple as this, and it is the overall balance which will determine the final direction of bias: this is an empirical question.

In any case, as already noted, the rationale for the system suggests that any such bias would be counterbalanced in the second half of the cycle. This rationale breaks down, however, when there are partial redistributions such as those in Victoria and Western Australia in 1989, both of which were caused by their representation entitlement having changed. When this situation occurs, the second 'half' of the cycle never takes place and there is no opportunity for any initial bias in one direction to be redressed by a later bias in the opposite direction. This is potentially significant since the rates of population growth in the states are so different that it is very likely that it will be the norm rather than the exception that at least one state will be redistributed after every election because its seat entitlement has changed. After the 1987 election, it was Victoria (-1) and WA (+1); after the 1990 election, it was NSW (-1), Queensland (+1) and SA (-1) (although they would all have in any case been redistributed because of the 'seven year' rule); after the 1993 election, it is Victoria (-1), Queensland (+1) and the ACT (+1); after the next election WA will be redistributed under the 'seven year' rule, if not because of a change in entitlement, and it is quite likely that Queensland will yet again be entitled to an extra seat. For the first time, the Northern Territory may also be entitled to more than one seat.

Furthermore, redistributions because of changes in seat entitlements (rather than under the 'seven year rule') are especially significant, because the addition or loss of

a seat usually requires major boundary changes to a large proportion of the state's divisions. For example, in the 1989 redistribution of Victoria, only about 70% of electors remained in the same division as before the redistribution (AEC 1989).

The effect of these partial redistributions is apparent in Table 4, which shows that over the full set of four elections (1984–93) held since the electoral changes, the average time (weighted to take account of the number of seats in each state) between the last redistribution in a state and the election date has been just under two years and three months, and that at none of the four elections has the average time been above four years. At an election held in February 1996, the average would be almost exactly three years.

Table 4: Periods Between Redistributions and Elections, 1984–1993

Polling Date	Mean Period Since Last Redistribution ^a
1 December 1984	2½ months
11 July 1987	2 years 10 months
24 March 1990	3 years 10 months
13 March 1993	2 years 1 month
Overall	2 years 3 months

^a weighted to take account of number of seats in each state.

Source: Australian Electoral Commission *Commonwealth Electoral Procedures*, 3rd ed., 1992.

Although such a discrepancy is not a large one, it nevertheless does appear to be a built-in feature of the current redistribution process and I would suggest that it needs to be addressed in some way. Of course, there will only be an impact on political outcomes if there is some relationship (even if only a weak one) between population growth rates and support for the political parties. The nature of the relationship between the social demographic structure and the geography of the states is, of course, varied and so one would not expect the same relationship to hold in every state: it is the overall balance of party enrolment advantage between the states which may have importance in influencing election outcomes.

Table 5 shows, on a state by state basis, the extent to which the enrolment levels in seats won by the ALP and the coalition deviated from the respective state average enrolment at each of the elections from 1980 to 1993 (eg in 1980, seats won by the ALP in New South Wales had an average enrolment which was 2% higher than the average enrolment for all seats in the state). In addition to demonstrating how the overall picture in relation to relative enrolment levels changed between 1983 and 1984, this information also allows an attempt to be made at assessing the relationships between enrolment deviations and the redistribution cycle in the various states over the full period from 1980 to 1993. Also notice that by directly examining enrolments (rather than by making indirect assessments of the impact via voting under- or over-representation, as was done earlier in the paper), any potential intervening influence of differential turnout or informal voting (as suggested by Rydon (1993)) is avoided.

