Implications of Changes to Voting Channels in Australia

A Research Report Commissioned by the Electoral Regulation Research Network.

December 2018

Project Leader

Rodney Smith (University of Sydney)

Project Researchers and Authors (listed alphabetically)

Ian Brightwell (University of New South Wales)
Richard Buckland (University of New South Wales)
Martin Drum (University of Notre Dame Australia)
Justin Harbord (Western Australian Electoral Commission)
Annabelle McIver (Macquarie University)
Stephen Mills (University of Sydney)
Carroll Morgan (University of New South Wales)
Mark Radcliffe (New South Wales Electoral Commission)
Roland Wen (University of New South Wales)

Research Assistant

Kara Chakerian

Contents

			Page
1	Exec	cutive Summary	6 8
2	Intro	oduction to the Report	O
3	A 'Ç	Quiet Revolution': The Decline of Ordinary Voting	10
	3.1	International Trends	10
	3.2	The Trend Away from Ordinary Voting in Australia	10
4	The Rise of 'Convenience Voting' and Diversified Ways of Voting		
	4.1	Conceptualising 'Convenience Voting'	15
	4.2	The Number of Voting Channels	16
	4.3	Formal Eligibility to Access Voting Channels	18
	4.4	Temporal and Spatial Restrictions on Accessing the Ballot	20
	4.5	Not Just a Matter of Convenience	21
5	Assessing Different Voting Channels		
	5.1	Criteria for Assessing Different Voting Channels	22
	5.2	Voter Participation	23
	5.3	Communication between Candidates and Voters	25
	5.4	Access and Usability	27
	5.5	Secrecy of the Ballot	28
	5.6	Security and Resistance to Fraud and Misadventure	29
	5.7	The Accuracy and Reliability of the Count	30
	5.8	Transparency	31
6	New Research on Voting Channels in Australia		
	6.1	Introduction	33
	6.2	Why New South Wales and Western Australia? The	33
		Two Case Study States	
	6.3	The Legislative Framework for Voting Channels in NSW and WA	34
	6.4	Use of Voting Channels in the Elections Included in this Report	35

	6.5	Ordinary Voting on Election Day	35
	6.6	Declaration Voting (Including Declaration Envelope	36
		Voting) on Election Day	
	6.7	Ordinary Pre-Poll Voting	37
	6.8	Declaration (Envelope) Pre-Poll Voting	38
	6.9	Remote or Mobile Polling	38
	6.10	Postal Voting	38
	6.11	Remote Electronic Voting	39
	6.12	Declared/Special Institution Voting	39
	6.13	Other Relevant Features of the Elections Included in	40
		this Study	
	6.14	A Mixed Methods Approach	42
	6.15	Surveys of Election Workers	42
	6.16	Characteristics of the Election Workers	44
	6.17	Interviews with Candidates, Campaign Managers	48
		and Party Representatives	
	6.18	Election Observations	50
!	7 Wha	t Criteria Do Election Stakeholders Value?	51
	7.1	Introduction	51
	7.2	The Criteria Valued by Election Workers	51
	7.3	The Criteria Valued by Candidates and Campaigners	53
	7.4	Implications of the Patterns	57
	8 The	Challenges of Different Voting Channels: Preparing	59
		he Vote	
	8.1	Introduction	59
	8.2	Overview of Problems Encountered in the NSW and	60
		WA Elections	
	8.3	Preparing for the Vote	61
	8.4	Training Election Workers	64
	8.5	Communicating with Voters	67
	8.6	Challenges for Campaign Head Offices: An	68
		'Incredibly Complex Messaging Challenge'	
	8.7	Challenges for Local Campaigns: 'A Massive	71
		Logistical Operation'	
	8.8	Challenges for Candidates: 'The Voters Come to You'	73
	8.9	Overall Implications for Campaign Communications	74

9	The Challenges of Different Voting Channels: Cast Votes	ing 76
	9.1 Introduction	76
	9.2 Problems During the Process of Casting Votes	76
	9.3 The Effects of Convenience Voting on Th Problems: Pre-Poll Voting	ese 78
	9.4 The Effects of Convenience Voting on The Problems: Postal and Remote Electronic Voting	ese 80
10	The Challenges of Different Voting Chann Determining the Result	els: 81
	10.1 Introduction	81
	10.2 Problems During the Process of Determining Result	the 81
	10.3 Scrutiny and Transparency	82
	10.4 The Effects of Convenience Voting on Problems the Count	s in 84
11	What Happens When Things Go Wrong?	86
	11.1 Introduction	86
	11.2 The Causes of Problems	87
	11.3 How Well Were Problems Resolved?	89
	11.4 Where Do Election Workers Turn to Try to Reso Problems?	lve 93
12	Future Trends in Voting Channel Use	96
	12.1 Introduction	96
	12.2 Election Workers Predictions of Overall Demand	96
	12.3 Future Demand in Different Regions	98
	12.4 Party and Candidate Perceptions of Future Dema	nd 100
13	Conclusion	102
	13.1 Managing Changes to Voting Channels in Austra	lia 102
	13.2 Changing Voting Channels Assessed	103
	13.3 Conclusion: An Ongoing Challenge	105

Appendix 1. Text of the Election Worker Questionnaire (WA State General Election Version)	107
Appendix 2. Schedule for Semi-Structured Interviews	121
Appendix 3. Problems Encountered by Role and Level of Experience	123
Appendix 4. How Well Were Problems Dealt With: Full Responses	126
References	129

1. Executive Summary

Increasing numbers of voters in Australia and other democracies are choosing to vote via channels other than in-person voting at a local polling place on election day. The alternative voting channels they use include early in-person voting, postal voting and remote electronic voting.

This trend is commonly called a shift to 'convenience voting', although a better description might be 'flexible voting', since some citizens have needs which mean they are simply unable to access the vote effectively using in-person voting at a local polling place on election day.

The report identifies seven criteria for assessing voting channels: participation in voting, communication between candidates and voters, access to the ballot, ballot secrecy, security and fraud resistance, accuracy and reliability of the count, and transparency. The international and Australian literature shows that the move to flexible voting helps to meet some of these criteria; however, it also creates new issues.

Original research conducted for this report via online surveys of election workers in New South Wales (NSW) and Western Australia (WA) in 2016 and 2017 shows that they tend to see voter convenience as less important than other criteria such as accurately recording votes, processing votes securely, preventing voter fraud and ensuring voters are not coerced. Original interview research showed that political parties and candidates are prepared to accept voter convenience when it does not hinder them from effectively communicating with voters. Parties and candidates are currently trying to meet this challenge.

Elections in NSW and WA use a range of voting channels, including remote electronic voting. The online surveys suggest that elections using these channels are generally well run. Relatively few election workers experienced or observed problems carrying out their assigned tasks. They were mostly satisfied with their training.

The problems that did occur during elections were generally not considered to be serious. In most cases, they were dealt with successfully. On this evidence, the electoral commissions are handling the current mix of voting channels successfully.

The stage of the election at which problems were most likely to occur involved the casting of votes at polling places, where time pressures and voter confusion are likely to be highest. Problems were also more likely to occur during the hand-counting of paper ballots. Problems at both of these stages might be reduced to some extent if more voters used electronic voting channels, since those channels require voters to manage themselves and make certain aspects of vote counting easier.

The growing demand for flexible voting seems likely to continue. No single voting channel is likely to replace ordinary voting on election day as *the* new dominant form of voting. Instead, for the foreseeable future, different voters will want to use different voting channels.

Australian lawmakers, electoral commissions and election candidates all face continuing challenges to meet reasonable expectations among citizens that voting will be made convenient and easily accessible. One way of facilitating this would be to open access to the four most common voting channels—ordinary voting on election day, pre-poll voting, postal voting and remote electronic voting—to anyone who wants to use them. Citizens would then be free to access the ballot in the ways most suited to their needs.

2. Introduction to the Report

The research for this report began with the observation that rapidly increasing numbers of Australians are voting early, in-person, via mail or electronically. In some cases, recent changes to electoral legislation have allowed this to occur. In other cases, citizens are bending or breaking the rules to vote in ways that suit them, by declaring that they meet eligibility criteria when they do not. This trend has not been confined to Australia. Other democracies are witnessing a shift to what has been labelled 'convenience voting'.

We do not know enough about the implications of this trend for the main actors in elections. The key questions that motivated this report at the outset were:

- What challenges and opportunities does this trend present for Australian electoral commissions, election contestants and voters?
- How prepared are these various actors for these challenges and opportunities?
- What could be done better to prepare these actors for the challenges and opportunities?

As the research developed, we decided to focus on two main stakeholders—the election workers who run elections, and the political parties and candidates who contest them. This decision was partly taken because we know less about the implications of changes to voting for these stakeholders than we do for voters. The decision was also made to avoid duplication with another project on convenience voting commissioned by the Electoral Regulation Research Network during the same period, which has since resulted in a report entitled *A Review of Convenience Voting in the State of Victoria* (Laing *et al* 2018).

The key questions for this report were thus refined to become:

- What challenges and opportunities does this trend present for key election stakeholders: Australian electoral commissions and election contestants?
- How prepared are these stakeholders for these challenges and opportunities?
- What could be done better to prepare these actors for the challenges and opportunities?

The research for this report focuses on NSW and WA. These jurisdictions were chosen as the case study States due to the range of voting channels that they offer to at least

some voters, a range which includes remote electronic voting via the iVote system. Research on the electoral commissions was conducted via online surveys of election workers in NSW and WA in 2016 and 2017. These workers had been employed for one or more of nine State by-elections held in NSW during 2016 and 2017, the 2017 NSW Local Government Elections, and the 2017 Western Australian State General Election. Research on parties and candidates was conducted via qualitative semi-structured interviews. These methods were supplemented by some direct observations and analysis of election procedures.

The rest of this report is structured as follows:

- Chapters 3 and 4 set out the evidence for the decline in ordinary in-person voting on election day in Australia and the rise of 'convenience voting'.
- Chapter 5 outlines seven criteria for assessing voting channels: participation, communication, access, ballot secrecy, security and fraud resistance, accuracy, and transparency.
- Chapters 6 to 12 present the results of the research.
- Chapter 13 draws some conclusions about the impact of the transition to convenience voting, using the seven criteria set out in Chapter 5.

The New South Wales Electoral Commission and the Victorian Electoral Commission provided funding for the research through a grant scheme administered by the Electoral Regulation Research Network at the Melbourne Law School, the University of Melbourne. The researchers would like to thank Professor Joo-Cheong Tham, the Director of the Electoral Regulation Research Network, as well as the New South Wales Electoral Commission, the Victorian Electoral Commission and the Western Australian Electoral Commission for supporting the project.

3. A 'Quiet Revolution': The Decline of Ordinary Voting

3.1 International Trends

Commentators in a number of advanced democracies have observed a growing shift away from the traditional practice of voters casting their ballots at a polling place on election day. Writing about the United States of America, Paul Gronke states that the availability of pre-election day voting has been growing 'steadily and inexorably' since the 1980s. He describes this transformation in voting behaviour as a 'quiet revolution' that has taken place 'with little fanfare and, until the last few years, not much critical examination' (Gronke 2012: 134). Michael Alvarez and his colleagues write that 'In just the past decade, convenience voting methods have gone from being a novelty in the United States to being virtually ubiquitous' (Alvarez *et al* 2012: 258). Peter Miller and Sierra Powell report a sixfold increase in early in person voting in the USA between 1988 and 2012, with postal voting doubling over that period (2016: 34). By the 2016 Presidential election, more than 47 million votes—around a third of all votes cast—were absentee or early ballots (McDonald 2016).

This 'quiet revolution' has not been confined to the USA. While election day voting at a polling place is still the dominant mode of voting in most democracies, reports that one-third or more of electors have cast their votes before election day—either inperson or remotely—are increasingly commonplace. Graeme Orr observes that '[o]ver the past decade there has been a significant shift towards 'convenience' voting in many western democracies; a shift which threatens to deconstruct the very notion of election day' (Orr 2014: 151).

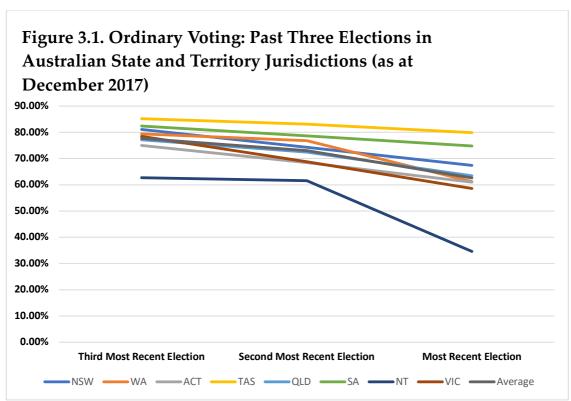
3.2 The Trend Away from Ordinary Voting in Australia

Australia has not been an exception to this trend. From 2001 to 2016, the percentage of voters casting an ordinary or absent vote on election day in Australian federal elections fell from over 90 percent to under 70 percent. Twenty-two percent of early voters at the 2016 Federal Election cast an in-person vote, with the remainder using postal ballots (Rojas and Muller: 2014: 2; Australian Electoral Commission 2017: 33-35; McAllister and Muller 2017: 104-105).

_

¹ In Australia, 'election day' is often referred to as 'polling day'. The two expressions are used interchangeably in this report.

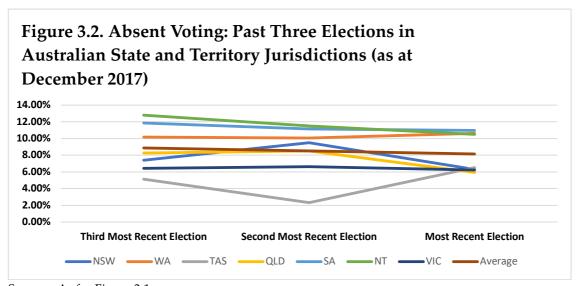
The same pattern is seen at the State and Territory level. Using the previous three elections up to December 2017 as an indicator, the percentage of electors casting their votes at a local polling place on election day across the eight Australian State and Territory jurisdictions has fallen on average from 78 percent to 63 percent. As Figure 3.1 shows, the rate of this decline has varied. In Tasmania, the fall has only been from 85 percent to 80 percent, while the proportion of local in-person election day electors in Victorian State elections has dropped from 78 percent to 59 percent. The Northern Territory saw an even more dramatic decline between its two most recent elections, with rates of ordinary voting almost halving from 62 to 35 percent.²



Sources: Tasmanian Electoral Commission 2010; 2014; Electoral Commission South Australia 2014; Elections ACT 2017; Electoral Commission Queensland 2015b; New South Wales Electoral Commission 2015; Victorian Electoral Commission 2015; Northern Territory Electoral Commission 2017; Western Australian Electoral Commission 2017d.

