

Research Report Number 1 2003

> Informal Vote Survey House of Representatives 2001 Election





Australian Electoral Commission AEC Helping you have your say.

### Acknowledgments

In the course of preparing this research paper, a number of individuals assisted the AEC by answering a continuous flow of questions. We would like to acknowledge Dr Zlatko Jovanoski, School of Mathematics, University of New South Wales, Australian Defence Force Academy and Dr Simon Jackman, Political Science, Stanford University. Thanks also to Professor Zachary Elkins, University of California at Berkeley, Dept of Political Science for allowing us permission to use his PHD thesis.

A special thanks to Mr Antony Green at the Australian Broadcasting Commission, Election Unit for assisting us with questions on historical electoral events in Australia.

#### Enquirles

Information of Research publications are available on the AEC website; <u>www.aec.gov.au</u>. Other enquiries can be made by e-mail to the Research Section of the AEC; research@aec.gov.au

# Contents

Langer Style Voting    2
Methodology
Divisional Tables
International Informality
Compulsory Voting7
Optional Preferential Voting 10
Sociological Factors 11
Not Fluent in English
Age
Number of Candidates
Senate 17
Conclusion
Attachment A (Sections of the CEA)
Attachment B (Section of the Scrutineers Handbook 2001)

#### Abstract

Every election has some degree of informal votes cast. The amount of informality is influenced by a large number of factors. In the Australian context these factors include compulsory voting, differences in the voting systems between the States and the Commonwealth and sociological factors.

This research paper examines previous studies of informality and tests the hypothesis that sociological and institutional factors influence informal voting. The paper uses a multiple regression model to correlate the informal vote against a number of variables.

Finally, the paper attempts to explain the results of the regression and concludes that there is no single factor that influences informality but a range of issues; some are highly significant while others remain difficult to test.

### Introduction

This research paper seeks to provide an overview of the informal voting at federal elections. The paper focuses on the variations of informal voting and examines research conducted on previous informal voting in Australia and international literature. The last informal vote survey for the House of Representatives was conducted by the AEC in 1996.

At the November 10 federal election, 2001, a total of 580,590 informal votes for the House of Representatives were recorded out of  $12,054,664^1$  votes, representing 4.82% of the total votes. The 2001 informal vote was the fourth largest since federation<sup>2</sup>.

### The Electoral Act and Informality

The law regarding informality in the House of Representatives are found in Section 240, 268, 270 and 274 of *The Commonwealth Electoral Act 1918* (CEA). A copy of these sections is found in Appendix A.

### **Other Sources of Information Regarding Informality**

In addition to the CEA 1918, an additional source of information in connection to informal voting is the "Scrutineers Handbook" which is published by the AEC for information in assisting scrutineers at elections.<sup>3</sup> The book contains a chapter in connection with formality of votes. The relevant information relating to the scrutineers book is found in Appendix B.

#### Langer Style Voting

Any study of informality in Australia must take into account the effects of Langer style voting. Prior to the 1998 election, ballot papers that were assumed accidentally marked non-consecutively for the House of Representatives (1,2,3,3,...) were counted as formal votes. The vote was accepted as formal and preferences distributed up to the point where the mistake of numbering began. These ballot papers then became 'exhausted<sup>4</sup>'.

<sup>&</sup>lt;sup>1</sup> A total of 12,708,837 voters were registered to vote, and a 94.85% turnout was recorded.

 $<sup>^2</sup>$  The other three were 1928 (4.94%), 1987 (4.98%) and 1984 (6.34%). In 1928 a referendum was concurrently conducted with the House of Representatives and Senate elections. In 1987 there was double dissolution. In 1984 a referendum was also conducted, Group ticket voting was introduced for the Senate, enrolment and voting for Aboriginal people became compulsory.

<sup>&</sup>lt;sup>3</sup> A new version of the book is published for each election. The version cited here is "Scrutineers Handbook – Election 2001, Australian Electoral Commission, ISBN 0-642-73208-6

<sup>&</sup>lt;sup>4</sup> In 1996 where Langer style votes were last admitted as formal and classified as 'exhausted', a total of 48,979 such votes were cast out of 10,883,852 formal votes (0.45%). The exhausted votes were of a similar magnitude for each of the States, NSW (0.46%), Vic (0.49%), QLD (0.26%), WA (0.62%), SA (0.51%), TAS (0.21%), ACT (0.49%), NT (0.48%).

This part of the CEA was specifically introduced to assist voters in casting their vote "below the line" in Senate elections. The Senate ballot paper in Australia can be extremely large and the chances of making a mistake in numbering it are great.

The parliament decided that the part of the CEA, which allowed for ballot papers to be counted in the Senate where preferences were marked non-consecutively in the Senate should also be applied in the House of Representatives. This effectively allowed for a system of optional preferential voting, which was rejected in 1981 by the Parliamentary Joint Select Committee on Electoral Matters (JSCEM). In order not to encourage electors to take advantage of the provision to allow ballot papers accidentally marked non-consequentially, a section of the CEA 1918 was enacted to make it an offence to print, publish and distribute electoral advertising such as howto-vote cards, that might induce electors to vote otherwise than in accordance with the instructions on the ballot paper.

At the 1987 and 1990 federal elections Mr Albert Langer conducted campaigns encouraging voter's *inter alia* to use a type of optional preferential vote. In 1990 the CEA 1918 was again strengthened to protect full preferential voting and made it an offence to encourage voting otherwise than full preferential voting.

At the 1996 elections Mr Langer indicated that he intended to encourage electors to use a form of optional preferential voting. As a result of an advertisement published by Mr Langer encouraging the above style of preferential voting, the AEC obtained an injunction, preventing him from continuing the campaign. Mr Langer<sup>5</sup> defied the injunction and was sentenced to jail for contempt of court. The term Langer Styler voting arose from Mr Langer's high profile campaigns of encouraging electors to vote in a form 1,2,3,4,4,4 or similar. In 1998 the CEA was again amended so that it was no longer an offence to encourage voters to vote other than in accordance with full preferential voting. However Langer-style votes would no longer be counted as formal.

In the 1998 and 2001 elections Langer-Style votes were counted as informal. Prior to 1998 these votes would have been counted up to the point that the numbering became non-consecutive at which time they would have been classified as 'exhausted'. Consequently this type of voting has contributed to the rise in informality at the 1998 and 2001 elections.