Table 5: Mean Enrolment Deviation (per cent) from State Average by Party, 1980-93^a

Election	Seats Won By	NSW	Vic	Qld	WA	SA	Total
1980	ALP	+ 2.00	+1.20	- 4.28	- 1.13	- 0.85	+ 0.54
	Lib/Nat	- 1.44	- 1.27	+ 1.53	+ 0.43	+ 1.02	- 0.39
1983	ALP	+ 1.30	+ 2.55	- 1.06	+ 2.99	+ 0.02	+ 1.43
	Lib/Nat	- 1.64	- 5.86	+ 1.18	- 7.98	- 0.03	- 2.29
1984	ALP	- 0.06	- 0.57	+ 0.98	- 0.89	+ 0.19	- 0.17
	Lib/Nat	+ 0.08	+ 1.02	- 0.59	+ 2.00	- 0.30	+ 0.23
1987	ALP	+ 0.09	- 0.71	- 0.40	- 0.31	- 0.34	- 0.31
	Lib/Nat	- 0.11	+ 1.13	+ 0.48	+ 0.69	+ 0.55	+ 0.43
1990	ALP	+ 0.57	- 0.40	- 2.15	+ 0.24	- 0.45	- 0.30
	Lib/Nat	- 0.82	+ 0.23	+ 3.58	- 0.31	+ 0.53	+ 0.33
1993	ALP	- 0.57	+ 0.99	- 0.16	+ 0.41	- 1.91	- 0.11
	Lib/Nat	+ 1.11	- 0.89	+ 0.17	- 0.31	+ 0.96	+ 0.13

^a Tasmania and the ACT are omitted because at every election either all or all except one seat were won by the same party.

Source: Australian Electoral Commission *Election Statistics*.

A number of things are clear from Table 5. The first, and probably the most important, is that whereas the ALP was in total significantly disadvantaged in terms of enrolment levels before the electoral changes came into effect at the 1984 election, since then it has been the coalition which has been consistently disadvantaged. Although the size of the coalition's post-1983 disadvantage has been smaller than was that of the ALP's pre-1984 disadvantage, it nevertheless has the potential to be important and seems to reinforce the conclusion reached earlier about there having been some built-in ALP advantage from 1984 onwards.

By comparing the outcomes in states at different stages of the redistribution cycle, we can perhaps obtain a clearer picture of the extent to which, as suggested above, it may be the redistribution criteria themselves which have been responsible for the ALP advantage. As a reminder, all states were redistributed prior to the 1984 election, Victoria and Western Australia were redistributed prior to the 1990 election, and the remaining states were redistributed prior to the 1993 election.

Although the evidence in Table 5 shows that the relationship varies from state to state, it nevertheless demonstrates an overall tendency for the system to initially favour the ALP. Out of the 10 occasions following redistributions under the current system which involved major boundary changes because a state's seat entitlement had altered, the mean enrolment deviation from state averages in ALP-won seats was negative on seven occasions.⁸ For this complete set of 10 occasions, the mean enrolment deviation in ALP-won seats was -0.30%. This is clearly a potentially significant amount.

However, of more significance, perhaps, is not what has happened in general but rather in the two most populous states, NSW and Victoria, which between them have 60% of all seats. In these two states, at the elections following both of their two redistributions under the existing criteria, the ALP has had an advantage in terms of enrolments on all four occasions, with an overall mean enrolment deviation in its seats of -0.40%. This is larger than when all states which have just been

⁸ If the boundary redistributions were random with respect to party advantage, ie if it were equally likely that in a state the ALP's mean enrolment deviation would be either positive or negative, the probability of the ALP having an advantage on seven or more occasions out of 10 would be only 0.17.

redistributed are considered (-0.30%—see above) and even more so when compared with all states which were at a later stage in the redistribution cycle (only -0.15%). Four of the five ALP members of the 1983 Joint Select Committee were from NSW and Victoria and it would presumably have been a major concern of theirs to ensure that any alterations did not disadvantage (and preferably should advantage) the ALP there. As an illustration of how this can occur, at the 1990 election (and following the 1989 redistribution in Victoria) the three very safe Victorian rural seats held by the National Party on average had enrolments which were 2.3% above the state average; at the 1984 election (following the initial redistributions under the new criteria) the three National Party seats in Victoria on average had enrolments which were 1.8% above the state average.