² In some cases, the proportional decreases presented in Figure 3.1 may disguise smaller *absolute* decreases in the number of ordinary votes , or even increased *absolute* numbers of ordinary votes, in cases where the total number of votes cast has increased.

As Figure 3.2 demonstrates, the proportional fall in local in-person election day voting is not due to an increase in Australians voting on election day outside the electorates in which they live (usually referred to as 'absent voting' in Australia). In fact, across the seven States and Territories that offer this long-standing form of 'convenience voting', rates of absent voting have been relatively stable, averaging around eight percent across the last three elections.

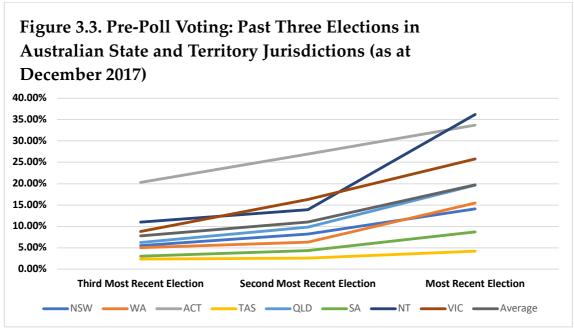


Sources: As for Figure 3.1.

Instead, a large part of the decline in local in-person election day voting can be attributed to an increase in the use of in-person early voting, traditionally called 'prepoll voting' in Australia.³ Averaged over the past three sets of Australian State and Territory elections, use of pre-poll voting has more than doubled from around eight percent to around 20 percent (see Figure 3.3).⁴ As Angelo Rojas and Damon Muller comment, pre-poll voting has quickly become an 'institutionalised part of Australian electoral participation' (Rojas and Muller 2014). There is considerable variation within this overall trend, with Tasmania and South Australia showing comparatively little growth and rates of pre-poll voting tripling to 26 percent in Victoria and 36 percent the Northern Territory over the last three elections. Nonetheless, Figure 3.3 shows pre-poll voting increasing in every jurisdiction over the last three elections.

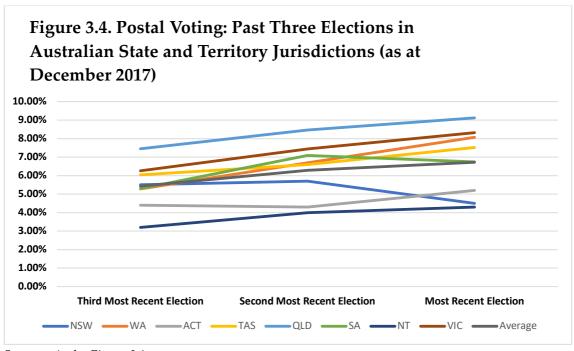
_

³ In-person early voting is often called 'early voting' in non-Australian jurisdictions, including the USA. This usage has recently become more common in Australia, even in official texts, as a substitute for 'pre-poll voting'. Somewhat confusingly, in Australia 'early voting' may also refer generally to *any* type of voting before polling day (in-person, postal, remote electronic etc.). While we have striven for clarity in this report, there is no way to regularise these contending usages, so readers will have to rely on the context to work out which meaning is being used in a particular instance.



Sources: As for Figure 3.1.

Rates of postal voting have also grown over the same period in most States and Territories, averaging almost eight percent across the most recent elections (see Figure 3.4). This growth has been quite limited, however, and postal voting declined slightly in South Australia and NSW between the most recent two elections.



Sources: As for Figure 3.1.

While pre-poll and postal voting are the most widely used alternatives to ordinary and absent voting, other alternatives have become well-utilised in some Australian jurisdictions. Mobile voting services are not offered widely in most jurisdictions; however, in the 2016 Northern Territory Election, 14.0 percent of voters cast their votes at mobile polling places, up from 10.1 percent and 8.8 percent in the previous two elections. In NSW, voters who might once have relied on postal voting have had the option of casting their votes via the telephone or internet using the iVote system since the 2011 State election. Use of the iVote system grew from one percent in 2011 to six percent in 2015 (see Sections 4.2 and 6.10 below for further discussion).

Although there is some variation in the take-up of alternative forms of voting across the Australian jurisdictions, the overall trend of a move away from in-person voting at a local polling place on election day is evident across Australia.

4. The Rise of 'Convenience Voting' and Diversified Ways of Voting

4.1 Conceptualising 'Convenience Voting'

The trend away from in-person election day voting is commonly termed the rise of 'convenience voting'. Convenience voting is usually defined as any alternative means of voting to casting a ballot at a local polling place on election day. As some of the leading American scholars on the topic have observed: 'Convenience voting goes by various names, but they all capture one essential idea: making voting more convenient (less costly) by allowing voters to cast a ballot at a place and time other than the precinct polling place on Election Day' (Gronke et al 2008: 438; see also Orr 2014).⁵

The essence of convenience voting is voter choice: citizens can choose one (more convenient) method of voting over one or more (less convenient) alternatives. Although most of the focus in discussions of convenience voting has been on postal voting (called 'absentee' voting in the USA) and early in-person voting (see, for example, Orr 2014; Biggers and Hanmer 2015), these methods of voting do not in themselves capture the essence of convenience voting. Replacing in-person voting with universal postal voting—as has been done in the US States of Oregon, Washington and Colorado and in some Victorian Local Government Elections—does not represent a move towards convenience voting (as is implied by Orr 2015: 56). As R. Michael Alvarez et al (2012) have shown in the USA, different modes of 'convenience voting' tend to attract different types of voters. To the extent that inperson voting at a polling place on a Saturday is more convenient than other options for some people (Rojas and Muller 2014: 8), it is a form of convenience voting for them, as much as remote electronic voting is for other voters. In a diverse society, any single way of voting will not represent convenience for some voters. The most convenient way of voting for one voter will be inconvenient for another.

The issues around convenience voting are thus more complex than they might initially appear. Decisions about the ways in which citizens can vote in any jurisdiction involve three analytically separate dimensions that all affect the level of voting convenience.⁶ These are:

⁵ The perspective here is the voter's. Convenience voting may, of course, be less costly for voters but costlier for electoral management bodies and/or candidates.

⁶ The concept of convenience voting might legitimately be extended to issues such as the ease with which citizens are enrolled to vote and what forms of identification they have to produce to access the ballot (see Smith 2014; Orr and Arklay 2016). These issues are not addressed in this report.

- 1. the number of voting channels that are made available to at least some voters.
- 2. the formal constraints on eligibility to access available voting channels.
- 3. the temporal and spatial constraints on the use of available voting channels.

These dimensions could be recast as questions regarding how many voting channels are provided, who can use them, where and for how long? Voter convenience is greatest when multiple voting channels are available to all citizens at times and places that allow for easy access. It is smallest when there is a single voting channel for all citizens accessible at restricted times and places.

Recent changes in the ways that Australian citizens vote have involved various combinations of these three dimensions. In some cases, developments such as the spread of internet technology have provided the potential to introduce new voting methods that were not previously viable. Other cases have involved relaxing the eligibility rules around access to voting methods that had already been used by some voters for over a century, such as postal voting. These relaxations have had implications for the time periods during which electors can vote, producing a growing focus on the 'voting period' rather than 'polling day', and have been associated with pressure on electoral management bodies to provide pre-poll voting centres in more locations. The following sub-sections of this report situate Australian voting practices in more detail on each of the three dimensions.

4.2 The Number of Voting Channels

A voting channel refers to the way in which an elector's decision regarding candidates becomes recorded as a vote. Examples of channels that are officially available in established democracies include:

- supervised voting at a fixed polling place using paper ballots or electronic voting machines (ordinary voting, pre-poll voting).
- supervised voting in which officials take ballot papers or electronic voting machines and other necessary materials to the voter (declared institution voting; mobile voting).
- unsupervised voting using mailed paper ballots or ballots transmitted between the voter and electoral officials by fax, email, telephone, or the internet (postal voting; internet voting).
- semi-supervised voting in which a voter authorizes someone to vote on their behalf at a fixed polling place using paper ballots or electronic voting machines (proxy voting).

Jurisdictions at the most restrictive end of convenience voting will make only one method available; in jurisdictions at the least restrictive end, all methods will be provided.

In Australia, the range of voting channels has gradually increased since the first colonial elections for the NSW Legislative Council in 1843 (see Thompson 2006). Voting at a polling place on a single day using the 'Australian' version of the secret ballot was established in the colonies from the 1850s (Brent 2006). The timing of the expansion of voting channels from this baseline has varied considerably between colonies, and later between the Commonwealth, different States and Territories. In the absence of a comprehensive comparative source on the history of Australian electoral laws, it is not possible to summarise this variation here but the broad trajectory of expanding voting channels is as follows.⁷ Postal voting and/or absent voting were introduced in some Australian colonies prior to Federation. They were made available in Federal Elections from 1902 and 1911 respectively (Sawer 2001). Declared institution voting and/or mobile voting were later additions, dating from around the mid-twentieth century. Explicit provision for pre-poll voting came later still, from the 1970s onwards and as late as 2000 in WA. Most Australian jurisdictions now offer ordinary, absent, postal, pre-poll and mobile/declared institution voting to at least some voters.

One obvious omission from this very brief historical survey is proxy voting, which has not been a feature of Australian elections and is unlikely ever to be added to the range of voting channels available to Australians. Graeme Orr calls proxy voting, which dates at least as far back as seventeenth century Maryland, 'probably the first form of convenience voting' (2015: 61). Proxy voting persists in some well-established democracies, including the United Kingdom, the Netherlands, France and Belgium.

Remote electronic voting is a more likely prospect for expanding the voting channels available to Australian voters. It has been introduced in NSW and WA. The 2015 NSW State election iVote system received 283,669 votes, making it the largest politically binding remote online election anywhere in the world to date (Brightwell *et al* 2015: 1). Remote electronic voting is currently under consideration by other Australian jurisdictions (Electoral Council of Australia and New Zealand no date).

Whether this consideration will translate into wider adoption is unclear at the time of writing. Over the past two decades, policy-makers around the world have repeatedly considered remote electronic voting as an additional voting channel for at least some groups of voters (Barrat i Esteve et al 2012). To take two recent examples, the US State of West Virginia trialled block chain-based remote electronic voting for some serving military personnel at the 2018 American mid-term elections (Alexandre 2018; Nguyen 2018), while the New Zealand government is considering remote electronic voting trials for some Local Government Elections (Cowlishaw 2018). These plans may or

_

⁷ For the history of electoral law in the two jurisdictions on which this report focuses—New South Wales and Western Australia—see Twomey (2004); Simms (2006); Clifford *et al.* (2006); Phillips (2013).

may not proceed to wider or continued implementation. Internet voting was first trialled in the USA in 2000 (Solop 2001; Alvarez and Hall 2008: 71, 80), while in 2015 the New Zealand Government abandoned reasonably advanced plans for internet voting trials at local elections (New Zealand Department of Internal Affairs. 2017).

The use of remote electronic voting for national elections beyond trials and pilots remains limited. Only two countries currently allow resident citizens access to internet voting for national elections. Estonia has had the most liberal laws since 2002, allowing any citizen to vote via the internet. Internet voting has since been employed in three elections for the national parliament (2007, 2011 and 2015), along with four rounds of Local Government Elections and two European Parliament elections. Voter use grew from 1.9 percent of voters in 2005 to 31.3 percent in 2014, a level repeated in the two most recent Estonian elections (30.5 percent in 2015 and 31.7 percent in 2017) (Madise and Martens 2006; Madise et al no date; Alvarez et al 2009; Valimised, 2017).

Revision of Swiss federal law in 2002 enabled restricted use of internet voting for local, cantonal and national referenda. The cantons of Basel, Geneva and Neuchâtel operate e-voting systems as an alternative to postal and in-person voting. Internet voting is also offered to expatriate voters (Braun and Brändli, 2006; Germann and Serdült 2017; Mendez and Serdült 2017). Current public debates in Switzerland centre on the possibility of expanding internet voting as an optional voting channel to additional cantons (SBC 2017a; 2017b).

Other countries, including Armenia, France, Mexico, Panama and the United States have employed internet voting in national elections for expatriate citizens and/or serving military personnel. Internet voting is also currently used in Local Government Elections in two Canadian provinces and parts of India (Kandekar and Dhande 2011; Goodman and Smith 2016).

Compared with many countries, the variety of voting channels offered by Australian jurisdictions is relatively broad. The long-term trend has been towards expanding the number of available channels.

4.3 Formal Eligibility to Access Voting Channels

The second dimension concerns formal eligibility to use the available voting methods. At one end of this dimension lie jurisdictions in which all voters are eligible to use one voting method but access to any others is strictly limited to specific minority groups, such as voters on active military service. Jurisdictions at the other end of this dimension make all voters eligible to use any of the available voting methods.

Jurisdictions across the world have adopted a range of approaches toward this formal eligibility dimension. The federal electoral system in the USA provides some evidence of this diversity. In twenty-seven US States, voters may cast their ballots in person at a polling station during a designated period before election day ('early voting', in American parlance), or request a ballot to complete in a place of their own choosing before election day ('absentee voting'), in either case without needing to provide an 'excuse' or justification. Seven States provide early but not absentee voting. Against this generally liberal picture, thirteen States in the north-east, midwest and south make no provision for early voting and require an excuse before issuing an absentee ballot (National Conference of State Legislators 2017, Gronke 2012).

Eligibility requirements for accessing most alternatives to ordinary voting on election day in Australia have traditionally been restrictive. When postal voting was introduced for national elections from 1902 it was made available to electors who lived more than 5 miles (8 kilometres) from their polling place, as well as to those who were prevented from attending a polling place by illness or infirmity. Governments at national and State levels expanded (and in some cases contracted) these sorts of formal restrictions in a piecemeal way over subsequent decades. Major reforms to Australian electoral laws, such as the changes to the *Commonwealth Electoral Act* in 1984, relaxed access to postal and pre-poll voting without changing the presumption that formal eligibility for these forms of voting would remain limited to specific categories of voter.

This longstanding assumption that access to voting channels other than an ordinary vote on election day should be restricted has shifted over the past two decades. While the Commonwealth, NSW and South Australia still restrict postal and pre-poll voting to specific categories of voters, the electoral acts of Queensland, WA and the Northern Territory now allow any registered voter to access a postal or early in-person vote. The Electoral Commission of Queensland (2015a) announces on its website: 'Casting your ballot before election day is called early voting. Everyone is welcome to do it no special reason needed!'.

Victoria, Tasmania and the Australian Capital Territory provide postal and pre-poll votes to any registered voter who declares that they will be unable to vote on election day. These jurisdictions require voters to make an oral or written declaration; however, at least in the case of Victoria, there is evidence that in practice some electoral officials do not enforce this requirement (Reader 2015: 6-7).