### Methodology

The AEC currently maintains the ballot papers from each election by Polling Place. The papers for each Polling Place were sorted by informality and categorised into one of the following nine categories. These categories were chosen as a result of previous studies and information received from Divisional Offices. It should be noted that in some cases the category of 'Other' is larger than would be expected. This is particularly true in Queensland and New South Wales where optional preferential systems are employed for State Government elections. In the case where a voter

<sup>&</sup>lt;sup>5</sup> For a detailed description of Langer style voting see Electoral Backgrounder Number 7, *Langer Style Voting*, Australian Electoral Commission, 17 July 1998, ISSN No 1440-8007. The notes are available on the AEC website; www.aec.gov.au/\_content/how/backgrounders07/index.htm

marked more than one preference but less than the total number of candidates, the papers are found in the 'Other' category. The categories are as follows:

- Blank. This category contains all those ballot papers that are completely blank, that is no writing whatsoever.
- Number 1 only. This category contains ballot papers where the elector expressed only a first preference by placing a single figure 1 against one candidate.
- Langer Style Voting. This category contains ballot papers with repeating numbers such as 1,2,3,3,3.... A description of Langer style voting is found in the above text.
- Non-Sequential. This category contains those ballot papers where the numbering is non-sequential such as 1,2,300,324,490....
- Voter Identified. This category contains ballot papers bearing writing identifying the elector.
- Marks. This category contains those ballot papers where there is no preference, or partial preference but slogans, written comments, marks etc are contained on the ballot paper.
- Slogans making numbering illegible . This category contains all those ballot papers where slogans, writing or comments have been made and the words or marks interfere with the preferences in such a way that the numbering cannot be deciphered.
- Other. The other category contains ballot papers that cannot be categorised into any of the above. Typically this category consists of ballot papers that have insufficient preferences expressed.

The results were entered into a database at Polling Place level and aggregated to Divisional and State levels. The results are found on the AEC website (http://www.aec.gov.au/\_content/what/voting/survey/index.htm). A limited number of independent variables were regressed against the informal votes based on research conducted on informality and in context with the Australian electoral environment. Certain conclusions and recommendations have been made throughout this document based on the results of the regression analysis. It should be noted that the census data used is 1996 as the 2001 census results were not available at the time of writing this report.

### **The Divisional Informal Tables**

Informal votes have been categorised by Division in separate tables located on the AEC web site (http://www.aec.gov.au/\_content/what/voting/survey/index.htm). The tables contain the following information.

• Demographic Rating. This is one of the following four socio-demographic categories assigned to each of the Divisions.

- Inner Metropolitan: Divisions situated in capital cities and consisting of wellestablished built-up suburbs.
- Outer Metropolitan: Divisions situated in capital cities and containing areas of more recent suburban expansion.
- Provincial: Divisions with a majority of population in major provincial cities.
- Rural: Divisions located outside capital cities and without a majority of population in major provincial cities.

The total number of enrolled electors for the Division, along with the total number who voted (Turnout) expressed both numerically and as a percentage of the enrolment.

The total number of Static Polling Booths, Special Hospital Team and Pre Poll voting centres. Each Divisional Office is used as a pre-poll centre during elections, therefore the minimum number of Pre-Polls is 1 for a Division.

The Two Candidate Preferred Votes (TCP) are expressed both as the total number of votes and a percentage of the total formal votes cast. The TCP is the names of the two parties who were first and second after all the preferences were distributed.

The informal vote is the total number of informal votes received as a percentage of the turnout. The informal votes are broken down by category. Each category is expressed as a percentage of the total informal vote.

The Polling Place containing the highest and lowest percentage of informal votes has been included along with the total number of votes, informal votes and percentage of informal votes for Absent, Pre Poll and Provisional votes.

### The State Informal Tables

The State informal tables are an amalgamation of the States Divisional tables. The last informal survey conducted by the AEC was in 1996, the relevant percentages of the informal votes by category have been included at the State level. It should be noted that the 1996 survey did not categorise ballots in the same categories as this report. The State informal tables also include a graph of the national informal vote compared to the individual state informal vote from 1901. It should be noted that the dates on the bottom of the graphs are arbitrary due to software constraints.

#### **International Overseas Informal Vote**

The informal vote in Australia is relatively high by international standards. McAllister<sup>6</sup> argues that "Australia has one of the highest levels of spoiled or informal ballots among established democracies".

<sup>&</sup>lt;sup>6</sup> See McAllister, Ian, and Toni Makkai and Chris Patterson 1992. "Informal Voting in the 1987 and 1990 Australian Federal Elections". Canberra: Commonwealth Government Printer

When comparing different countries and informal votes it is important to understand there are many factors that exert an influence on the informal vote. The type of electoral system, the rules governing formality, political and electoral knowledge and literacy levels are some of the factors to take into account. Another factor that must be considered when comparing informal votes is the frequency of the elections. Comparing the latest electoral results carries with it some danger, as there may be unique political, social, economic and electoral factors to consider in a single electoral event. Therefore, it is important to look at the informal vote over a period of time.

A total of 146 countries were analysed<sup>7</sup> and the average informal vote over the last 4 elections was calculated. In some countries the data for the last 4 elections is not available and consequently averages have been taken over 3, 2 and in some cases 1 event. The countries have been ranked from the highest informal percentage (1) to the lowest (146). Australia ranks 46. That is Australia has the 46th highest rate of informal voting out of 146 countries.

Table 1 identifies the 10 highest informal voting countries along with other relevant data. The table also identifies those countries that have compulsory voting and the type of voting system<sup>8</sup> within each country.

<sup>&</sup>lt;sup>7</sup> The data for this table has been taken from 'Voter Turnout Since 1945', International Institute for Democracy and Electoral Assistance, Stockholm, Sweden, 2001 ISBN 01-89098-61-7

<sup>&</sup>lt;sup>8</sup> A detailed description of voting systems is found in 'The International IDEA Handbook of Electoral System Design', The International Institute for Democracy and Electoral Assistance, Stockholm, Sweden, 1997 ISBN 01-89098-005

	Table 1							
Country	Informal %	Type of Electoral	Min Voting	Compulsory Voting	Ra nk			
		System <sup>9</sup>	Age					
Brazil	23.7	L	18	Y	1			
Peru	22.6	L	18	Y	2			
Ecuador	19.3	Р	18	Y	3			
Burma	12.3	F	18	Ν	4			
Somalia	11.1	Р	18	Ν	5			
Mozambique	10.7	L	18	Ν	6			
Angola	10.4	L	18	Ν	7			
Bolivia	10.0	Μ	18	Y	8			
Morocco	10.0	F	18	Ν	9			
El Salvador	9.5	L	18	Ν	10			
Australia	3.7	А	18	Y	46			
United	0.2	F	18	Ν	14			
Kingdom					6			

#### **Compulsory Voting**

Compulsory voting was first introduced at Commonwealth elections in 1924. With the exception of Queensland, the various States introduced compulsory voting after the Commonwealth.<sup>10</sup> Is compulsory voting an influence on informal voting? While compulsory voting avoids a high degree of abstention, there is no guarantee that everyone will comply with the electoral laws and vote formally.