A noticeable feature is that in each of the three states (NSW, Queensland and SA⁹) where boundaries remained unchanged for the three elections from 1984 to 1990 there was a progressive trend from advantage to disadvantage as far as enrolment deviations were concerned (although it was not always the same party which benefited over time). In NSW the ALP began in 1984 with a small advantage, and their enrolment position grew progressively worse until the 1992 redistribution, following which they again returned to a position of advantage. In Queensland, on the other hand, the ALP began with a significant disadvantage in 1984 but this had progressively become an even larger advantage by 1990. The 1992 redistribution left a small ALP advantage. The pattern in South Australia was the same as in Queensland, although the size of the deviations was much less and the 1992 redistribution increased rather than decreased the ALP's advantage.

The fact that there was a trend over time in all three of these states provides support for my suggestion of the effect of the 'approximate equality over time' redistribution criterion, but obviously the effect has worked in favour of different parties in different states. The 1989 redistributions in Victoria and Western Australia mean it is not possible to know whether or not there would have been trends in those states.

Overall, these direct analyses of enrolment deviations confirm the more indirect earlier findings that the 1983 electoral changes benefited the ALP by not only removing the disadvantage previously suffered from this source, but also by replacing it with a small advantage. This has resulted both from the removal of the 5,000 square kilometre rule and also from the 'approximate equality over time' criterion now required to be used in devising electoral boundaries.

There is also an interaction between the two sources of bias (ie differential enrolment levels and differential geographic concentration of voters). Table 6 contains information which allows the nature of this interaction and the way in which it was altered by the 1983 electoral changes to be analysed. For example, in 1980 the average enrolment level in the nine electorates where the ALP's two-party preferred vote was between 30 and 35% was 2.53% below the respective state average enrolment; by contrast, in the eight electorates where the ALP's vote was between 65 and 70% the average enrolment level was 2.89% above the state average.

⁹ Excluding Tasmania for the reason mentioned in Table 5.

Table 6: Relationship Between Enrolment Deviations and ALP 2-Party Preferred Vote, 1980-1993 Elections

ALP 2-Party Preferred Vote (per cent)	Mean Enrolment Deviation (per cent) from State Average ^a (no. of electorates in brackets)									
	1980		1983		1984		1987		1990	
30.00 and below	- 4.28	(2)	- 5.80	(3)	- 0.56	(4)	+ 0.50	(5)	+ 3.02	(5)
30.01-35.00	- 2.53	(9)	- 12.28	(1)	+ 3.83	(4)	+ 2.85	(3)	+ 1.56	(2)
35.01-40.00	- 2.03	(18)	- 0.33	(11)	+ 1.31	(16)	+ 1.30	(20)	+ 0.65	(20)
40.01-45.00	- 0.68	(14)	- 2.06	(17)	+ 0.15	(18)	- 0.48	(16)	+ 0.99	(22)
45.01-50.00	+ 2.04	(25)	- 2.68	(13)	- 1.29	(18)	- 0.30	(14)	- 1.82	(17)
50.01-55.00	- 1.20	(13)	+ 3.26	(20)	+ 0.16	(22)	+ 0.07	(29)	+ 0.55	(25)
55.01-60.00	+ 2.36	(11)	- 0.80	(19)	- 0.57	(23)	- 0.62	(28)	- 1.53	(24)
60.01-65.00	- 1.71	(11)	+ 1.45	(12)	- 0.02	(16)	- 0.11	(13)	- 0.16	(16)
65.01-70.00	+ 2.89	(8)	- 1.57	(10)	- 1.10	(10)	+ 0.74	(9)	+ 0.62	(7)
70.01 and over	+ 1.96	(6)	+ 4.68	(11)	+ 0.80	(9)	- 4.96	(3)	- 0.45	(2)

^a Tasmania and the ACT excluded (see note to Table 5).