Even in the more restrictive jurisdictions, eligibility requirements may be loosely enforced. From 1984, the Commonwealth did not require voters to identify the prescribed reason for which they require a postal vote. Concerns were voiced as early as the 1998 Federal Election that some voters were casting pre-poll votes 'as a matter

of convenience rather than for the grounds specified' in legislation (Newman 2004: 9; see also Maley 2018: 19). Moves to replace written declarations with oral declarations may well have encouraged ineligible voters to access pre-poll votes in NSW (Parliament of New South Wales 2008: 20; Parliament of the Commonwealth of Australia 2009a: 184).

Survey evidence exists showing that some pre-poll voters in Federal Elections are unaware of the need to have a valid reason for doing so. Exit polls conducted by the Australian Electoral Commission after the 2010 and 2013 elections found that pre-poll voters often listed 'convenience' as the main reason for voting early, although it is not a valid reason under Commonwealth regulations. Nearly three-quarters of respondents in 2013 agreed that, if pre-poll voting were unavailable, they could still have voted on election day (Rojas and Muller 2014: 6). Surveys of NSW voters who have used the iVote system have similarly identified convenience as a common but ineligible reason for accessing internet voting (Elgood *et al* 2016: 71). These voters may well be acting out the view of the former NSW Electoral Commissioner Colin Barry, who in 2012 described pre-poll voting declarations as 'redundant ... a cultural relic that has no place in a 21st century election regime' and argued for the 'right of voters to [vote] in the manner which is the most convenient to them' (2012: 46-47).

4.4 Temporal and Spatial Restrictions on Accessing the Ballot

The third dimension centres on temporal and spatial considerations. How long is each voting method available to voters who are eligible to use it? How are the points of access to voting methods distributed? One end of this dimension would include jurisdictions in which the time period allowed for voting is short and voters have to travel long distances to cast their votes. The other end of this dimension would contain jurisdictions in which the voting period is long and voters can cast their votes while in their everyday locations.

Graeme Orr (2015: 61-62) notes that debates about the length of the polling period and the locations of polling places were central to early public discussions of convenience voting in the late nineteenth to mid-twentieth centuries. There is no international consensus on the optimum polling period. In their survey of electoral rules in 63 democracies in the early 2000s, Louis Massicote *et al* (2004: 102-118) found that almost all countries had a single 'polling day' (the Czech Republic, Namibia and Slovakia each had two day polling periods) but that countries were divided on whether voting should occur on a 'rest day' (69 percent of countries) or a 'work day' (31 percent). Moreover, the time period for voting during polling day ranged from just five hours (Belgium) to 16 hours (Poland). In a similar way, democracies have developed varied traditions for locating polling places based on the prominence of

buildings such as church halls and schoolrooms in the everyday lives of citizens (Orr 2015: 109-124).

Decisions about time and place matter for voter convenience. American research shows that moving the times that polling places open and close forward or back by just one hour has an impact on turnout rates among younger voters (Urbatsch 2017). Moving the locations of polling places (Orford *et al.* 2011) and providing more or fewer locations for early in-person voting (Finseraas and Vernby 2014: 281-282) are decisions that have an effect on general turnout rates. In this sense, long-standing Australian practices such as absent voting and the provision of large numbers of polling places are a form of convenience when compared with the practice in many democracies of specifying a single polling place at which a citizen is expected to vote.

4.5 Not Just a Matter of Convenience

The increasing availability of voting options in Australia and elsewhere has not solely been driven by considerations of convenience. In some cases, this flexibility makes the difference between whether citizens can vote at all, or else are able to vote with the same levels of independence and privacy as other citizens. In Australia as in the USA, part of the push towards adoption of diverse voting channels has come from people with disabilities, for whom accessing a polling place and/or completing a traditional ballot is extremely difficult if not impossible (for the USA, see Miller and Powell 2016). In the Australian context, this has particularly applied to the introduction of remote electronic and telephone assisted voting (Smith 2009: 35-36). To categorise the voting requirements of citizens who are blind, for example, as a matter of convenience seems to trivialise their right to vote. In this sense, Nathaniel Reader's (2015: 3) term 'flexible voting' might be a more neutral expression to cover convenience as well as other reasons behind citizen expectations that a range of voting methods be provided.

5. Assessing Different Voting Channels

5.1 Criteria for Assessing Different Voting Channels

Successful elections are not defined by a single criterion. Instead, they must meet a set of criteria that includes participation, equality, secrecy, security, reliability, transparency, efficiency, and so on. These criteria are linked in various ways and achieving one may compromise another. Different stakeholders involved in elections will disagree about what should be included in the list and how much emphasis should be given to any particular criterion in the list, a point which we explore further in Chapter 7.

This study has been guided by seven criteria for assessing the range of voting channels now available in Australia. These are the extent to which they:

- 1. promote voter participation
- 2. allow for effective communication between candidates and voters
- 3. promote access to the ballot
- 4. preserve ballot secrecy
- 5. are secure and resistant to fraud and misadventure
- 6. promote an accurate and reliable vote count
- 7. support transparency

Other legitimate criteria for assessing voting channels have not been focussed on in this report, mostly because it would not have been practicable to address them within the constraints of the research project. These include their economic cost and efficiency (Montjoy 2010; James and Jervier 2017), environmental sustainability (Simply Voting 2018), their impact on the social rituals of elections (Thompson 2004; Orr 2014; 2015) and their trustworthiness (Wilkins 2018). These alternative criteria are mentioned in passing from time to time in this report; however, the focus will be on the seven criteria above. These seven criteria map reasonably well onto the Electoral Council of Australia and New Zealand's (2017) 'Eleven essential principles for an Australian internet voting service' endorsed on 4 July 2017:

- 1. Accessibility
- 2. Usability
- 3. One person, one vote
- 4. Security
- 5. Robustness
- 6. Transparency
- 7. Independence
- 8. Impartiality

- 9. Accuracy
- 10. Voter privacy
- 11. Secrecy of the ballot

The rest of this chapter outlines some of the key considerations raised by Australian and international literature when applying these seven criteria to different voting channels.

5.2 Voter Participation

American academic researchers have been principally concerned with the relationship between early voting and electoral turnout. Voter turnout in the USA remains low by comparison to other developed economies, despite increases during the Obama period (Desilver 2017), raising questions about citizen engagement and the legitimacy of electoral outcomes. Many electoral administrators regard liberalising the rules around electoral participation as a desirable means of facilitating participation and lifting turnout (Giammo and Brox 2010: 295-6; Burden and Gaines 2015).

The theoretical underpinning for this approach lies in the rational-choice analysis that suggests individuals will choose to vote where the benefits they derive from doing so outweigh the costs (Riker and Ordeshook 1968). By making voting more convenient for individuals, early and absentee voting effectively lowers the cost of electoral participation and should therefore increase aggregate turnout, or at least reduce its decline. As a result of rule liberalisation, voting in the United States has 'never been easier' (Giammo and Brox 2010). Despite these promising theoretical foundations, however, empirical research has failed to demonstrate conclusively that providing opportunities for voting before polling day increases turnout. Results have been mixed at best and are contingent on both the type of alternative voting and type of electoral contest being analysed (Hager 2015, Gronke *et al.* 2008). Summarising the empirical research, Norris and Garnett comment that while studies find stricter registration and balloting rules do correlate with lower turnout, reforms designed to ease the process do not necessarily boost participation substantially (Norris and Garnett 2015).

Part of the problem is explained by the demographic characteristics of early US voters. Research has established that early voters are 'typically white, older, wealthier, better educated with higher levels of political knowledge and participation' (Hager 2015; see also Alvarez *et al.* 2012; Giammo and Brox 2015, Ashok *et al.* 2016). They also tend to be more politically attentive, more partisan and more ideologically extreme than election day voters (Gronke *et al.* 2008) and to have the knowledge and skills required to cast an early vote, such as understanding the process, availability and eligibility for

early voting (Hager 2015). In every respect, then, such voters are more likely to vote anyway, suggesting that convenience voting has a substitution effect (shifting habitual election day voters into early voters).

Besides considering the long-term demographic characteristics of voters, US researchers have more recently explored whether early voting generates short-run influences on turnout. These mobilisation effects might in effect lower the cost of participation by, for example, providing the voter with additional information and motivation to vote. For example, the longer the period before election day in which early voting is provided, the more opportunities there are for potential voters to discover early voting. They may hear about early voting from media reports, party canvassers, or other voters; or they may come across early voting locations sited in high traffic areas such as shopping malls (Giammo and Brox 2010: 296) or near where they live (Gimpel, Dyck, and Shaw 2006). Equally, election administrators can lift rates of early voting through advertising and other forms of community outreach (Hood and Bullock 2011). Mobilisation effects can serve as learning opportunities in which those voters who lack knowledge and skills can overcome that gap.

The patterns in the USA have been replicated in other countries, particularly with regard to remote electronic voting, which is often viewed as a way of increasing turnout. Studies from Estonia, Switzerland and Canada, as well as pilots of internet voting in the United Kingdom, suggest that remote electronic voting has limited and inconsistent effects on turnout (The Electoral Commission 2002: 33; Norris 2005; Breuer and Trechsel 2006: 10; Trechsel no date: 14-17; Mendez and Serdült 2017; Goodman and Stokes 2018).

Even if overall turnout does not rise, remote electronic voting may increase turnout among specific social groups, affecting the equality of electoral participation across groups. As with research on early voting in the USA, the survey evidence from several countries runs against this hope. Although internet voting does attract some younger voters, at least initially, it is predominantly adopted by middle class, educated, urban and male citizens who would otherwise have voted via another channel (Solop 2001: 291; The Electoral Commission 2002: 17; Madise, Vinkel and Maaten no date: 31-34; Christin and Trechsel 2004: 11; Breuer and Trechsel 2006: 19-20; Yau *et al.* 2006/2007; Trechsel et al 2007: 42-55; Germann and Serdült 2017).

In Australia, voter turnout has not had the prominence in discussions of flexible voting as it has in the USA. Australia's system of compulsory voting has consistently delivered very high rates of turnout in Australian national and State elections over long periods (Louth and Hill 2005). Compulsion changes the rational actor's weighing of costs and benefits about whether to vote, among other things by imposing a fine on non-voters but more profoundly by presenting the act of voting as an obligation rather than a choice. Because overall turnout in Australia is so high,

expanding voting choice is unlikely to lift aggregate turnout significantly. The most widespread effects of increased voting flexibility are likely to be substitution effects, as voters who would otherwise have attended a polling place on election day exercise their duty to vote via more convenient voting methods.

Any turnout boost gained by expanding the number and/or availability of voting channels in Australia is therefore likely to be limited to specific and relatively small groups of citizens who otherwise could not have accessed the ballot at all, or accessed it independently, such as citizens with some forms of disability and Australians who are overseas. The limited research on this issue suggests few consistent demographic influences on increased convenience voting at Australian elections, although older citizens seem to be more likely than younger voters to cast pre-poll votes and postal votes (Rojas and Muller 2014: 5; Reader 2015; McAllister and Muller 2018).

5.3 Communication between Candidates and Voters

Election day mobilisation of voters has long been a priority for political parties and candidates in voluntary voting systems such as the USA (Gosnell 1927). The rise of convenience voting has challenged campaign organisations to organise comparable efforts to mobilise early voters. In this sense, the convenience enjoyed by the voter is not shared by the campaign organisation confronted by logistical complications arising from the dispersed timing and locations of early voting and particularly unsupervised postal and remote electronic voting.

American research suggests that while convenience voting raises the costs of campaigning, protracted efforts to get out the vote may also promote more efficient campaigning, by allowing campaign organisations to progressively shift their attention from locking in their core supporters to focussing in the final weeks and days on those who have yet to vote (Gimpel et al 2006; Gronke *et al.* 2008: 445; Hansen 2016: 153-4; Galicki 2017). Moreover, strategic calculation by these organisations, targeting undecided potential supporters, may mobilise voters who do not fit the white, older, wealthier and strongly partisan profile of typical early voters (Alvarez et al 2012: 256-7; Orr 2015: 60).

The Obama presidential campaigns of 2008 and 2012 provide well-documented examples of how parties and candidates can effectively switch their focus to reach different groups of voters at different stages of a campaign. The Obama campaign initially used databases allied with on-the-ground canvassing volunteers to reach persuadable voters. In the final weeks of the campaign, canvassers' attention shifted to mobilising identified supporters to vote early through collecting 'early vote pledge cards' and absentee ballot request forms, commitments which the campaign regarded as 'votes in the bank' (McKenna and Han 2014, see also Issenberg 2012). In Florida in

2008, church groups, voting rights activists and Democratic party campaigners conducted 'Souls to the Polls' efforts, which mobilised church attendees to attend early voting centres open on Sunday. Research suggests that African-American, Hispanic, younger and first-time voters were disproportionately likely to vote early in Florida, in particular on weekends including the final Sunday of early voting. Following Florida's subsequent decision to limit early voting, electoral participation by these groups dropped (Herron and Smith 2014). These types of campaign efforts may explain why the expected pro-Republican partisan effects of convenience voting have not been evident (Alvarez *et al.* 2012).

While parties and candidates may be able to adjust their campaign methods to reach voters, convenience voting may have the added benefit that it gives voters the opportunity for measured consideration of the competing claims made by parties and candidates away from the immediate stimuli of campaigning. Voting at a busy polling place may be less conducive to careful voter reflection than voting from a quiet environment of their choosing (Barry, Dacey, Pickering, and Evans, 2002). In this way, convenience voters may be able to cast more considered votes.

A specific opportunity for campaign communication offered by postal voting in the Australian context relates to the practice of parties collecting postal vote applications from voters and passing these on to electoral commissions. By doing this, the parties are able to time their advertising mail-outs to coincide with the arrival of the postal voting packs sent by the electoral commission. Norm Kelly (2012) has criticised this practice as an abuse that advantages some candidates over others.

More broadly, some critics argue that early voters lack vital information available to election day voters and that convenience voting thus undermines the equality of voters (Thompson 2004). If parties release new policies or new revelations about the character of candidates emerge after some citizens have voted, those citizens cannot assess and act on that new information in the ways that election day voters can. In the American context, this argument has particular importance for primary elections, where candidates may drop out of the race after some early citizens have already voted for them (Meredith and Malhotra 2011).

There has been some news media commentary on the way parties and candidates have responded to the challenge of convenience voting in Australia (see, for example, Murphy 2016); however, there has been very little academic research. The main exception, based on the 2016 Australian Election Study survey of Australian voters, indicates that pre-poll and postal voters exhibited ideological, attitudinal and partisan patterns that were very similar to election day voters and that the Coalition may have derived a slight advantage over Labor in the contest for pre-poll and postal votes (McAllister and Muller 2018: 107-108).