Lavaareda<sup>11</sup>, argues that compulsory voting is one of many factors in informal votes. He argues that blank ballots cast in systems employing compulsory voting are " the functional equivalent of abstention". The link between compulsory voting and informal voting is also strongly supported by Mackerras and McAllister<sup>12</sup> who note that Australia has one of the highest rates of informal votes in established democracies and state "The most significant consequence of compulsory voting is a large proportion of invalid and spoiled votes at elections". The Mackerras and McAllistar view that informality and compulsory voting is inextricably linked is

<sup>&</sup>lt;sup>9</sup> Alternative Vote (A), First Past The Post (F), List Proportional Representation (L), Parallel System (P)

<sup>&</sup>lt;sup>10</sup> Queensland (1912), Victoria (1924), New South Wales (1927), Tasmania (1928), Western Australia (1936), South Australia (1941).

<sup>&</sup>lt;sup>11</sup> Lavareda, José Antôáio (1991), A democracia nas urnas: o processo partidario eleitoral barsileiro, Ri de Janerio. Lavareda's work in connection with informal voting is discussed in Timothy Power and J Timmons Roberts, 'Compulsory Voting, Invalid Ballots, and Abstention in Brazil' in Political Research Quartley 48 (3), December 1995 pp 795–826

<sup>&</sup>lt;sup>12</sup> M Mackerras and I McAllister: 'Compulsory voting, party stability and electoral advantage in Australia', Electoral Studies – An International Journal, Volume 18, Number 2 June 1999, Harold Clarke, Geoffrey Evans and Elinor Scarborough (editors)

supported by Major<sup>13</sup> who notes that 'the informality rate increases under compulsory voting because voluntary abstention is no longer an option".

The link between compulsory voting and informal voting is difficult to prove. Authors supporting such a hypothesis conclude that there are those voters who vote informal, but under a non compulsory-voting system would simply not vote at all. Who are these voters and how can such ballots be identified? If there is an answer it is not an easy one. The following table identifies by State the different categories of informal votes.

			Ta	ble 2					
NSW	NSW	QLD	VIC	WA	SA	TAS	ACT	NT	NAT
Blanks	20.38	15.67	24.9	23.3	24.5	27.86	30.8	20.7	21.43
			5	6	2		4	4	
Number 1	32.47	46.42	26.0	29.8	36.6	23.60	28.7	27.9	33.58
			5	7	3		6	5	
Ticks and	12.57	11.46	12.9	9.93	14.9	15.84	8.99	10.6	12.42
Crosses			7		5			2	
Langer Style	2.37	2.00	3.22	4.18	1.05	6.88	0.83	14.5	2.68
								6	
Non Sequential	22.52	10.49	14.1	21.7	13.4	13.17	7.66	15.0	17.18
-			5	5	0			6	
Voter Identified	0.04	0.03	0.07	0.11	0.03	0.02	0.04	0.00	0.04
Marks	5.49	4.91	8.23	7.78	5.97	12.11	4.20	2.98	6.31
Slogans making	0.28	0.30	0.42	0.18	0.57	0.01	0.05	0.00	0.31
numbering									
illegible									
Other	3.87	8.72	3.98	2.83	2.87	0.51	18.6	8.09	6.00
							3		
Total	5.42	4.83	3.98	4.92	5.54	3.40	3.52	4.64	4.82

It would be easy to dismiss those ballots that were returned totally blank as deliberate informal due to political protest. There may be other reasons such as simply forgetting after completing the Senate ballot paper, not understanding the electoral system and instead of making a mistake and voting for the wrong party, an individual may elect to return a blank ballot paper. Consequently, blank ballot papers alone cannot be guaranteed to represent protest votes.

Those ballot papers categorised under the heading "marks" are perhaps more indicative of political protest. These ballot papers consist of slogans, words of protest against the political and electoral system. They are deliberately informal, in many cases no party has been selected, rather simply words of protest have been written on the ballot paper. In other words it is clear that the voters intent was to cast an informal ballot. It is not unreasonable to suggest that if a non-compulsory system of voting was introduced then these voters would be abstainers. At the 2001 election a total of 36,689 electors voted in such a manner. Had these electors abstained from voting then the turnout would have declined from 12,054,664 to 12,017,976 or from

<sup>&</sup>lt;sup>13</sup> Shaun Major 'To Vote or Not to Vote?, Compulsory Voting in Australia, Western Australian Electoral Commission, December 1995.

94.85% to 94.56%. Removing the ballots categorised as "Marks" would have seen the informal vote drop to 4.52%.

It is impossible to say with assurance whether other types of informal voting are a deliberate act of electoral disobedience or a misunderstanding of the electoral laws. However it appears from all the evidence and literature that compulsory voting does bring with it an element of deliberate informal voting. While the magnitude of this protest vote may not be large, the fact is it does exist and it is difficult to measure. In his paper on compulsory voting Smith<sup>14</sup> notes "In Australia, compulsory voting caused voters turnout to rise from a turnout at a Commonwealth level that had been as low as 46.9% and never risen above 77.7% to increase to over 90%, usually above 95%. Nevertheless, despite this large increase of voters, there has been at best a very small increase of informal vote due to compulsory voting, never greater than 1%". Assuming Smith's calculations are correct and the maximum increase in the informal vote is 1% then this would have translated into a total of 120,546 electors at the 2001 election.

Given that those who deliberately vote informal would not vote at all in an environment of non-compulsory voting, one would expect to see a decline in both the turnout and the informal vote. The Tasmanian Local Government elections offer such an opportunity. The Local Government elections are non-attendance elections that are the ballots are mailed to electors. Voting is non-compulsory and electors are required to number at least the number from 1 to n( where n = the number of vacancies). The following table<sup>15</sup> identifies results from Local Government elections in the Federal division of Braddon in 1999. The Local Government elections employ the Hare-Clarke system.