Source: Australian Electoral Commission *Election Statistics; Full Distribution of Preferences*.

Overall, the main features are quite clear: prior to the changes, it was not only true that the ALP had more safe seats than the coalition, it was also the case that those seats tended to be heavily over-enrolled. In contrast, almost every category of coalition seat was under-enrolled. Following the changes, however, the situation was reversed, with the safest coalition seats tending to be the ones which were over-enrolled, while safe ALP seats were on average slightly under-enrolled. The pattern in 1993 was rather different, with the situation returning to one in which the ALP's safest seats were also over-enrolled: as seen earlier, however, this was more than counterbalanced by the under-enrolment in their less safe and marginal seats, giving a small overall ALP under-enrolment.

This information reinforces the conclusion that the effect of the 1983 electoral changes went a good deal further than simply correcting a bias in favour of the coalition, and actually resulted in a bias in the opposite direction.

Conclusion

The fact that the ALP has now won five consecutive elections is the most notable aspect of Australian federal politics over the last decade. Explanations for this succession of victories include leadership, disunited opposition parties, particular issues and better campaigning tactics. However, with the exception of 1983, the overall level of voting support for the ALP at these elections has not been especially high (not even a majority in 1990), and an important feature of their wins has been the effective way in which they have been able to translate votes into seats. The nature of the electoral system is necessarily an important determinant of this (as the 1993 Canadian election demonstrated in very dramatic form), and any party which wishes to win and hold on to government must be capable of effectively operating within the electoral system.

Most commentary during the last decade on this topic has emphasised the importance of the targeting of marginal seats and, to a smaller extent, of the preferential voting system. It has generally been assumed that the effect of the electoral changes passed in 1983 (and first implemented at the 1984 election) was to neutralise the previously existing bias towards the coalition parties. This paper demonstrates that the effect went further than that, and contributed to a bias towards the ALP which was larger in total at the 1987 and 1990 elections than the previous bias against them in 1980 and 1983 had been.

There seem to be two main aspects of the electoral changes which were responsible. One of these, a 'size effect' resulting from the increased number of members of the House of Representatives, may have been a transient one whose impact had disappeared by 1993 due to the continuing growth in the total size of the electorate. If I am correct about this, then the task of the coalition at the next election may be somewhat easier than from 1984 to 1990.

The second aspect, on the other hand, is an in-built feature of the system. The analyses presented here suggest that the bias is probably a result of the interaction of the requirement for redistribution committees to aim for approximate equality in enrolment numbers over time (rather than immediately) with the need to have partial redistributions whenever a state's representation entitlement changes. Since there is inevitably a degree of randomness involved in determining the size of the differential

enrolment advantage, it is possible that it will not always favour the ALP. However, current patterns of population growth strongly suggest that the ALP will tend to be the advantaged party. It has certainly worked in its favour up to this time.

Although the size of this resulting differential enrolment bias towards the ALP has not been large, a bias of this size is still potentially significant in a very close election and this is a subject which deserves further attention. Since a number of the states have followed the Commonwealth in adopting an 'equality over time' criterion for redistributions, there is also a need to examine its effect on those state electoral systems. At the federal level, the impact on this component of the shift from the previous to the current system seems to be in the range 0.20% to 0.40%. When combined with the other source of bias this was, for example, sufficient to make the difference between the ALP winning and losing the 1990 election. In view of this, although he was not necessarily the main driving force on the committee, it could perhaps be said that Senator Graham Richardson's membership of the 1983 Joint Select Committee on Electoral Reform was at least as important a role in the 1990 election victory as was the often-quoted 'second preference' strategy.

While variations in enrolments in individual seats were made smaller by the 1983 changes, a partisan bias is still present. Analyses of election outcomes should take this fact into account. The ALP would almost certainly have lost the 1990 election under the pre-1984 electoral arrangements, and might even have lost in 1987. Judgements which fail to take the electoral framework into account overlook a factor of fundamental importance.

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