5.4 Access and Usability

The Australian system of compulsory voting provides an obligation on election administrators to facilitate universal participation. In the words of one Australian Electoral Commission researcher, voting choice has been expanded 'to ameliorate the effects of compulsory voting and to increase the accessibility of the electoral process generally' (Newman 2004: 2). Key considerations here are the needs of older citizens, citizens with disabilities and citizens with low language and literacy skills. American research shows that while people with disabilities have lower general rates of political participation, they are more likely than other citizens to participate in elections via postal ballots. Expanding early in-person voting has no effect on their voting participation (Alvarez et al 2012: 256-7; Miller and Powell 2016). No similar research exists for Australia; however, as noted earlier in this report, organisations advocating for people with disabilities claim that participation will increase with the availability of voting channels that take account of disabilities such as mobility restrictions and sight impairment.

Aside from issues of accessibility, the complexity of the preferential and optional preferential voting systems used in Australia present particular problems of usability for ballot papers and their electronic alternatives. Australian research has consistently shown a relationship at the electorate level between higher socio-economic disadvantage and the proportions of informal ballots cast (see, for example, Australian Electoral Commission 2016: 11). This suggests that many voters with lower educational and English language skills struggle to cast a vote that will be accepted into the count.

Whether increased flexibility of voting methods will reduce this problem is unclear. Rates of informal voting tend to be lower for pre-poll and postal voting (Australian Electoral Commission 2016: 20); however, this may be because of the characteristics of citizens who tend to use these voting channels (see Section 5.2 above). Electronic voting systems have advantages for voters with some kinds of disabilities. They can also be designed to warn voters that they are about to cast an invalid vote and/or to force them to review their choices before submitting them (see Section 10.4 below); however, this may be of limited use if accessing the voting system is intimidating or difficult to operate by voters who may only be using it once every few years (Olembo and Volkamer 2013). The need for strong security features can add barriers to usability. Procedures in electronic voting that must be followed from a security point of view might make no intuitive sense to the voters who must carry them out. That in turn increases either the supervisory load (to help people cast their votes properly) or the introduction of voting irregularities because voters do not cast valid votes.

5.5 Secrecy of the Ballot

Ballot secrecy has long been a fundamental expectation of democratic elections. It may be seen as a goal that binds voters, so that they do not have an opportunity to reveal their votes, or as a goal that gives voters the opportunity to vote privately, which they may take up or not (Rokkan 1961). In related way, ballot secrecy may be valued as an end in itself, or else as a means to prevent integrity breaches such as voter coercion and vote-buying (see Maley 2018).

In-person voting using a standardised paper ballot at a properly appointed polling place will achieve the goal of giving most voters the opportunity to vote secretly, whether they cast a pre-poll vote or an ordinary vote at a polling place.8 While prepoll voting offers the same secrecy protections as ordinary voting, postal voting and remote electronic voting do not, since both take place in unsupervised contexts where other people may observe voters completing their ballots. Moreover, voters must sign declaration envelopes to cast postal votes, or submit electronic votes via a system where they cannot be sure that their registration details are not linked to their ballots. Both these processes introduce an element of trust in the system to preserve the secret ballot that does not exist when voters deposit their ballot papers directly into ballot boxes. Postal votes are vulnerable to breaches of secrecy for the period between their completion and posting by voters and the physical separation by polling officials of ballot papers and their associated envelopes. Electronic voting systems that store data for extended periods of time during or after an election provide longer-term risks of potential secrecy breaches. Another difference between postal and remote electronic voting is that, at least at a theoretical level, the effects of secrecy breaches in processing postal ballots seem likely to be more limited than those that could arise in electronic voting.

These risks to ballot secrecy shift for different types of voters. Voters with some physical disabilities will be unable to complete a paper ballot. They will inevitably lose the opportunity to keep their votes secret by being forced to disclose their choices to other people who are able to fill out ballots for them. Electronic or telephone-assisted voting can be designed to offer these voters greater opportunities to cast a secret vote.

_

⁸ Voters casting in-person declaration votes (absent voting, voters whose name is not on the electoral roll, voters whose name has already been marked off as having voted, etc.) may also be identified on declaration envelopes where these are required. See Section 6.6 below.

5.6 Security and Resistance to Fraud and Misadventure

All voting channels have security weaknesses and provide opportunities for electoral fraud and misadventure. As the 2013 Senate Election in WA demonstrated, votes cast on paper ballots at a polling place on election day may go missing and never be accounted for, even in a generally well-run electoral system (Keelty 2013). Similarly, NSW Electoral Commission figures show that around eleven percent of NSW citizens who had registered for postal votes, along with two percent of NSW citizens who had registered for an iVote, did not record a vote at the 2015 State General election (Brightwell 2018; NSW Electoral Commission no date h). The extent to which problems of security, fraud and misadventure need to be addressed depend partly on the social and cultural context in which an election takes place (see Smith 2013; 2014). As a general rule, however, longer and more complex voting channels provide greater opportunities for votes to 'leak' and for attacks or fraud to occur (Burden and Gaines 2015).

For this reason, not all 'convenience' voting channels are seen to carry the same risks. Postal voting is usually regarded as less secure than pre-poll voting at a polling place, due to the opportunity for coercion while a voter is filling out a postal ballot paper, the longer time between completion of the ballot and its receipt by election officials, and the necessary reliance on third parties such as postal services to issue and transport postal vote requests and postal ballots (Wilks-Heeg 2008; White 2012; Orr 2015: 56-57). Remote electronic voting is often seen to intensify or magnify these risks, since voters may not pay proper attention to the security of the personal electronic devices that they use to vote, attacks may affect many more votes than could be affected by stealing or tampering with postal ballot packs, and that attacks may be more difficult to identify (Barry *et al.*, 2002; Jaoquim *et al.* 2010; Bernhard *et al.* 2017). In at least one respect, remote electronic voting may reduce the potential problems of coercion associated with postal voting, since it offers the possibility of changing a coerced vote later in the voting period (Alvarez *et al.* 2009).⁹

⁹ A determined coercer will usually be able to detect that a remote electronic vote has been changed. The possibility of re-voting may thus not be a theoretically perfect response to the possibility of coerced votes but it is better than postal voting, in which voters have no possibility of re-voting if they are coerced at the time of voting. Both remote electronic and postal channels have the same coercion propensity at the time of voting; however, remote electronic voting gives the voter the possibility of addressing the problem, a possibility that does not exist with postal voting.

5.7 The Accuracy and Reliability of the Count

Any vote count should be reliable and produce an accurate result. Although some elections are won by large margins, so that minor inaccuracies may seem unimportant, other elections are won by mere handfuls of votes. Counting large numbers of ballot papers by hand is time-consuming and prone to error. The preferential and optional preferential voting systems used in Australia present an additional burden of complexity to the count, with ballot papers repeatedly moved from one candidate's tally to the next as the count progresses. For these reasons, upper house vote counts in Australia, along with some lower house counts, are increasingly being conducted by computer, using preference data entered from paper ballots.

Producing as accurate a count as possible can mean that the wait for the announcement of final results in Australian elections drags on for days and even weeks, particularly in upper house elections that involve complex preference flows to fill multiple seats on a proportional basis. While some argue that drawing out the count over the hours of election night and beyond 'signals the importance of the overall election ritual' (Orr 2015: 168), others have seen it as a reason to introduce electronic voting (see, for example, Barry et al., 2002; Williams 2013).

Computer counts are certainly far quicker than hand counts and computers can be programmed to allocate the preference flows required in most Australian electoral contests. A correctly programmed computer count is less likely to produce the errors found in hand counts (Barry et al. 2002). Nonetheless, complex computer programs may contain errors. Hand counting processes are often well-established and specified in legislation. Transferring those processes to electronic counts—particularly where those counts must meet existing legislative requirements that were developed for hand counting—is not always straightforward. The consequences of minor programming bugs can lead to the declaration of the wrong winners. problems with paper counts, problems with computer counts may have systematic consequences over a series of elections. Failures in a vote counting program that go undetected may continue to produce the wrong winners. For these reasons, some electoral commissions in Australia publish the relevant count data, giving analysts the opportunity to check the results and identify problems (see, for example, Gore and Lebedeva 2016; Conway et al 2016).

_

¹⁰ Risk limiting audits provide a theoretical option for reducing the time spent on confirming counts (see Lindemann and Stark 2012), although how much time they would actually reduce in dealing with Australia's relatively complex ballots is unclear.

5.8 Transparency

Transparency is widely seen as a way of preventing wholesale electoral fraud such as ballot stuffing or simply fabricating the results. An accurate vote count is also thought to be best secured by a transparent count.

Paper-based voting systems may be relatively slow and mistakes may be made; however, the presence of candidate representatives who can observe the physical artefacts and actions adds transparency to the process. For example, paper ballots can be re-counted until participants accept that the result is accurate. There are limits to this transparency, since scrutineers may not be present at all stages and locations of an election. Even if they are present at all stages and locations, some of their observations may be faulty. For example, it is very common to have differences between preliminary hand counts and the final hand count, even though both counts have been independently observed. When this happens the final count is typically accepted in lieu of a detailed investigation. This problem typically occurs when ballots are moved from one location to another during the counting process, with the possibility that ballots may have been misplaced in the process. Such discrepancies are in many cases impossible to resolve and the judgement of the returning officer is used to decide whether the discrepancy is electorally significant.

Some aspects of the transparency of hand counts can be applied to electronic voting and counting through direct observation of the officials who are responsible for the electronic systems. Nonetheless, this observation has limitations, since most of the counting activity occurs within computers. The major piece of scrutiny of electronic voting systems lies in independent expert auditing of the counting programs and processes to ensure that errors have not occurred or will not occur. This reliance on scrutiny by experts has led to debates about the desirability of risk limiting audits, making vote counting software 'open source' and incorporating 'end-to-end' verification features in electronic voting systems.

Where data from paper ballots is keyed into computers for counting (see Section 5.7 above), the later provision of preference data from the entered data allows independent checking of count programs. In the absence of legislatively mandated cross-checking of paper ballots and keyed data, candidate scrutineers are sometimes unable to audit the data entry process effectively.

Regardless of the voting channel and counting method, almost all voters delegate the transparency of the count to others—groups of candidate scrutineers in the case of paper-based counts and smaller expert groups of auditors and scrutineers in the case of computer-based counts. As Sarah Birch *et al.* (2014: 189) have argued, these differences may lead to different levels of voter trust in paper-based and electronic counts:

Even if voting and counting are carried out in the absence of evident problems, it still may be, as noted above, that people's preferences are not accurately recorded, tallied or reported. All voting systems can of course yield the 'wrong' result, but the opacity of electronic devices in comparison with old-fashioned paper ballots means that concerns about accuracy may be more difficult to allay.

The available Australian studies suggest that substantial proportions of voters are open to the use of remote electronic voting, although many retain concerns about its security and more voters trust that their votes will be accurately recorded via paper-based voting channels than via electronic voting channels (Smith 2016; Zada et al 2016; Goodman and Smith 2017; Perth Market Research 2017: 93-95). Whether this is a function of familiarity with paper ballots and will change if and when remote electronic voting becomes more common in Australia is unclear.

6. New Research on Voting Channels in Australia

6.1 Introduction

This report presents new research on voting channels in Australia, focusing on NSW and WA. Rather than directly researching the experiences and attitudes of voters, it examines two other sets of stakeholders who are crucial to the success and legitimacy of any election: the candidates and parties that stand for election; and the workers employed by electoral commissions to run elections. We know much less about the experiences and views of these stakeholders than we do about the views and behaviour of voters. This chapter sets out the mixed methods approach adopted for this report. It begins by explaining the two case study jurisdictions and then provides details about the ways in which the experiences and views of election workers and parties and candidates were researched.

6.2 Why New South Wales and Western Australia? The Two Case Study States

The data discussed in the rest of this report are drawn from NSW and WA. These States were chosen because they were the only two Australian jurisdictions whose range of voting channels for State general elections and by-elections included remote electronic voting via the internet or telephone, using the iVote system.¹¹ These two jurisdictions thus currently offer the widest range of voting channels and—even taking into account legislative and practical limitations on accessing particular voter channels—the most voter 'convenience' in Australia.

A number of elections took place during the fieldwork phase of this research (2016-2017). These were three sets of three State by-elections in NSW (November 2016, April 2017 and October 2017), the Western Australian State General Election held in March 2017, and two sets of NSW Local Government Elections held in September 2016 and September 2017 (see Table 6.1).¹² The following sections of this chapter set out the voting methods available under relevant electoral laws in NSW and WA.

¹¹ Remote electronic voting was not available at the NSW Local Government Elections. See also Section 6.11 below.

 $^{^{12}}$ Research on the September 2016 NSW Local Government Elections was restricted to some preliminary observations of election processes. This report focuses on the other elections that occurred in NSW and WA in 2016 and 2017.

6.3 The Legislative Framework for Voting Channels in NSW and WA

Under the *Parliamentary Electorates and Elections Act 1912* (NSW) in force at the time of the research for this report,¹³ the NSW Electoral Commission provided the following channels of voting in the State by-elections:

- Casting an ordinary, in-district vote at a polling place on election day
- Casting a declaration vote at a polling place on election day
- Postal voting for eligible electors
- Technology Assisted Voting (using the iVote system via telephone or the internet) for eligible electors
- Eligible electors could cast a pre-poll vote in person at voting centres
- Electors at 'Declared Institutions' such as nursing homes, are visited by election officials to collect their votes.

In 2011, NSW became the first jurisdiction in Australia to offer the option of remote electronic voting (via the iVote system) for blind and sight impaired voters, voters with other disabilities, voters living more than 20 kilometres from their nearest polling place and voters who were out of the State on polling day (for more detail, see New South Wales Electoral Commission 2016).¹⁴

Part 6 of the *Local Government Act* 1990 (NSW) allows most councils to choose whether they will run their own elections or engage the NSW Electoral Commission to carry out their elections. The exceptions are councils being elected for the first time, when the NSW Electoral Commission must be used. Voting methods for local council elections are the same as for State elections, except that absent voting and use of the iVote system is not currently permitted (New South Wales Electoral Commission. No date e).

The Western Australian Electoral Commission provided similar services under the *Electoral Act 1907* (WA), with the addition of polling in remote areas. Two legislative amendments resulted in significant changes to voting channels provided at the 2017 State General Election. These were:

1. The removal of the need for electors to supply a reason for seeking to vote early meant that there was effectively three weeks of ordinary polling as electors

State elections.

14 Remote electronic voting had previously been trialled for some defence force personnel at the 2007 Australian Federal Election (Parliament of the Commonwealth of Australia 2009b). The trial was considered too costly and not repeated.