		Table 5		
LGA Name	Candidates	Required	Turnout	Informal Vote
		Numbering		
Central Coast	16	1 - 8	59.58	1.87
Devonport	14	1 – 7	59.48	1.93
City				
Burnie City	14	1 – 7	61.63	2.01
King Island	9	1 - 4	75.65	0.62
Circular-Head	7	1 – 5	62.50	0.57
Waratah-	8	1-5	59.95	0.63
Wynyard				

Table 3

At the 1998 House of Assembly in the division of Braddon where compulsory voting is used along with the Hare-Clarke system, the informal vote was 4.19% and the turnout was 96.11. The federal election resulted in Braddon yielded an informal vote of 3.33% with a turnout of 96.45%.

As can be seen in Table 3, the Informal vote is extremely low in all elections with non-compulsory voting compared to electoral events in Australia where compulsory voting is used. However it should be noted that the turnout figure is also lower

<sup>&</sup>lt;sup>14</sup> See "Compulsory Voting – A comparative Approach", Lindsay Smith, Mitchell College of Advanced Education, Administrative and Political Sciences (ISBN 0 909665 30 3)

<sup>&</sup>lt;sup>15</sup> Source: "Local Government Election Report 1999", Tasmanian Electoral Office.

compared with compulsory voting in the Australian context. There can be a number of reasons for this; firstly there is only one ballot paper and electors have more time to vote than they otherwise would at an attendance ballot. Secondly, it is not compulsory. While it is difficult to quantify, there does appear to be compelling evidence supporting Elkins<sup>16</sup> view that compulsory voting brings with it some degree of informal voting. However, there are many other factors, which contribute to the informal vote.

### **Optional Preferential Voting**

Voting for the House of Representatives requires every square to be numbered in order for it to be formal. The instructions on the ballot paper are clear "Number the boxes from 1 to  $n^{17}$  in the order of your choice". However not all elections in Australia have full preferential. The table<sup>18</sup> below sets out the details of the name of the legislature to be elected and the rules governing formality for optional preferential systems.

State	Legislature	Instructions on the ballot paper
NSW	Legislative Assembly	Place the number '1' in the square opposite the name of the candidate for whom you desire to give your first preference vote. You may, if you wish, vote for additional candidates by placing consecutive numbers beginning with "2" in the squares opposite the names of those additional candidates in the order of your preference for them.
QLD	Legislative Assembly	<ul><li>Place the number ("1") in the square opposite the candidate of your choice.</li><li>You may if you wish indicate your preference for additional candidates by numbering the other squares in your preferred order.</li></ul>

#### Table 4 – Optional Preferential

It is therefore not surprising that the two States with the highest proportion of 'number 1 only' informal are NSW and QLD who practice optional preferential at a

<sup>&</sup>lt;sup>16</sup> See Zachary S Elkins 'Institutionalising Equality: The Compulsory Vote in Brazil, University of Texas, thesis. Refer to <u>www.tcnj.edu/~psm/abstracts/000054a.htm</u>

<sup>&</sup>lt;sup>17</sup> n is the number of candidates on the ballot paper. The instructions on the voting screen read "Please read the instructions on your ballot paper"

<sup>&</sup>lt;sup>18</sup> source 'Electoral Systems of Australia's Parliaments and Local Government', Electoral Council of Australia, Melbourne. <u>www.eca.gov.au</u>

State level. What influence does States practicing optional preferential voting have on the Commonwealth elections?

The federal division of Reid in NSW is a landlocked division surrounded by Parramatta, Benelong, Lowe, Blaxland, Fowler and Prospect. The State electorate of Auburn contains approximately 60% of Reid and the remainder is within the division of Blaxland.

In September 2001 a State by-election was conducted in Auburn (2 months prior to the Federal election) where optional preferential was employed. The table below sets out the Polling Places in the federal division of Reid. The table identifies if the Polling Place is in the State Divisions of Auburn, the change of informal vote from the 1998 election (swing) and where appropriate the informal vote for the State electorate of Auburn.

Polling Place	Auburn	Table 5 – Division of           % informal	Swing	Auburn Informal %
Auburn	Yes	11.38	+5.19	3.58
Auburn Hospital	Yes	15.80	+8.53	4.91
Auburn North	Yes	13.98	+6.82	3.23
Auburn West	Yes	17.19	+10.80	4.28
Berala	Yes	13.28	+7.10	3.64
Blaxcell	No	9.75	+2.90	
Cardinal Gilroy Village	No	6.00	-2.56	
Fowler Road	No	11.18	+1.55	
Granville	No	12.46	+3.83	
Granville North (Reid)	Yes	8.97	+2.76	
Granville South	No	10.81	+3.25	
Guildford	No	8.93	+2.06	
Guildford East	No	11.59	+2.98	
Guildford West	No	10.63		
Hilltop Road	No	10.70	+1.22	
Hyde Park	Yes	12.13	+5.64	
Lidcombe	Yes	11.27	+5.04	2.94
Lidcombe South	Yes	12.24	+4.67	2.92
Merrylands	No	11.21	+2.92	
Merrylands East	No	11.79	+3.58	
Merrylands North	No	9.22	+1.73	
Merrylands West	No	5.10	-0.12	
Monterey Street	No	4.15	-1.14	
Old Guildford	No	11.87		
Rawson	No	7.87	-2.53	
Regents Park	Yes	9.29	+3.69	3.65
Sherwood	No	10.03	+2.84	
Grange				
Silverwater	Yes	7.57	+0.07	2.06
Trinity Auburn	Yes	14.96		
Wentworthville South	No	10.58	+2.45	
Yennora (Reid)				

Table 5 – Division of Reid

The table illustrates that the informal swing for polling places within the State electorate of Auburn was consistently higher than those that were not contained in the Auburn electorate but were within the Division of Reid. In fact, the average swing for Auburn Polling Places in Reid was +5.48 compared with +1.56 for non-Auburn Polling Places. A similar effect is also found in the Division of Blaxland.

What does this show us? There was a campaign at the time of the Auburn by-election to Vote 1. Under the optional preferential system of voting, by casting a first preference vote, the vote is counted. However this is not the case at a federal election where preferences for all candidates need to be allocated by the voter. It appears that

a number of voters in the Reid Division that were covered by the State electorate of Auburn continued to cast a first preference vote only at the federal election<sup>19</sup>, thus making the ballot informal.

#### **Sociological Factors**

Existing literature<sup>20</sup> suggests that there is a correlation between informal voting and sets of economical-sociological independent variables. The variables used in this report are named socio-demographic by Milbrath and Goel<sup>21</sup> McAllister, Makkai and Patterson used a method of factor analysis to identify a range of variable that were closely correlated and use the results to use as variables in the regression model.