¹³ The NSW Parliamentary Electorates and Elections (1912) Act applied during the course of this research; however, the recently passed Electoral Act 2017 will be in force for the next NSW State General Election in 2019. Amongst the changes in the new Act are the creation of categories of 'Registered Early Voter – Postal' and 'Registered Early Voter – Technology Assisted Voting', which effectively supersede the 'General Postal Voter' category used in other Australian jurisdictions and used previously for NSW

- were generally able to cast votes as they would have in a polling place on election day at various locations across the State.
- 2. The introduction of the iVote system allowed particular categories of electors to vote independently and remotely without the need to attend a polling place or other vote issuing location. This not only provided a wider opportunity for electors to cast their vote but also laid the groundwork for a possibly expanded service in future elections (Western Australian Electoral Commission 2018).

6.4 Use of Voting Channels in the Elections Included in this Report

The following sections outline the patterns of use in voting channels at the elections in NSW and WA during 2016-17, noting trends in use compared with previous elections where possible. As has been the case more generally in Australia (see Chapter 3), ordinary voting on election day has declined, while demand for other forms of voting, particularly pre-poll voting, has increased substantially.

6.5 Ordinary Voting on Election Day

The changes to pre-poll voting in WA discussed in Section 6.3 saw a sharp decrease in turnout on polling day—down 11 percent from 2013 to 2017—with many electors having already voted before the day in-person or by post. Only 61.22% of electors cast ordinary votes in a polling place on election day in 2017. This compared with 72.25% in 2013. The decrease in ordinary voting on election day over the four preceding elections combined had totalled just over nine percent. Whilst decreasing, this channel of voting still accounts for the majority of votes cast and is viewed as the 'traditional' form of voting, with party workers outside the polling place canvassing voters and scrutineers inside to observe counting after the close of polling.

NSW has seen a similar trend of falling ordinary election day votes in favour of other modes of voting. Only 67 percent of votes at the NSW State General Election in 2015 were ordinary votes cast at a polling place on election day, compared with 74 percent at the 2011 State General Election. Although there was variation in the levels of ordinary voting at the nine NSW by-elections held between 2016 and 2017—ranging from a high of 78 percent (Canterbury 2016) to a low of just 54 percent (Murray 2017)—the by-election results overall reflect the recent drop in ordinary voting in NSW (NSW Electoral Commission no date g).

At the 2017 NSW Local Government Elections, ordinary votes comprised 67 percent of the total votes cast, about the same as the 65 percent figure for the 2016 Local Government Elections but down substantially from 74 percent at the 2012 Local

Government Elections (NSW Electoral Commission no date a: 52; no date d: 42; no date e: 37).

6.6 Declaration Voting (Including Declaration Envelope Voting) on Election Day

At the time of the research, declaration voting on election day included absent voting, 'silent' voting by people who were not required to disclose their address, ¹⁵ voting by people whose name had already been marked as voted and voting by people who were not on roll. At the 2017 WA State General Election, most declaration voting did not involve the completion of written declarations on envelopes. In NSW, the various types of declaration vote involved more complex and time-consuming processes. The votes needed to be sorted to be delivered to the appropriate location for scrutiny and counting. In both NSW and WA, not all declaration votes would eventually make it into the count (if, for example, voters had neglect to sign the required declaration).

At the 2017 WA election, absent voting was the highest it had been in over 20 years, increasing in percentage terms for the first time since 2005. The raw increase in 2017 (27,933) was greater than the previous four elections combined (27,699). Over 90% of electors cast an absent vote by having their name marked off electronically. This meant that over 130,000 declaration votes were admitted to the count based on declarations in a polling place that did not require completion of an envelope. There was a significant increase in the supply of Elector Recording System (ERS) devices for electronic mark-off, meaning many voters could cast a valid absent or ordinary vote with an oral declaration rather than relying on the checking of a written declaration after election day. ERS devices were not available at all locations, particularly smaller polling places in remote and rural areas. In these areas, absent votes were still cast by electors completing envelopes. These votes represented just under 10 percent of the absent votes admitted to the count.

With operations in WA more centralised than in other jurisdictions, all declaration vote processing and most counting occurs in the one counting centre. Unless particular circumstances (such as distance) dictate otherwise, Returning Officers conduct their final distribution of preferences at the central counting centre, where declaration votes are processed. This means that candidates and parties can coordinate their scrutineers centrally and have them oversee multiple counts rather than distribute them across the various electorates.

Absent voting was negligible in the nine NSW State by-elections and was not available for the 2017 NSW Local Government Elections

¹⁵ Changes to NSW legislation since the research was conducted have removed the declaration requirement for silent voters.

6.7 Ordinary Pre-Poll Voting

With pre-poll voting increasing by 270 percent at the 2017 WA State General Election, demand at early voting locations was high throughout the three-week early voting period. Approximately 24 percent of electors voted early, with 16 percent of electors casting pre-poll votes. This compares to a figure of just under nine percent in 2013.

This jump represents a significant change in planning requirements for the Electoral Commission, candidates and parties, with a need to allocate significantly more resources to activities prior to election day. The particular challenge is that it is not clear where, and in what numbers, electors will choose to cast a pre-poll vote. In the past, the Western Australian Electoral Commission had taken advantage of legislation allowing free use of government buildings. Furthermore, legislation provided that most court houses were effectively pre-poll vote issuing offices. For the previous three elections, the WA Commission had also had an agreement for the Australian Electoral Commission to use AEC offices as issuing locations.

All of that changed in 2017. Most courts were no longer suitable for use, apart from in some country locations, due to the impact on court services of the increasing numbers of electors. The agreement with the Australian Electoral Commission did not continue into 2017 and changes within the AEC's divisional office structure meant that it no longer had suitable venues to handle the expected level of traffic. This led, in 2017, to an increased focus on commercial premises, particularly in the metropolitan area and urbanised cities and towns in rural areas. Unfortunately, the need for short-term arrangements proved a barrier to leasing suitable premises in a timely manner. Owners gave limited commitments to short-term leases until after the Christmas period. The Commission's ideal of having large premises spread across urban areas leased six months out from the election was not achievable, with lessors preferring to hold out for longer-term offers before committing to leases for election purposes. In a number of cases, compromises had to be made in relation to one or other of these considerations due to availability constraints.

At the 2017 NSW Local Government Elections, 19 percent of voters cast pre-poll votes, including 0.8 percent who cast their votes at Sydney Town Hall, which provided pre-poll voting for all of the councils using the NSW Electoral Commission as their election provider. The overall pre-poll vote was down from 26 percent in the NSW Local Government Elections of 2016 (NSW Electoral Commission no date e: 36, 56).

Ordinary pre-poll voting in the nine NSW by-elections held between 2016 and 2017 ranged between 13 percent (Manly 2016) and 35 percent (Cootamundra 2017). It is worth noting that only Manly and Canterbury (two metropolitan electorates) had levels of pre-poll voting below or at the State-wide average levels for the 2015 NSW

State Election (14 percent), with five of the nine by-elections registering pre-poll votes of 25 percent or more (NSW Electoral Commission no date g).

6.8 Declaration (Envelope) Pre-Poll Voting

The aim for early in-person voting at the 2017 WA State General Election was to have all votes, where possible, issued to electors who were marked off electronically. This was achieved in WA Electoral Commission coordinated locations through the supply of Elector Recording System (ERS) machines. In interstate and overseas locations, a web-based version of the ERS was available to allow online mark-off. For those locations where internet access was not readily available or the size of the location did not warrant the issue of an ERS machine, declaration envelopes were issued to electors. This form of voting represented less than one percent of pre-poll votes counted. The move away from declaration envelopes to ERS mark-off provides more certainty as to the eligibility of electors at the time they cast their vote. It also reduces post-election day processing, allowing results to be determined and released sooner.

NSW legislation does not provide for declaration (envelope) pre-poll or absent voting in local government elections. In the nine NSW State by-elections conducted during the period of this research in 2016 and 2017, all in-person pre-poll votes were taken as ordinary pre-poll votes.

6.9 Remote or Mobile Polling

Seventy-two remote polling locations operated in WA in 2017, down from 87 in 2013. However, a number of locations were operated as regular polling places, with longer hours on election day, to take account of higher elector numbers. Remote or mobile polling particularly occurred in the north-east of the State. This remote polling was served by motor vehicle, aeroplane and helicopters (where flooding meant that helicopters needed to be chartered at short notice to reach some communities).

Remote or mobile voting was not offered at the 2017 NSW Local Government Elections or the nine NSW by-elections held during 2016 and 2017.

6.10 Postal Voting

The anticipated increase in pre-poll voting at the 2017 WA State General Election, combined with the increase in the cost of postal voting for parties, meant that postal voting was expected to increase marginally or plateau, as it had in other jurisdictions in recent elections. As it was, the Liberal Party only continued the practice of pursuing

postal votes but used this as one of their key campaigning strategies (see Section 7.3). As a consequence, postal voting was 50 percent higher in 2017 than in the 2013 WA State General Election in terms of votes cast, with 8 percent of votes cast as postal votes. Over 36,000 more people cast postal votes in 2017 than they did in 2013.

At the 2017 NSW Local Government Elections, six percent of votes were postal votes, up from around four percent at both the 2016 and 2012 NSW Local Government Elections (NSW Electoral Commission no date a: 16; no date e: 36). Postal voting at the nine NSW by-elections held between 2016 and 2017 ranged between two percent (Murray 2017) and eight percent (North Shore 2017) (NSW Electoral Commission no date g).

6.11 Remote Electronic Voting

A total of 2,431 registrations were received and 2,288 votes were taken using the Western Australian Electoral Commission's iVote system, available to assist electors with disability to cast a secret vote. 54 electors used the telephone verification service to confirm the vote that they had cast.

Remote electronic voting via the iVote system at the nine NSW by-elections held between 2016 and 2017 ranged between three percent (Orange 2016; Gosford 2016) and seven percent (Murray 2017) (NSW Electoral Commission no date g), figures that are roughly in line with its use at the 2015 NSW State Election.

6.12 Declared/Special Institution Voting

At the 2017 WA State General Election, special institution voting took place in 266 locations including medical facilities, retirement villages and prisons. A further five locations were identified as drive-in polling places, where electors were able to cast their votes without leaving their vehicle. Selected locations were chosen where there was the option of a covered area that electors, carers or family could drive up and have their name marked off the roll electronically before being issued with, and casting, their vote from their vehicle. Some smaller or more organised institutions encouraged residents, patients or inmates (as the case may be) to enrol as postal voters, removing the need for site visits to take votes. Given the physical and logistical challenges for electors in these circumstances casting votes, this process is less likely to be replaced, or affected, by alternatives such as increased pre-poll or internet voting opportunities.

Declared institution voting was offered at 333 institutions for the 2017 NSW Local Government Elections and also at a number of institutions at the nine NSW by-

elections held between 2016 and 2017. Data on how many declared institution votes were cast at these elections is not available; however, declared institution votes comprised 0.31 percent of all votes at the 2015 NSW State General Election (NSW Electoral Commission 2015: 18).

6.13 Other Relevant Features of the Elections Included in this Study

Apart from the voting options available to electors, these elections varied in a number of ways, presenting different challenges for electoral workers and other stakeholders (see Table 6.1). The 2017 WA State election involved two houses of parliament elected using different balloting rules, with 59 Members of the Legislative Assembly elected from single member electorates and 36 Members of the Legislative Council elected from six regions. The election covered a huge territory (2.526 million square kilometres) and involved a large number of voters (1.593 million), candidates (717) and employed election workers (8,305), most of the latter working at one of 752 ordinary polling places (Western Australian Electoral Commission 2017a: 4).

Although territorially smaller than the WA State election, the 2017 NSW Local Government Elections involved more registered voters (2.635 million) and more election workers (9,123) (New South Wales Electoral Commission no date b; no date e). The NSW Local Government Elections also involved an element of uncertainty for citizens as to whether or not they were required to vote, as well as a more restricted menu of voting channels than those available in NSW for State or federal elections.

Elections for 46 NSW local governments were conducted in September 2017, with the remaining 82 NSW local governments having held their elections a year earlier (New South Wales Electoral Commission 2017a). As a result, in some cases the difference between being required to vote and not having to vote in 2017 depended on which side of a street residents lived. In addition, recent council amalgamations meant that most of the 2017 elections were for new local government bodies with unfamiliar names (NSW Government 2018). Voters potentially had to lodge up to four different ballot papers (one each to elect councillors, elect a mayor, vote on referendum questions and vote on non-binding poll questions), although in practice the largest number of ballot papers for any local council was three.

Table 6.1. Features of the Elections Included in the Research

			Registered	Voting
Election	Date	Location	voters	methods available
Canterbury By-	12 November	Metropolitan	57,112	1. Ordinary on
Election (NSW)	2016			election day.
Orange By-Election	12 November	Rural	56,242	2. Declaration (not
(NSW)	2016			on roll etc.) on
Wollongong By-	12 November	Regional city	59,640	election day.
Election (NSW)	2016			3. Ordinary pre-poll.
				4. Declaration pre-
Gosford By-Election	8 April 2017	Regional city	55,935	poll.
(NSW)				5. Postal.
Manly By-Election	8 April 2017	Metropolitan	55,105	6. iVote system
(NSW)				(web, phone-IVR
North Shore By-	8 April 2017	Metropolitan	54,762	or phone-operator
Election (NSW)				assisted).
				7. Declared
Blacktown By-	14 October 2017	Metropolitan	55,926	institution.
Election (NSW)	44.0 . 4 . 404.	.		
Cootamundra By-	14 October 2017	Rural	53,529	
Election (NSW)	440.1.2045	D 1		
Murray By-Election	14 October 2017	Rural	55,985	
(NSW)				
Western Australian	11 March 2017	59 lower	1,593,222	1. Ordinary on
State General		house seats; 6	_,	election day.
Election		upper house		2. Declaration
		regions		(absent etc.) on
		(metropolitan,		election day.
		regional, rural		3. Pre-poll.
		and remote)		4. Postal.
		,		5. iVote system
				(web, phone-IVR).
				6. Remote or mobile.
New South Wales	9 September	46 local	2,635,132*	1. Ordinary on
Local Council	2017	councils		election day.
Elections		(metropolitan,		2. Declaration on
		regional, rural		election day.
		and remote)		3. Ordinary pre-
				poll.
				4. Declaration
				pre-poll.
				5. Postal.
				6. Declared
* A a at 21 Italy 2017 Elici				institution.

^{*}As at 31 July 2017. Eligible people could register to vote until polling day. Sources: NSW Electoral Commission (no date e; no date f); WA Electoral Commission (2017).

As indicated above, almost all citizens who voted in-person had to vote within their council boundaries. The limited exceptions were those who could make use of a special voting centre established at Sydney Town Hall, at which electors could cast pre-poll or polling day votes in all bar one of the local council elections (New South Wales Electoral Commission no date e: 35-37).¹⁶ Thus the potential for voter confusion over whether, where and how to vote was high.

The NSW by-elections were all smaller events, involving fewer voters and election workers (with 578, 534 and 503 staff employed for the sets of by-elections). Since the by-elections required fewer staff, to some extent the NSWEC was able to select from its more experienced regular casual staff (its 'A Team') to conduct the elections. Although the by-elections presented some uncertainty to citizens about whether or not they were required to vote, this affected far fewer voters than were affected by the Local Government Elections (New South Wales Electoral Commission no date e).

6.14 A Mixed Methods Approach

The research for this report was collected using a mixed methods approach that included five separate online surveys of election workers, interviews with election candidates, campaign managers and party officials, along with some observations of electoral administration processes. The University of Sydney granted ethics approval for the research (Project Number 2016/940).

6.15 Surveys of Election Workers

Surveys of electoral workers are a valuable if relatively under-used method of identifying how well or poorly election management tasks are implemented at polling places and other key election sites. Election workers are 'street level' officials whose decisions and actions are critical to the quality of any election.¹⁷ They experience and observe aspects of elections that voters and high level decision-makers do not. At the same time, the survey responses of election workers need to be treated critically. Election workers, particularly those employed solely for polling day, may lack adequate knowledge of proper electoral practices themselves. They may either exaggerate or minimise the problems they faced carrying out their tasks in order to present their performance in the best light (see, for example, Alvarez et al 2013: 92-114; James 2014: 149; Clark and James 2016: 3-6; James 2017: 136-137). These

_

¹⁶ Maitland City Council chose to conduct its own election using council staff during the 2017 NSW Local Government Elections.

¹⁷ See Lipsky (1980) for the classic discussion of the importance of street level bureaucrats to successful administration of policy.

caveats should be borne in mind when assessing the survey evidence presented in this report.

For this study, we invited all permanent, contract and casual workers who had worked on a relevant election in 2016 or 2017 for the New South Wales Electoral Commission or the Western Australian Electoral Commission to participate in an online survey about their experiences. 18 The invitations were sent to different groups of election workers as soon as possible after each election event.

Steps were taken to ensure respondents' anonymity and to avoid any real or perceived coercion in their decisions about whether or not to participate in the survey. Invitation emails were sent to potential participants by the electoral commissions and the employment agencies that hired workers for each of the elections. These emails contained a link to an anonymous online questionnaire on the Qualtrix platform, with the survey data only accessible to the lead researcher via a University of Sydney account. In this way, the researchers did not know who had been invited to participate in the surveys and the electoral commissions did not know who had taken up the invitation to participate. For all surveys except the October 2017 NSW By-Elections Survey, a reminder email containing the link to the questionnaire was sent to participants several weeks after the initial invitation. The text of the questionnaire is provided in Appendix 1.

The arms-length method by which the survey invitation was distributed makes it difficult to calculate precise response rates for the surveys. Dividing usable responses by the official election commission employment figures for each of the five election rounds results in the conservative estimated response rates set out in Table 6.2. In each round of surveys, the response rate was roughly 30 percent or better. Despite the arms-length survey delivery method, a possible sample bias toward respondents who had positive experiences of working on the election and/or want to work on future elections should be acknowledged.

employed in that election.

¹⁸ As noted earlier, Maitland City Council conducted its own election. This study excluded workers

Table 6.2. Estimated Response Rates for the Five Election Worker Surveys

	Employed	Usable	Estimated
	workers	responses	response rate (%)
September 2016 NSW	565	199	35.2
By-Elections			
March 2017 WA State	8,305	2,474	29.8
General Election			
April 2017 NSW By-	534	248	46.4
Elections			
September 2017 NSW	9,123	2,925	32.1
Local Government			
Elections			
October 2017 NSW	503	151	30.0
By-Elections			

To allow for more detailed statistical analysis, respondents to the three rounds of NSW by-election worker surveys were combined into a single sample of 598 respondents. The by-elections were all run according to the same policies and processes. Combining the survey results in a sample that includes three metropolitan electorates, three regional electorates and three rural electorates. While this variation does not reflect the overall composition of NSW electorates, it provides a serendipitous stratified sample of electoral contexts, allowing for comparisons to be made between respondents who worked in a range of environments. A few respondents may have worked on more than one by-election and thus be included in the sample more than once. (Some respondents may have worked on one or more by-elections and also in a NSW local council election.) Since the questionnaire items are mostly targeted at respondents' training for and experiences during specific elections, rather than their views of election management in general, the inclusion of a small number of respondents more than once is not likely to affect the results. Preventing these respondents from completing a more than one survey would potentially have limited the data collected about particular elections.

6.16 Characteristics of the Election Workers

Relevant characteristics of the election workers in the three samples are presented in Tables 6.3 and 6.4. As would be expected, almost all of the election workers were contracted or employed casually to work for polling day or the longer election period and most were employed as polling place election officials. Most worked in metropolitan contexts, which reflects the population concentrations of WA and NSW in Perth and Sydney.

Election workers tended to be middle-aged or older, with three-quarters of them over 45 years. Given this, it was slightly surprising that their previous election work experience was relatively limited. Table 3 shows wide variation in previous election experience; however, the median number of previous elections among the WA State Election sample was two, while for the two NSW samples it was three.

Election workers in all three samples tended to be women (between 60 and 68 percent). All three samples had relatively high levels of formal education—with one-quarter holding postgraduate qualifications—and their everyday employment experience was predominantly in professional, clerical, administrative and management roles. Clark and James (2016: 12) note very similar gender, age and class patterns in their 2015 survey of British poll workers.

Table 6.3. Respondents' Experiences of Election Work

Table 6.3. Respondents' Experiences of Elect			
	WA	6 1: 1	NICHA I I
	State	Combined	NSW Local
	General	NSW By-	Government
	Election	Elections	Elections
Employment Ctatus with Electoral			
Employment Status with Electoral Commission			
Permanent	0.1	1.2	0.3
Contract	10.0	98.8	99.7
Casual	89.9		
Casuai	09.9	n/a	n/a
Role			
Polling Place Election Official	58.3	62.7	60.8
Polling Place Manager (Ordinary or Early	18.8	21.6	24.9
Voting)			
Early Vote Issuing Officer	9.4	n/a	n/a
Returning Officer	7.2	2.8	5.1
Returning Officer Liaison Officer	1.1	n/a	n/a
Returning Officer Support Officer	n/a	1.0	1.2
Project Manager or Project Leader	0.4	n/a	n/a
Senior Office Assistant	n/a	6.2	5.4
Office Assistant	n/a	17.0	14.0
Count Centre Staff Member	n/a	0.2	0.3
Results Management Team Member	n/a	0.7	0.5
O	,		
Number of Previous Elections			
0	27.9	14.1	16.0
1	18.5	13.5	16.5
2	9.2	14.6	13.2
3	8.5	9.8	9.8
4	9.5	9.6	7.9
5-9	18.0	22.3	20.9
10 or more	6.9	15.7	15.7
Most Remote Election Work Setting			
Metropolitan	68.9	46.4	58.3
Regional City or Town	20.2	35.8	31.3
Rural or Remote	10.9	17.8	10.4

Table 6.4. Demographic Characteristics of Election Workers

3		of Liection Workers	NSW Local
	WA State	Combined NSW	Government
	General Election	By-Elections	Elections
Gender			
Female	67.8	61.4	60.3
Male	32.0	38.6	39.5
Other	0.1		0.2
Age			
<25	3.8	5.2	5.7
25-34	7.2	6.7	8.4
35-44	13.3	13.0	11.2
45-54	23.0	23.1	21.7
55-64	33.2	30.5	30.8
65-75	17.7	20.5	20.8
>75	1.9	1.1	1.5
Education			
High School or	45.4	41.4	38.3
Trade Certificate			
Undergraduate	29.6	33.5	32.8
Tertiary Degree			
Postgraduate	25.0	25.1	28.9
Tertiary Degree			
Occupation			
Professional	28.1	32.4	30.9
Clerical or	24.5	25.0	22.8
Administration			
Manager	17.8	18.8	17.0
Community or	4.6	5.8	4.4
Personal Service			
Student	4.6	5.0	5.6
Sales Worker	2.7	2.2	2.9
Technical or Trade	2.4	2.8	2.6
Worker			
Machinery	0.7	0.7	0.5
Operator or Driver			
Labourer	0.6	0.6	0.4
Other (includes	14.0	6.7	12.9
home duties)			

6.17 Interviews with Candidates, Campaign Managers and Party Representatives

In addition to gathering survey evidence from election workers, we considered it important to understand the perspective of those who are subject to electoral regulation and administration; that is, election candidates and managers of party election campaigns. We thought it likely that these perspectives would provide us with new information and raise new issues about the operation of voting choice. Where electoral management bodies are concerned with systemic questions of efficiency, compliance and neutrality, participants in the electoral contest are more likely to view voting choice through the prism of a more immediate consideration: partisan and political advantage, played out through strategic and tactical competition by rival campaign organisations in specific election contests. We also felt that the experience of these users or consumers of the electoral process, would valuably supplement the perspectives of its managers or producers, and thus 'round out' our research on voting choice. Further, we felt these user perspectives might provide electoral management bodies with useful feedback about the nature and impact of voting choice.

From a methodological point of view, accessing this perspective posed several challenges. Candidates and party campaign managers occupy critical, elite positions within their respective campaign organisations, though sometimes only for the limited duration of a specific election contest (Mills 2014). As electoral contestants their primary consideration is partisan advantage, and to this end operate within strategically important networks and have access to proprietary campaign information. These elite actors, moreover, display great diversity of partisan affiliation, organisational position, and professionalism. To address these challenges, we opted for a qualitative research methodology based around semi-structured interviews with a selection of candidates and party officials.

Unlike quantitative research, which generates valid insights through precise measurement, accurate sampling and the analysis of statistical significance, qualitative research relies on deep observation of particular, individual contexts. Qualitative research is thus particularly relevant for studying human attitudes and behaviours, and social norms and values, where data is not susceptible to quantification or measurement. Indeed, qualitative researchers recognise that much data gathered by empirical means is inherently ambiguous and requires nuanced interpretation of the differing circumstances of each respondent rather than precise measurement of large groups. The qualitative approach is designed to yield rich and deep insight into, and 'thick description', of human organisations and relationships (Vromen 2010).

Table 6.5 Party Representatives and Candidates Interviewed for the Report

		Western Australia		New South Wales			
		2017 State	General	2016	by-	2017	by-
		Election		election	s	election	ns
Head Office	Metro	Patrick	Gorman			Kaila	
		(ALP)				Murnai	n
		Andrew Co	x (Lib)			(ALP)	
		Lisa Cole (N	Jat)			Peter	Phelps
		Andrew	Beaton			MP (Lil	0)
		(Green)					
	Regional	Filip Despot	toski (SFF)	+			
Candidates	Metro	John Care	y (ALP,	Sophie	Cotsis	Felicity	
		Perth)		(ALP,		Wilson	(Lib,
		Eleni Evan	gel (Lib,	Canterb	ury)	North S	Shore)
		Perth)					
		Simon	Millman				
		(ALP, Mt La	awley)				
		Michael Su	utherland				
		(Lib, Mt Lav	vley)				
		Jessica Sha	w (ALP,				
		Swan Hills)					
		Frank Alb	an (Lib,				
		Swan Hills)					
	Regional	James	Hayward	Phil	Donato		
		(Nat, Bunbu	ıry)**	(SFF, Or	ange)		
		Michael	Baldock				
		(Green, Bun	bury)				
		Bernie Mast	ters (SFF,				
		Bunbury)					

^{*} Filip Despotoski is NSW State Campaign Manager of SFF and also worked in WA elections

A principal tool of qualitative research is the semi-structured interview which, as the term suggests, grants both interviewer and respondent a degree of flexibility and latitude to organise and particularise their discussion. Semi-structured interviews—unlike rigid, survey-style closed-end questioning—permit and encourage respondents to articulate their views fully, and to provide context and framework for their answers. They provide researchers the possibility to ask follow-up questions and seek clarification around points of particular interest. Semi-structured interviews are regarded as a particularly appropriate method of accessing the views of political elites, as they allow the researcher to go 'behind closed doors' to understand the inner

^{**} James Hayward is also the State President of the WA Nationals

workings of, in this case, election campaign strategies of candidates and parties. All interviews were digitally recorded transcribed and manually coded. All respondents were offered the opportunity to speak without attribution but all agreed to be identified in person. The interview schedule is set out in Appendix 2.

Qualitative research does not, as noted above, rely on statistically accurate sampling to identify respondents who are perfectly representative of the wider group being studied. It is important, however, to ensure that interview respondents are sufficiently numerous and authoritative to provide a range of credible perspectives. To this end, the researchers undertook nineteen interviews with individuals whose electoral participation covers a diverse set of circumstances. As Table 6.5 shows, the individuals were involved with both the Western Australian State General Election (fourteen interviews) and from each of the by-election phases in NSW (six interviews). Twelve participated as candidates for election while eight were senior head office officials from political parties.¹⁹ Fourteen of the respondents were based in metropolitan locations (Perth or Sydney), while five were located in regional areas. Our respondents included six women and thirteen men. Twelve spoke as candidates or officials of one of the two major parties in each State (six Australian Labor Party, six Liberal Party), while seven represented minor parties (two Nationals, two Greens and three Shooters and Fishers). Of the twelve candidates, six were successful in seeking election (Carey, Wilson, Shaw, Donato, Cotsis and Wilson). We believe this represents a sufficiently wide range of respondents to generate valid data about responses to voting choice by election candidates and party campaign managers.

6.18 Election Observations

In addition to the surveys and interviews, the researchers made some observations of election processes at the NSW by-elections, the NSW Local Government Elections and the WA State General Election. These observations covered early voting centres, election day polling places, a call centre handling iVote system inquiries, counting centres and iVote system decryption ceremonies at head offices. While these observations were less systematic than the other forms of research undertaken for this report, they provided valuable understandings of the processes involved in different phases of the election events analysed in this report.

_

¹⁹ One interviewee had roles in both NSW and WA and another was both a candidate and party official.

7. What Criteria Do Election Stakeholders Value?

7.1 Introduction

Thinking abstractly, it is possible to arrive at a reasonably common list of criteria that an electoral process should satisfy (see Chapter 5). In practice, it may not be possible to meet all of these criteria simultaneously. Some criteria are likely to clash with each other. Measures that promote transparency of the vote count may, for example, clash with maintaining the secrecy of the ballot. Measures that ensure equality of access to the ballot may introduce or increase the possibility of fraud and corruption. In this way, elections present policy dilemmas for electoral lawmakers and administrators, who have to compromise some criteria to achieve others. These sorts of dilemmas are common in all fields of public policymaking, although they are often overlooked in discussion of elections.