After examining the literature available and in light of anecdotal evidence from Divisional Returning Officers, a number of independent variables were used to regress against the informal vote at divisional levels. The analysis uses the ordinary least squares regression technique. A number of variables have been omitted due to the fact that after analysis they were not statistically significant. In addition some variables were removed because of the high degree of multicollinearity.<sup>22</sup>

The following variables were included; The number of candidates for each Division at the 2001 election, the percentage of persons not fluent in English, the percentage of those persons aged 80 years and over, these with low education.<sup>23</sup> The results of the regression are found in Table 6.

<sup>&</sup>lt;sup>19</sup> A total of 7,964 informal votes were cast at the 2001 federal election in Reid (11.08% of the total votes). A total of 2,640 informal ballots had a first preference (1 only) on them which represents 33.15% of the total informal ballot papers for Reid.

<sup>&</sup>lt;sup>20</sup> A discussion of the sociological variables is found in 'Electoral Absenteeism and Potential Absenteeism in Belgium', J Ackaert and Lieven De Winter, a paper delivered at the 1996 Annual meeting of the American political Science Association in San Francisco.

<sup>&</sup>lt;sup>21</sup> Milbrath,LW and Goel M (1977) Political Participation. *How and Why Do People Get Involved in Politics*, Chicago, Rand McNally College Publishing Company

<sup>&</sup>lt;sup>22</sup> Multicollinearity occurs when two variables contain much of the same shared information. For a precise discussion on the subject see Johnson.J (1984), *Econometric Methods*,  $3^{rd}$  edition. Singapore, McGraw-Hill

 $<sup>^{23}</sup>$  Low education was defined at those persons who either never attended school or left school at the age of 15 and under.

Multiple R	0.797005
R Square	0.635219
Adjusted R	0.625154

			Table 6			
	Coeffici	SE	t- stat	p-Value	Lower	Upper
	ent				95%	95%
Intercept	0.19487 7	0.515513	0.378025	0.705965	-0.824014	1.213767
Number of Candidates	0.30419	0.045104	6.744253	3.4E-10	0.215045	0.393335
Not Fluent in English	0.357105	0.028136	12.69189	2.71E-25	0.301494	0.412715
Age 80+	-0.109769	0.054991	-1.996143	0.047791	-0.218457	-0.001082
Low Education	0.102349	0.016578	6.173724	6.35E-09	0.069583	0.135115
Luucation						

#### Not Fluent in English

As illustrated in Table 7 the "Not Fluent In English" variable is the major predictor and highly statistically significant. As McAllister, Makkai and Patterson observe 'English language proficiency is therefore a major factor in determining informal voting<sup>24</sup>'. McAllister found that informal voting was significantly higher in areas where there were large concentrations of non-English speaking groups.

There are two plausible explanations for informal voting and electors not proficient with the English language. Firstly, once the voter enters the polling booth voting is a test of their English proficiency. The ballot paper and instructions are in English. Regardless of the amount of education and political campaigning, the voter must have more than a basic understanding of the English language to vote effectively.

Secondly many of the voters who are not proficient in the English language arrive from countries where the voting system is far different. It must be remembered few countries practice the alternative vote system. Many use a system where a one or a tick or a cross is all that is necessary to cast a formal vote. There may also be a number of voters who do not comprehend the system, and are afraid of making a mistake and simply return a blank ballot paper.

The AEC provides telephone assistance and produces a large number of advertisements and other materials in various languages other than English. The languages used during the last election are listed below.

		Tuble / Lun	8	a mina er using
Language	Radio	Television	Press	Interpreting Service
Arabic	~	<b>~</b>	<	✓
Bosnian	~			
Cantonese	~	<b>~</b>		✓
Chinese			~	
Croatian	~		~	✓
German	~		~	

 Table 7 – Languages used in Advertising

<sup>&</sup>lt;sup>24</sup> McAllister, Makkai, Patterson (1992), pp 24-25

Greek	<b>~</b>	✓	✓	✓
Hungarian	~		~	
Indonesian	>			
Italian	>	✓		✓
Japanese	~		~	
Khmer	~			✓
Korean	~		~	
Lao	~			
Macedonian	~	✓	~	✓
Maltese	~		~	
Mandarin	~	✓		✓
Persian	~		~	
Polish	>		>	✓
Portuguese	~		~	✓
Russian	>		>	✓
Serbian	>		>	✓
Spanish	>	<b>~</b>	>	✓
Thai	>			
Turkish	>		~	✓
Vietnamese	>	~	~	✓
Tagalog	>			

In addition the AEC provided radio advertisements for14 indigenous languages and Telephone Typewriter Phone Numbers (TTY) in each State and Territory.

By international standards, there can be no doubt that the Australian system of voting is complicated. A point emphasised by Dean Jaensch<sup>25</sup> who writes "The Australian elector, in any three-year period, will be asked to vote for the Australian Senate with one electoral system, for the House of Representatives with a different system, for his two state houses with the possibility of different systems for each, and for his local government with yet another system. As well, he may be asked to decide on federal or state referenda questions again with a different system of voting. He may be asked on one occasion to mark his ballot paper with sequential numbers and fill all available boxes (or available boxes except one), on another occasion to put a cross in any one square, and on refereed to write 'yes' or 'no'." Finally, the system is complicated by the use of two ballot papers for the Senate and House of Representatives. Not only are the ballots papers different in appearance but also have different rules in connection with formality. A tick can be used above the line in the Senate, there are no ticks allowed at all in the House of Representatives ballot paper. Even more importantly is the use of a singe 1 above the line in the Senate. As previously discussed a '1' only in the House of Representatives is informal.

#### **Low Education Attainment**

Low education attainment in the context of this report is defined as those persons whom have had no formal schooling or left school at the age of 15 or below.

<sup>&</sup>lt;sup>25</sup> Jaensch.Dean 'Electoral Systems' in Richard Lucy (ed), *The Pieces of Politics* (Melbourne, 1975); MacMillian.

Wolfinger and Rosenstone<sup>26</sup> discovered a high correlation between less educated voters and informal voting.

As discussed above, the Australian voting system is not simple, sometimes contradictory and difficult to understand. There are differences in State systems, the Senate and the House of Representatives voting is different. In his work Elkins uses a regression model and discovers that education levels are the strongest variable related to turnout. He argues that those who have not attained a certain level of education are less likely to engage in political participation. Elkins also notes that in order to vote a certain level of literacy is required. The correlation of informal voting and persons attaining a low education is consistent with other research. Consequently, low education attainment is a valuable predictor in estimating informal voting.

### Age

The age cohort used in the regression was those citizens aged 80 years and older. Australia's population continues to age and according to the Australian Bureau of Statistics<sup>27</sup> the medium age has risen from 27.5 years in 1971 to 34.3 years in 1997 and projections for 2031 are around 42.5 years. Therefore ensuring the elderly understand the voting system and have access to facilities suitable for the aged on polling day is critical.

The regression model indicates that the variable for those aged 80 and over is not a significant indicator of informality. In other words the elderly do not appear to have an impact on the informal vote. Why would the elderly be a healthy predictor? Other reasons may be that they usually have deep-rooted ties to the local environment. They are less mobile and as Elkins<sup>28</sup> explains they have developed some degree of knowledge and opinion of issues, candidates and parties. The elderly also usually have strong relationships with the local community and a sense of civic responsibility. They are more patient and are likely to spend more time checking their ballot paper for mistakes and usually have a more considered opinions on how to mark their preferences. This and the fact that the elderly will have voted many times before make them reliable formal voters.

However the elderly are still vulnerable to informal voting. Many polling stations have poor lighting, the font is relatively small and with diminishing eyesight it may be a problem to see correctly. A ballot paper with a large number of candidates can be a daunting and often a confusing task. The risk of repeating numbers and non-consecutive numbers is greatly enhanced with the elderly.

#### Number of Candidates

The number of candidates on the ballot paper is influential in informal voting. Given the above discussion this is not surprising. This report has already discussed a number of variables, which may influence informal voting, and requires the citizen to have a reasonable degree of literacy, good comprehension of the voting system, basic numerical skills, and a proficiency in the English language.

<sup>&</sup>lt;sup>26</sup> Wolfinger, R and Rosenstone (1980), Who Votes (New Haven: Yale University Press)

<sup>&</sup>lt;sup>27</sup> Australian Bureau of Statistics, Australian Social Trends 1999, AusStats, www.abs.gov.au

<sup>&</sup>lt;sup>28</sup> Elkins pp 24-25

When a large number of candidates are placed on the ballot paper, there is a possibility that this will challenge some of these skills identified above. If the voter lacks some of these skills, say literacy, then after marking a certain number of preferences they may become confused, resulting in numbering becoming non-sequential. The regression model indicates that the number of candidates is a major factor in informal voting. Perhaps a good example of the impact of the number of candidates on informality can be found in the Division of Fowler. In 1998 Fowler had 5 candidates and an informal vote of 5.78%. The 2001 election saw 10 candidates and an informal vote of 12.75%.

### The Senate

The voting system for the Senate and House of Representatives are very different and there has been a great deal of discussion by scholars on the influence of the Senate voting system on informal voting in the House of Representatives.

The argument is simple: since the voting system is different and voters are required to complete a paper for the House of Representatives and the Senate there is confusion between the two systems and voters accidentally mark the House of Representatives paper in a manner that would be formal for the Senate but make the House of Representatives paper informal.

In 1984 a system was introduced named the Group Voting Ticket that allowed the voter to place a single '1' against the Group (a type of list system) of their choice and thus avoid numbering 1 to n boxes. The effect on the Senate was immediate, the 1984 election saw a decline in the Senate informal vote from 9.9% in 1983 to 4.3%. The Senate informal vote continued to decline after the introduction of the Group Voting Ticket. However the inverse was true for the House of Representatives. In 1984 the informal vote jumped from 2.1% in 1983 to 6.3%. The reason was many voters were confused and while using a single '1' in the Senate accidentally believed by doing the same in the House of Representatives their vote would be formal.

McAllister argues that 'a specific cause of informal voting in the 1984, 1987 and 1990 House elections was a change to the form of the Senate paper". The argument is that there remains a residual effect of the 1984 change, some voters continue to be confused between using a '1' only in the Senate and the House of Representatives.

#### Conclusion

Under the current system electors can cast a deliberate informal vote. There is little anyone can do to prevent political protests. However not all informal votes are deliberate, and it may be that those which present a prima facia case of deliberate informal voting are in fact a result of frustration and inability to understand a complex voting system.

This report has demonstrated there is not one single factor that can explain informal voting, rather there are a number of variables. The first set of variables are environmental factors, which contribute to informal voting in Australia. They can be defined as:

• Compulsory Voting

- The differences between State, Local government and Federal electoral systems.
- The number of candidates competing at a Divisional level
- The difference between the Senate voting system and the House of Representatives.

This report has also demonstrated those sociological factors such as age, education and English proficiency have a significant influence on informal voting. This conclusion is consistent with similar research conducted, which shows that there is a strong relationship between informal voting and low English proficiency and low socio-economic status. The variables used in the regression model and being highly statistical significant are:

- The proficiency with the English language of the voter
- The educational attainment level of the voter
- The age of the voter.

This report has not attempted to reconstruct individual behaviour from aggregate data, such analysis is complicated and often dangerous as demonstrated by King. However the report has found variables that are strong predictors in informal voting.

The information contained in this report allows the AEC to review its voter education campaigns and develop strategies that will aim to reduce informal voting at future elections.

### Attachment A – Sections of the Commonwealth Electoral Act 1918

240. In a House of Representatives election a person shall mark his or her vote on the ballot-paper by:

(a) writing the number 1 in the square opposite the name of the candidate for whom the person votes as his or her first preference; and

(b) writing the numbers 2, 3, 4 (and so on, as the case requires) in the squares opposite the names of all the remaining candidates so as to indicate the order of the person's preference for them.

(2) The numbers referred to in paragraph (1)(b) are to be consecutive numbers without the repetition of any number.

268 (1) A ballot-paper shall (except as otherwise provided by section 239, and by the regulations relating to voting by post) be informal if:

(a) subject to subsection (2), it is not authenticated by the initials of the presiding officer or by the presence of the official mark;

(b) subject to section 269 and subsection 270 (1), in a Senate election, it has no vote indicated on it, or it does not indicate the voter's first preference for 1 candidate and the order of his or her preference for all the remaining candidates,

(c) in a House of Representatives election, it has no vote indicated on it, or it does not indicate the voter's first preference for 1 candidate and an order of preference for all the remaining candidates:

Provided that, where the voter has indicated a first preference for 1 candidate and an order of preference for all the remaining candidates except 1 and the square opposite the name of that candidate has been left blank, it shall be deemed that the voter's preference for that candidate is the voter's last and that accordingly the voter has indicated an order of preference for all the candidates:

Provided further that, where there are 2 candidates only and the voter has indicated his or her vote by placing the figure 1 in the square opposite the name of 1 candidate and has left the other square blank or placed a figure other than 2 in it, the voter shall be deemed to have indicated an order of preference for all the candidates;

(d) it has upon it any mark or writing (not authorised by this Act or the regulations to be put upon it) by which, in the opinion of the Divisional Returning Officer, the voter can be identified:

Provided that paragraph (d) shall not apply to any mark or writing placed upon the ballot-paper by an officer, notwithstanding that the placing of the mark or writing upon the ballot-paper is a contravention of this Act; or

(e) in the case of an absent voter - the ballot-paper is not contained in an envelope bearing a declaration made by the elector under subsection 222 (1).