These election policy dilemmas increase when the preferences of different stakeholders in elections do not align. What suits the interests of one set of stakeholders may not suit others. Throughout this report, we have focused on the pressure from voters to increase the availability of convenience voting. In this chapter, we discuss the extent to which the preferences of many voters for convenience are shared by two other key sets of election stakeholders: (1) the election workers who administer elections and (2) the candidates and parties who contest elections.

7.2 The Criteria Valued by Election Workers

The online survey respondents were asked 'In your view, how important is it that the election process achieves the following goals?'. The results presented in Table 7.1 are reasonably uniform across the three election worker samples. They show that while convenience might be driving much of the public demand for increased access to a range of voting channels, electoral workers tend to see convenience as a relatively unimportant goal.

The criteria that electoral workers are most likely to value centre on the core elements of electoral integrity over which they have at least some control: accurately recording votes, processing votes securely, preventing voter fraud and ensuring voters are not coerced. Election workers are slightly less likely to emphasise the secret ballot and

equal access for voters with different needs; however, these elements of electoral integrity are still widely valued.²⁰

Table 7.1. Percentage of Election Workers Thinking Election Goals 'Extremely Important'

	WA State		NSW Local
Goal	Election	NSW By-Elections	Government Elections
Votes accurately recorded.	88.8	89.3	85.7
Preventing voter fraud.	88.6	87.1	84.1
Secure processing of votes.	87.4	85.5	83.9
Voting without coercion.	84.3	83.2	78.2
Equal access for voters.	74.1	71.7	68.2
Votes cast in secret.	73.7	69.3	69.0
Independent scrutiny of count.	59.7	55.0	54.9
Voting in most convenient way.	57.5	52.9	49.9
Results announced quickly.	39.4	37.1	40.2
Minimise cost of election.	38.5	36.2	37.9

Election workers accord less importance to the criteria of independent scrutiny of the count and voter convenience, and less again for quick announcement of the results and minimising the costs of elections. Interestingly, these criteria reflect the interests of other key election stakeholders: voters in the case of convenience and quick announcement of the results; parties and candidates in the case of independent scrutiny and speedy result declarations; and the parties with parliamentary representation who have an interest in the budgetary impact of elections (see Clark 2017).

Election workers may see these interests as conflicting with their most valued criteria—for example, they may see the goal of an early announcement of the result as clashing with accurately recording or securely processing votes, while achieving the goal of convenience via postal or remote electronic voting may conflict with preventing voter fraud and coercion. All of the most valued outcomes may be threatened by attempts to minimise election costs (see, for example, Clark 2014; James and Jervier 2017). It also ought to be acknowledged that election workers may also worry that reducing election expenditure will mean that they miss out on employment (Clark and James 2016). Taken overall, the results in Table 7.1 suggest that, where voter convenience conflicts with core electoral integrity criteria, election workers would tend to give priority to achieving those criteria ahead of facilitating voter convenience.

_

²⁰ Electoral integrity refers to a broader set of elements that occur across the whole electoral cycle (see Norris 2014); however, most of these other elements are beyond the control of the 'street level' election workers who make up the survey samples.

7.3 The Criteria Valued by Candidates and Campaigners

Candidates and campaigners interviewed for this report recognised that the provision of greater choice for voters is democratically desirable. They also regarded it as a probably inevitable response to a changing social and technological landscape. However, such judgements were typically second-order concerns. The principal concerns expressed by respondents centred on how the new rules would impact on their own electoral efforts. As adaptive actors, they tend to appraise voting channels through the prism of the implications for their own strategic and competitive interests. Thus in the terms of the criteria adopted for assessing voting channels in this report (see Chapter 5), candidates and campaigners regarded the 'promotion of voter participation' as desirable, but placed the highest priority on whether these channels 'allow for effective communication between candidates and voters'.

This is most apparent in their responses to pre-poll voting at a polling place. James Hayward, the WA National Party's State President and candidate for Bunbury, provided a dual assessment of pre-poll voting as both 'great' (from a systemic point of view) and 'difficult' (from a party point of view):

My thoughts are that pre-poll is good, it is great. It is good for a few reasons. One is that it takes a bit of pressure off polling day itself. I think it is a better experience for the voter, and I think that's got to be a good thing for a political party as well. And, despite the fact that it is difficult, it does actually give [us] more of an opportunity, more face-to-face time ... with the voters. So from that point of view it has got to be a good thing, even though it is difficult for us to manage (James Hayward interview).

Perhaps the most common sentiment expressed was the resignation that pre-poll voting was here to stay, and that participants simply need to adapt to it. As WA Liberal State Director Andrew Cox observed: 'it is just happening so we have to just latch on to it. We are not saying "we want you to vote then and not on election day", it is just what is happening, so we have to embrace it' (Andrew Cox Interview).

In terms of adaptation, party-voter communications, especially around pre-poll voting, were the dominant concern of the interviewees. They identified numerous 'difficulties' arising from pre-poll voting. These include a range of minor logistical issues around, for example, accessibility of pre-poll voting centres and the extent of public awareness of the starting dates and location of pre-poll voting. There were also a number of macro issues, with significant implications for the parties' overall campaigns, including the need to restructure their campaign communications and local candidate canvassing to accommodate the longer polling period, and the increased effort required to recruit and deploy campaign volunteers (see Section 8.5).

There were some similar dual assessments also apparent on the issue of remote electronic voting. Voters 'should' have greater choice, and many respondents saw its potential for promoting access to the ballot by disabled and remote voters; however, it makes campaigning 'harder':

My personal view is that I think people should have choice. I mean it makes it harder for us as campaigners to try and capture people if they are remote electronic voting. But I think people should have choice (Felicity Wilson interview).

Again, the difficulties articulated by respondents in relation to remote electronic voting revolve around effective communicating with voters:

[With the iVote system], you are not able to communicate with the voters. They are sitting at home on a computer. It does become almost impossible to be able to communicate with them. ... You need to make sure you have an on-line presence—that you try to contact voters digitally, because it is almost impossible any other way (Kaila Murnain interview).

In addition to these concerns about party-voter communications, the respondents also expressed concerns around the impact of remote electronic voting and postal voting on the integrity of the voting process. In terms of the criteria set out in Section 5.1, concerns were raised about ballot secrecy and security. On remote electronic voting, WA candidate John Carey suggested remote electronic voting was 'open to abuse' in that it would allow dominant family members to influence voters: 'When you go into a booth, your family member can't stand over you' (John Carey interview). WA Greens official Andrew Beaton noted recent rumours of Russian hacking of US voting software and expressed 'pretty grave concerns about security' in remote electronic voting: 'I would like to see some very heavy attention paid to the data security around [the iVote system]. All the rest of them [alternative voting channels] I think are fine. I am a fan of the old paper and pencil despite its cumbersome nature' (Andrew Beaton interview).

Other campaign directors and candidates in WA, as exemplified by Labor candidate Jessica Shaw, shared these concerns:

There are already so many allegations for interference by overseas countries in the voting of other nations, and I just cannot accept that there is a hack-proof system that can be invented. I mean yes there was a situation where the AEC lost a set of ballots, but the risk of that is far lower than the risk of an IT system being hacked. I cannot accept that

you could invent one that is secure enough, because anything can be hacked in my view (Jessica Shaw interview).

Such concerns were expressed with much greater frequency in Western Australia, where the practice was only trialled in the 2017 State General Election, than in New South Wales, where it has become entrenched over several electoral cycles. Yet a NSW official voiced similar concerns:

In terms of security, I think given current global climates and given issues that we are having internationally at the moment with hacking, it never goes astray if you were to introduce more stringent security measures (Kaila Murnain interview).

Further, ballot security problems experienced with the iVote system in NSW during the 2015 State elections had underlined the risk associated with the implementation of new technologies, one NSW official commented. The official suggested parties be given an opportunity to 'check these processes' so as to maintain 'faith in the system' (Kaila Murnain interview).

There is a diversity of views on whether remote electronic voting will promote access and usability of the ballot. A NSW official said he was 'surprised' by the number of seniors using remote electronic voting in a regional seat because they 'could not make it to the polling station' (Filip Despotoski interview). On the other hand, John Carey stated that remote electronic voting was unnecessary given Australia's compulsory voting regime, while voters in remote communities did not have ready access to laptops. More generally, he believed that remote electronic voting could devalue the 'gravitas' of the voting process:

You know, you go to East Timor, and people line up all day to vote. Will online voting mean that it just becomes a flippant act? It's like, I vote on my Facebook poll, I'll vote in a State or federal election. ... Seriously, are we just going to turn voting into online polls? (John Carey interview)

Given its limited nature in Western Australia, many candidates were barely aware that remote electronic voting existed

It never came up as a conversation or it wasn't raised with me. No one asked me how I can do that (Eleni Evangel interview).

Honestly, I didn't even know anything about it (Simon Millman interview).

The WA and NSW legislative provisions concerning postal voting at the time of this research did not prevent parties from distributing postal vote application forms, or from receiving those forms, as long as they then passed them on to the Electoral Commission. This process offered parties several potential campaign advantages. In particular, they were able to capture the postal vote applicant's contact details and follow-up by mailing them party campaign literature. As Liberal campaigner Peter Phelps explained:

If we had a postal voter who wanted to do a postal vote, we would send them the postal vote application form but of course we will send it with the party propaganda that went with it, because that is the effectiveness of our postal voting. You only get the one side (Peter Phelps interview).

For other respondents, this practice raised integrity concerns. Andrew Beaton and Michael Baldock from the WA Greens criticised the major parties' practice in this area on three grounds. It was 'devious' for parties to make their correspondence to voters 'very closely mimic the style and layout' of official postal vote applications. Second, by inviting voters to return their application to a party PO box, parties were able to capture personal details about the voter—names, addresses and voting inclinations—for subsequent data-driven marketing. Finally, parties were able to determine when they forwarded the postal vote to election authorities for inclusion in the count, which represents a potential risk to voting security (Andrew Beaton and Michael Baldock interviews).²¹ Further, independent candidate Bernie Masters said allowing postal votes to be received for a period after election day was a 'drag on the counting process' (Bernie Masters interview).

Whilst the Liberal Party has been the main party committed to utilising postal voting, they are unsure about whether they will continue to do so in the future. As WA Liberal Party Director Andrew Cox explained, this is because the cost relative to other forms of campaigning is so high: 'It is something that in the future, I don't know how we will be able to continue it, because it is just so expensive. The Australia Post component of it is frightfully expensive. I think it went up 40 percent from 2013 to 2017' (Andrew Cox interview).

For many interviewees, the ultimate protectors of valued electoral criteria—including efficiency, impartiality and ballot integrity—are the various electoral commissions and their staff. Electoral staff received generally high praise for their management of elections.

_

²¹ S 95(9) of the *Electoral Act* 1907 (WA) requires people who receive applications for postal votes or postal ballot envelopes to pass these on to the WA Electoral Commission 'forthwith'; however, it is difficult to prove that this has not occurred.

As the analysis above demonstrates, political campaigners at both candidate and campaign director level are predominantly focused on how they can operate effectively in the new landscape, rather than reflecting on whether recent increases in convenience voting are worthwhile developments or not. Political parties believe that convenience voting is here to stay and are shifting their tactics and resources to adjust to this new reality. The primary goal of political campaigners is to win votes, and this priority overwhelms considerations of whether electoral processes are working optimally or not. When questioned about concerns over whether political parties should be involved in handling postal vote applications, WA Liberal State Director Andrew Cox stated 'until the act is changed we will continue to do it' (Andrew Cox interview).

Within this overarching broad conclusion, it is worth reiterating that there are several differences in goals between political parties and between States. Remote electronic voting is much more advanced in NSW and unsurprisingly candidates and party directors are more accepting of its place in the electoral process. It has become 'normalised' in that jurisdiction. In WA, where remote electronic voting is restricted to those who cannot vote without assistance because they have insufficient literacy skills, are sight impaired or otherwise incapacitated (see Section 6.11 above), and where it was only rolled out for the first time in 2017, there is a lack of awareness of it, and greater general scepticism. Given the Liberal Party's more extensive engagement with postal voting, it is perhaps unsurprising that the postal voting application process was criticised by some other parties, especially the Greens.

7.4 Implications of these Patterns

The implications of this pattern of valued criteria for the introduction or increased use of convenience voting seem to be mixed. The election workers surveys might be open to arguments that remote electronic voting increases equality of ballot access for voters who are isolated, elderly, sight impaired or have another disability. They might also see electronic voting as a solution to the problems they encounter or observe when processing, sorting and counting paper ballots (see Chapter 9 and 10 below). On the other hand, they seem less open to arguments about the ability of remote electronic voting systems to provide convenience or the rapid processing of election results and may have misgivings about the impact of those systems on security, coercion and fraud.

The parties and candidates regard supervised voting channels as allowing more effective voter communication than channels that are unsupervised, largely because of the high priority they place on effective communication with voters. The oldest form of supervised voting, ordinary election day voting, has long provided a satisfactory level of party-voter communication. Our interviews suggest that candidates and

campaigners continue to appraise their ability to communicate with voters who use more recent channels against the standards set by older levels of access. Thus, while there are differences of emphasis among respondents in different parties and jurisdictions, our interviews displayed a generally high level of support for supervised voting at designated polling places—ordinary voting and pre-poll voting, including absentee voting—as well as declared institution voting and remote mobile voting.

On the other hand, unsupervised voting, including postal voting and remote electronic voting, tends to isolate voters from candidates and parties. Parties cannot easily communicate face-to-face or via (digital or paper-based) text with voters who use these voting methods. Where communication does occur, it is often further removed temporally from the act of voting than communication at polling places. Unsupervised voting is thus regarded with greater concern by campaign respondents.

8. The Challenges of Different Voting Channels: Preparing for the Vote

8.1 Introduction

How well is voting currently run in Australia? This is a critical question, since if elections are currently run well, introducing or expanding a new voting channel such as remote electronic voting may erode the current high quality of voting. On the other hand, if existing voting channels exhibit significant problems, then introducing a new voting channel or changing the mix of channels at least has the potential to reduce flaws in the voting process. To understand how well the voting process works in our case study jurisdictions of NSW and WA, we drew on three sources: the online surveys of election workers; interviews with candidates, campaign workers and party officials; and some observations of electoral processes.

The online surveys provide the most systematic evidence on this issue. Election workers were asked 'Based on your direct experiences and observations while working at the [...] election, did any problems occur while any of the following tasks were being carried out at the location or locations in which you worked?'. The questionnaires outlined up to 27 different tasks covering all stages of the election, from the preliminary steps of 'maintaining the security of a polling place or early voting centre' and 'taking initial delivery of ballot papers' to concluding tasks such as 'transmitting data electronically to a count centre' and 'storing iVotes securely'.