(2) A ballot-paper to which paragraph (1) (a) applies shall not be informal by virtue of that paragraph if the Divisional Returning Officer responsible for considering the question of the formality of the ballot-paper is satisfied that it is an authentic ballot-paper on which a voter has marked a vote.

(3) A ballot-paper shall not be informal for any reason other than the reasons specified in this section, but shall be given effect to according to the voter's intention so far as that intention is clear.

274. (1) In a House of Representatives election the scrutiny shall, subject to section 266, be conducted in the manner set out in this section.

(2) Each Assistant Returning Officer shall, in the presence of a polling official, and of such authorised scrutineers as may attend:

(a) exhibit for the inspection of the scrutineers each ballot-box received from a presiding officer, electoral visitor, or mobile polling team leader;

(aa) record the condition of the ballot-box when it was received;

(ab) check the accuracy of the statement of the presiding officer, electoral visitor or mobile polling team leader by:

(i) removing the ballot-papers from the box;

(ii) counting, but not inspecting, them; and

(iii) recording the number of ballot-papers removed from the box;

(b) reject all informal ballot-papers, and arrange the unrejected ballot-papers under the names of the respective candidates by placing in a separate parcel all those on which a first preference is indicated for the same candidate;

(c) count the first preference votes given for each candidate on all unrejected ballotpapers;

(d) make out and sign a statement (which may be countersigned by a polling official, and, if they so desire, by such scrutineers as are present) setting out the number of first preference votes given for each candidate, and the number of informal ballot-papers;

(e) place in a separate parcel all the ballot-papers which have been rejected as informal;

(f) transmit the following information, by telegram or in some - other expeditious manner, to the Divisional Returning Officer:

(i) the number of first preference votes given for each candidate; and

(ii) the total number of ballot-papers rejected as informal;

(g) seal up the parcels and indorse on each parcel a description of the contents thereof, and permit any scrutineers present, if they so desire, to countersign the indorsement; and

(h) transmit the parcels to the Divisional Returning Officer with the least possible delay, together with the statement specified in paragraph (d).

(2A) If, in a House of Representatives election, there are more than 2 candidates for a Division, the Australian Electoral Officer for the State or Territory that includes the Division must, in writing, direct each Assistant Returning Officers for the Division, and the Divisional Returning Officer for the Division, to conduct a count of preference votes (other than first preference votes) on the ballot papers that, in the opinion of the Australian Electoral Officer, will best provide an indication of the candidate most likely to be elected for the Division.

(2B) An Assistant Returning Officer to whom a direction is given under subsection (2A)

must:

(a) count the preference votes in accordance with the direction; and

(b) transmit to the Divisional Returning Officer any information required by the direction; in the manner specified in the direction.

(2C) A Divisional Returning Officer to whom a direction is given under subsection (2A) must count the preference votes in accordance with the direction:

(a) at the time of the fresh scrutiny under subsection (7); and

(b) at the time at which the Divisional Returning Officer examines and counts ballotpapers recording declaration votes other than ballot-papers recording declaration votes that were examined and counted at the time of the fresh scrutiny.

(3) The Divisional Returning Officer shall open all ballot-boxes not opened by an Assistant Returning Officer, and shall conduct the scrutiny of the ballot-papers contained therein in the manner aforesaid as far as applicable.

(4) The Divisional Returning Officer shall, in the manner prescribed by this Act or the Regulations, examine, count, and deal with all ballot-papers used for casting declaration votes.

(7) The Divisional Returning Officer:

(a) shall open the sealed parcels of ballot-papers received from the Assistant Returning Officers in or for the Division;

(b) shall make a fresh scrutiny of the ballot-papers contained in the parcels; and, for the purpose of that scrutiny, shall have the same powers as if it were the original scrutiny, and may reverse any decision given by an Assistant Returning Officer in relation to the original scrutiny;

(c) from the result of the scrutiny of the votes counted under the provisions of

subsections (3) and (4), and the fresh scrutiny conducted under the provisions of this subsection, shall ascertain the total number of first preference votes given for each candidate and the number of informal ballot-papers; and

(ca) must then proceed with the scrutiny and the counting of the votes as follows:

(i) if, after ascertaining the first preference votes given for each candidate, no candidate has

an absolute majority of votes, the Divisional Returning Officer must apply subsection (7AA);

(ii) if, after ascertaining the first preference votes given for each candidate, a candidate has an absolute majority of votes, that candidate is elected; and

(d) if, after applying subsection (7AA), subparagraph (7AA)(b)(i) applies, shall proceed with the scrutiny and the counting of the votes as follows:

(i) the candidate who has received the fewest first preference votes shall be excluded, and each ballot-paper counted to the candidate shall be counted to the candidate next in the order of the voter's preference;

(ii) the process of excluding the candidate who has the fewest votes, and counting each of his or her ballot-papers to the unexcluded candidate next in the order of the voter's preference, shall be repeated until only 2 candidates remain in the count; and

(iii) if, following the exclusion of candidates under this paragraph, a candidate has an absolute majority of votes, that candidate shall be elected.

(7AA) If, after ascertaining the total number of first preference votes for each candidate under paragraph (7)(ca), no candidate has an absolute majority of votes, the Divisional Returning Officer must take the following steps:

(a) rank the candidates consecutively in order of their standing in the poll as set out in subsection (7AB);

(b) then:

(i) if the total number of first preference votes for all the candidates, other than the first and second ranked candidates, is equal to or more than the number of first preference votes for the second ranked candidate - proceed with the scrutiny as set out in paragraph (7)(d); or

(ii) if the total number of first preference votes for all the candidates, other than the first and second ranked candidate, is less than the number of first preference votes for

the second ranked candidate - exclude all the candidates other than the first and second ranked candidates;

(c) if subparagraph (b)(ii) applies - count each ballot-paper of an excluded candidate to whichever of the first or second ranked candidates is earlier in the order of preference expressed on the ballot-paper.

(7AB) The ranking of candidates under paragraph (7AA)(a) is to be done as follows:

(a) the candidate with the highest number of first preference votes is to be the firstranked candidate, the candidate with the second-highest number of votes is to be the second ranked candidate, and so on;

(b) if 2 or more candidates have an equal number of first preference votes, the ranking as between those candidates is to be decided, by lot, by the Divisional Returning Officer.

(7AC) If, following the exclusion of candidates under subparagraph (7AA) (b)(ii) and the count of ballot-papers under paragraph (7AA)(c), a candidate has an absolute majority of votes, that candidate is elected.

(7A) The fresh scrutiny referred to in paragraph (7) (b) shall, if the Australian Electoral Officer for the State or Territory that includes the relevant Division so directs in writing, include a scrutiny of such preferences (other than first preferences), on such of the ballot-papers, as are required by the direction, and shall be conducted in the manner specified in the direction.

(9) If, on any count other than the final count:

(a) 2 or more candidates (lowest ranking candidates) have an equal number of votes; and Scrutiny of votes in House of Representatives elections

(b) one of them has to be excluded; the candidate to be excluded is the candidate with less votes than any of the other lowest ranking candidates at the last count at which one of those candidates had less votes than any of the others, but, if there has been no such count, the Divisional Returning Officer must decide by lot which of them is to be excluded.

(9A) If, in the final count, 2 or more candidates have an equal number of votes, the Divisional Returning Officer shall make a fresh scrutiny of the votes scrutinised under subsection (7) and a fresh scrutiny of all declaration ballot-papers rejected at the preliminary scrutiny.

(9B) If, after the fresh scrutinies referred to in subsection (9A), a candidate has received an absolute majority of votes, that candidate shall be elected.

(9C) If, after the fresh scrutinies referred to in subsection (9A), 2 or more candidates have an equal number of votes, the Divisional Returning Officer shall give to the Electoral Commissioner written notice that the election cannot be decided.

(10) Subject to subsection (11), in this section an absolute majority of votes means a greater number than one-half of the whole number of ballot-papers other than informal ballot-papers.

(12) The Divisional Returning Officer shall:

(a) place in a separate parcel all the ballot-papers which have been rejected as informal;

(b) place in a separate parcel all the unrejected ballot-papers; and

(c) seal up the parcels and indorse on each parcel a description of the contents thereof,

and permit any scrutineers present, if they so desire, to countersign the indorsement.

# Appendix B Section of The Scrutineers Handbook – 2001

"A voter at the House of Representatives election is obliged to :

- Place the number 1 in the square on the ballot paper opposite the name of the candidate for whom they gave his/her first preference; and
- Place consecutive numbers 2,3,4 ( and so on, as the case requires), without repetition of any number, in the squares opposite the names of all remaining candidates so as to indicate the order of preference for them.

Following amendments to the Act, a House of Representatives vote marked '1,2,3,,3,3....etc will not be formal up to the point where duplication numbers occur. Any vote marked in this way will be rejected as informal.

# **Formality Checks**

Formality checks of ballot papers fall into two categories:

- One comprising tests of whether the ballot paper concerned is an authentic one which does not identify the voter; and
- The other comprising tests of whether the voter has performed their duty in marking the ballot paper sufficiently well for it to be accepted.

# Authenticity tests

To be accepted as formal, a ballot paper:

- Must be authenticated by the official mark or by initials of the Presiding officer, or must, in the opinion of the DRO deciding the question , be an authentic ballot paper;
- Must not have any unauthorised writing on it by which the voter can be identified, and
- Must, in the case of a declaration vote, have been contained in a declaration envelope.

### Acceptable numbering – House of Representatives

A House of Representatives ballot paper is formal if:

- A first preference is shown by the presence of the number 1 in the square opposite the name of one, and only one candidate;
- There are consecutive numbers in all other squares on the ballot paper, indicating an unbroken consecutive sequence of preferences;
- There is no repetition of any number; and
- No more than one square (representing the last preference only) is left blank.

It should be noted that ticks and/or crosses on a House of Representatives ballot paper will render it informal. However, a ballot paper which represents the required numbers either by roman numerals or by ordinal numbers (eg  $1^{st}$ , end,  $3^{rd}$ ) or letters (eg A B C etc) can be accepted as formal".

#### References

Ackaert, Johan and DE Winter, Lieven. 1996 "<u>Electoral Absenteeism and Potential</u> <u>Absenteeism in Belgium</u>"

Australian Electoral Commission. 2001 "Scrutineers' Handbook Election 2001", Canberra: Australian Electoral Commission

Commonwealth Electoral Act 1918, Reprint 9

Elkins, Zachary. 1996 "Institutionalising Equality: The Compulsory Vote in Brazil", University of California, PHD thesis, University of Texas

International Institute for Democracy and Electoral Assistance. 2002 "<u>Voter Turnout</u> <u>since 1945 – A Global Report</u>", Stockholm: Bulls. Tryckeri, Halmstad

International Institute for Democracy and Electoral Assistance.1997 "<u>The</u> <u>International IDEA Handbook of Electoral System Design</u>", Stockholm: Bröderna Carlssons Boktryckeri AB

Jaensch, Dean. 1975. "Electoral Systems" In Richard Lucy (ed) "<u>The Pieces of</u> <u>Politics</u>". Melbourne. MacMillian Company

Johnson, J. 1984. "Econometric Methods". Singapore. McGraw-Hill Book Co

King, Gary. 1997 "<u>A Solution to the Ecological Inference Problem</u>". New Jersey, Princeton University Press

Lavareda, Jose Antonio. 1991 "<u>A democracia nas urnas: o processo partidário eleitoral brasilerio</u>". Rio de Janeiro. Rio Fundo Editora.

Mackerras, Malcolm and McAllister, Ian. 1999. "Compulsory Voting, Party Stability and Electoral Advantage in Australia". <u>Electoral Studies – An International Journal</u>, Volume 18, Number 2 (June)

Major, Shaun. 1995 "<u>To Vote or Not to Vote?</u>, <u>Compulsory Voting in Australia</u>". Western Australian Electoral Commission.

McAllister, Ian, Makkai and Patterson. 1992 "<u>Informal Voting in the 1987 and 1990</u> <u>Australian Federal Elections</u>". Canberra: Australian Government Printer

Milbrath, L and Goel, M. 1977. "Political Participation – How and Why Do people <u>Get Involved in Politics</u>". Chicago. Rand McNally College Publishing.

Smith, Lindsay "<u>Compulsory Voting – A Comparative Approach</u>". Mitchell College of Advanced education, Administrative and political Sciences Research papers.

Wolfinger, R and Rosenstone S. 1980 "Who Votes". New Haven. Yale University Press