The wording of the questionnaire item was designed to focus on what election workers did and saw at the election, to avoid, or at least reduce, speculation among respondents about problems they might have heard about from other sources or that they assumed must have taken place. To further dissuade speculative answers, the first option presented to respondents was 'This task was not applicable to my work location/s'. These responses were excluded from the analysis. As a further form of robustness check, the remaining responses were matched against information provided by NSW and WA Electoral Commission staff about which problems could possibly be encountered by election workers employed in particular roles and locations. Applying this filter further reduced the number of valid responses. Respondents who had encountered or observed a particular problem were then asked to assess its seriousness, on a scale from 'not at all' to 'extremely' serious.

Three points should be noted about this survey data. First, the data tell us how likely it was that all workers in an election who were carrying out or directly observing particular tasks were likely to encounter problems with those tasks. We cannot use them to calculate precisely what percentage of work locations, such as polling places,

were the sites of particular problems, or how widespread problems were across an election. If ten election workers reported a particular problem, the problem may have been observed and reported in the survey by ten workers who all worked in one location, or by one worker from each of ten locations. Nonetheless, the broad geographical coverage of the election worker surveys, along with the large number of survey respondents, gives us confidence that the results presented here allow us to make valid judgements about the overall likelihood of election workers encountering problems while undertaking different tasks in each of the elections analysed in this report.

A second point concerns the definitions of 'problem' and 'serious'. What constitutes a problem, as well as its seriousness, are subjective matters about which individuals can reasonably disagree. The large numbers of responses collected from the election worker surveys provide us with collective definitions of problems and their seriousness, in which idiosyncratic responses will have been largely washed out. What we are left with is a reasonable indication of what actually occurred during the election. As one check on this claim, we compared the responses of relatively 'green' election workers, who had worked at fewer than five elections, with those of the 'old hands' who had worked at five or more elections.²² The rates of problems observed or experienced by each group was remarkably similar (see Appendix 3).

Third, the occurrence of a problem, even a serious one, does not mean that it was not dealt with effectively. We present some evidence regarding how well problems were dealt with in Chapter 11. Nonetheless, it is impossible to say from the survey data exactly what happened during a particular problem in a specific voting context. Survey data are very good at presenting broad patterns but not at providing detailed insights into particular cases.

8.2 Overview of Problems Encountered in the NSW and WA Elections

The survey results suggest that elections in NSW and WA are generally well run. Most election workers encountered few problems, with between a third and a half of the respondents (52 percent in the 2016-17 NSW by-elections, 43 percent at the 2017 WA State General Election, and 34 percent in the 2017 NSW Local Government Elections) experiencing or observing no problems at all. As was suggested in Section 6.13 above, these differences may have to do with differences in the complexity of the three types of election, as well as in the overall experience of the sets of election workers.

_

²² Respondents were asked to include any elections for which they had worked in any capacity for an electoral commission in Australia.

A focus on the problems that were most likely to be encountered shows very similar patterns across the three samples. All of the ten most commonly encountered problems in the WA State General Election appeared in the top ten list for NSW Local Government Elections and eight of the ten appeared in the NSW By-Elections list. The two most common problems by a large measure both occurred during the NSW Local Government Elections, with 46 percent of relevant workers encountering problems 'dealing with people at the wrong polling place or EVC' and 34 percent with 'determining people's eligibility to vote'. Again, voter confusion over which councils were and were not holding elections, as well as changed council boundaries, undoubtedly contributed to these high figures (see Section 6.13). No other problems in any of the three elections affected more than one-quarter of relevant election workers and most affected far fewer. Election workers considered only a small minority of these problems to be 'serious' or 'very serious' (see Tables 8.1, 9.1 and 10.1).

To help make sense of more specific patterns in the problems, they have been divided into three clusters: those relating to preparations for the vote; those arising when votes are cast; and those arising during the vote count. It must be acknowledged that there is some overlap between these different stages and that some challenges (for example, communication between election workers in different locations) will occur across all three stages. Nonetheless, they constitute reasonably distinct chronological stages in any election, with each stage relying on completion of the previous one.

8.3 Preparing for the Vote

The online election worker survey presented respondents with eight possible problems that might have occurred during preparations for the vote. These problems covered polling places, communications; delivery of ballots, and storage of ballots and electoral rolls. Another key task in preparing for the vote—the proper training of election workers themselves—was dealt with in detail in another part of the survey, with the results discussed in Section 8.4 below. The challenges for candidates and campaigners attempting to communicate with voters prior to the vote are analysed in Section 8.5 below.

Table 8.1. Problems Encountered or Observed by Election Workers: Preparing for the Vote

NSW Local Elections 2017		NSW By-Elections 2016-17		WA State Election 2017	
	Percentage of		Percentage of Problems Thought		Percentage of
Encountered	Problems	Encountered	Very or	Encountered	Problems
or Observed	Thought	or Observed	Extremely	or Observed	Thought
Problem	Very or	Problem	Serious	Problem	Very or

		Extremely Serious				Extremely Serious
Security of polling places	6.6	13.0	5.6	10.3	5.5	12.2
Communicating with candidates	7.8	19.8	5.9	8.3	6.2	8.5
Communicating with EC workers in other locations	11.7	16.2	6.1	41.2	4.9	18.1
Delivery of ballot papers	4.2	7.8	2.5	10.0	6.7	13.0
Storing unused ballot papers	2.2	14.0	1.2	40.0	2.4	14.3
Storing rolls, Elector Recording System machines and tablets securely	2.1	15.8	0.2	0.0	1.5	21.7
Providing postal voting packs to voters	9.9	6.3	16.1	0.0	15.5	7.1
Providing iVote credentials to voters*	N/A	N/A	0.0	0.0	25.0	0.0

^{*}A small number of respondents was engaged in this task, which means the results should be treated with caution.

Table 8.1 presents evidence on problems arising for election workers during vote preparations. Shading is used to help distinguish the three election types. The first column for each election type presents the percentages of relevant election workers who experienced or observed each problem. The second column shows the proportion of the problems that election workers considered 'very' or 'extremely' serious. Multiplying the two figures together provides an overall rate for experiences of very or extremely serious problems. For example, maintaining the security of a polling place was a very or extremely serious problem for just 0.9 percent (13.0% x 6.6%) of relevant election workers at the 2017 NSW Local Government Elections.

The results in Table 8.1 point to few problems in the preparation stages for the three election types. Although finding suitable venues for polling places, including early voting centres, has posed an increasing problem for the NSW and WA Electoral Commissions (WA Electoral Commission 2017a: 10-11), securing those venues once they are found does not appear to have posed many difficulties. Communications, particularly among election workers, presented more difficulties and when they occurred, they had a slight tendency to be more serious. The obvious outlier here is communication during the 2016-17 NSW by-elections, which seemed to produce a small number of relatively serious issues.

There was some variation in the extent of problems that occurred in getting ballots to the necessary locations for their later completion by voters. In each of the three election types, lower rates of problem occurs when getting paper ballots to polling places than getting them to voters via postal voting packs. This almost certainly reflects the internally controlled process of transferring paper ballots to polling places, as against the less controlled process of sending postal ballots through the mail service. No problems were reported in providing iVote credentials in NSW and no serious problems were reported in WA. Many of the citizens who used the iVote system would have been able to register for and receive their iVote credentials using the automated system, without requiring the involvement of NSW or WA election workers. Nonetheless, citizens who encountered difficulties, such as losing their iVote credentials, were required to telephone electoral commission call centre workers to have their credentials resent (WA Electoral Commission 2017b; NSW Electoral Commission 2018). It should be noted that the numbers of election workers who dealt with iVote credentials in the surveys were very small.

Finally, ballot papers and paper and electronic rolls were stored securely throughout the three elections, with virtually no problems reported in NSW or WA. Two-fifths of the problems storing unused ballot papers for the NSW by-elections were judged to be serious. While any serious problem storing ballot papers presents a concern, it should be noted that just 0.5 percent of the relevant election workers across the nine by-elections experienced or observed such a problem, so the issue was not widespread.

8.4 Training Election Workers

One of the major risks to electoral integrity is the quality and training of the election workers who run elections. In NSW and WA, thousands of people are hired for short periods to help conduct the poll. While the NSW and WA electoral commissions identify individuals with considerable experience to fill key roles such as Returning Officers, they rely on larger pools of less experienced workers to carry out more basic but still essential electoral tasks.

The infrequent nature of elections, the large numbers of workers required and cost constraints mean that these election workers get relatively limited training. NSW Returning Officers receive two to three days of training, while WA Returning Officers receive online training and attend a one-day training conference followed by a series of workshops. Polling Place Managers in NSW and WA are given two hours face-to-face training. Training of other polling place workers occurs via online modules, videos and/or on the job training. Workers are also provided with a range of relevant manuals (NSW Electoral Commission. No date e: 26-28; WA Electoral Commission 2017a: 9). Writing about the 2107 State General Election, the WA Electoral Commission has acknowledged the limitations of this training (2017a: 9):

Through an Australia-wide collaboration of electoral bodies, enough equipment was available to ensure that videos loaded on tablets were available for viewing by electoral officials in every polling place. While this 'on the job' training is not ideal, it is the best that can be planned under the resource and time constraints we face.

Despite these limitations, the election workers in the online surveys generally felt adequately prepared for their tasks and were satisfied with the training they received. Table 8.2 shows their retrospective judgements about their level of preparation. The vast majority of election workers thought they were 'very' or 'extremely' well prepared for their tasks. In line with the expectation that most election workers will learn on the job, more experienced workers were less likely to feel only 'moderately' well–prepared and more likely to feel 'extremely' well-prepared. Experience of even two to four previous elections—some of which may have involved another electoral commission or another type of election—led to significant increases in the proportion of election workers who felt 'extremely' well prepared.

Table 8.2 Election Workers' Self-Assessment of Preparedness for Election

How Well Prepared?

	Extremely	Very Well	Moderately	Not Very	Not at All
NSW By-Elections					
Number of Previous Elections					
0-1	21.7	54.2	19.3	3.6	1.2
2-4	35.3	53.1	10.7	0.9	0.0
5+	50.0	43.7	6.0	0.4	0.0
All respondents	40.4	48.7	9.6	1.0	0.2
NSW Local Government Elections					
Number of Previous Elections					
0-1	17.0	58.6	23.1	1.3	0.0
2-4	28.1	57.4	13.4	1.0	0.2
5+	38.6	52.1	8.4	0.7	0.2
All respondents	31.1	55.2	12.6	0.9	0.2
WA State General Election					
Number of Previous Elections					
0-1	23.3	47.0	25.5	3.4	0.8
2-4	30.4	50.7	17.1	1.6	0.2
5+	41.4	48.9	8.8	1.1	0.0
All respondents	32.2	49.0	16.5	1.9	0.3

Table 8.3 shows that two-thirds to three-quarters of election workers were 'very' or 'extremely' satisfied with the training they received, with just three to seven percent 'not at all' or 'not very' satisfied. Levels of satisfaction were highest among the NSW by-election workers and lowest among the WA State General Election workers. These differences are not large and they may have to do with the relative complexity of the different elections. The NSW by-elections were more straightforward than either the NSW Local Government Elections or the WA State General Election (see Section 6.13 above), reducing the knowledge required of election workers. Interestingly, Table 8.3 reveals no relationship between electoral experience and satisfaction with training. Although relatively inexperienced election workers generally felt less prepared for the election than their more experienced counterparts, they were no less satisfied with the training they received.

Table 8.3. Election Workers' Satisfaction with Training

	How Satisfied?					
	Not at All	Not Very	Moderately	Very	Extremely	
NSW By-Elections						
Number of Previous Elections						
0-1	2.4	1.2	16.9	53.0	26.5	
2-4	1.8	2.2	16.5	56.3	23.2	
5+	0.4	1.8	17.3	58.3	22.3	
All respondents	1.2	1.9	16.9	56.8	23.2	
NSW Local Government Elections Number of Previous Elections 0-1 2-4 5+	0.4 0.7 1.2	2.8 2.4 2.4 2.5	23.2 22.2 20.9 21.8	57.4 54.6 56.2 55.8	16.2 20.1 19.4 19.1	
All respondents	0.9	2.5	21.8	33.8	19.1	
WA State General Election Number of Previous Elections						
0-1	1.9	4.7	30.1	46.9	16.5	
2-4	2.3	4.5	27.8	52.1	13.3	
5+	1.4	5.7	25.8	49.1	18.1	
All respondents	1.9	5.0	27.7	49.6	15.9	

These patterns point to the importance of high stocks of practical experience for maintaining an effective election workforce. The results in Table 8.4 support this suggestion. Asked how, if at all, their training could have been improved, few respondents requested more materials, more time, more information, or more knowledge testing. The most common suggestions were for more practical examples to illustrate rules and processes, and more hands on training. As Table 8.4 shows, the felt need for more practical examples and hands on experience varied little across election types. Further analysis revealed that the perceived value of practical training does not diminish with experience: the veteran cohorts of election workers were just as likely as the least experienced cohorts to want more practical examples and more hands on training (figures available from the report authors).

Table 8.4 Suggested Improvements to Training*

		0	
			WA
		NSW Local	State
	NSW By-	Government	General
	Elections	Elections	Election
More Practical Examples	32.7	37.0	29.8
More Hands On Training	22.9	26.4	28.1
More Detailed Information About Rules	14.1	16.1	24.4
More Time to Cover Material	13.6	12.7	9.7
Better Testing of Understanding	12.3	13.2	15.2
Better Training Materials	7.1	7.7	9.3

^{*}Respondents could select as many improvements as they liked.

Overall, the vast majority of election workers felt very or extremely satisfied with their training *and* very or extremely well prepared for their election tasks: 78 percent for the NSW by-elections; 73 percent for the NSW Local Government Elections and 65 percent for the WA State General Election workers. The electoral commissions may be able to improve these figures by adding more practical examples and hands on elements to election worker training. If the sorts of financial constraints acknowledged by the WA Electoral Commission make this impossible, ensuring the highest possible retention of electoral workers over multiple elections may be the most realistic strategy for retaining the necessary levels of practical experience that the commissions need to run good elections.

8.5 Communicating with Voters

In line with the survey of election workers, the interviews with candidates and parties suggest that elections in NSW and WA are regarded as generally well run. At the same time, however, the proliferation of voting channels has had a significant impact on the way in which electoral contestants go about the task of communicating with voters during the election campaign. Our evidence shows this impact varies for different parties and candidates, jurisdictions and electoral contests; however, most respondents believe the availability of new channels has made their task more difficult.

If the move to increased voting channels was driven by a desire to improve 'voter convenience', these negative impacts on electoral contestants can be considered as unintended consequences of that desire, since there is no evidence that they were fully appreciated by legislators. The following discussion describes this impact in more detail by considering implications for communications with voters by party head offices, then local campaigns, and finally candidates.

8.6 Challenges for Head Office: An 'Incredibly Complex Messaging Challenge'

Head offices are responsible for the party's overall campaign strategy, including the timing of policy announcements and advertising. Before the rise of voting prior to election day, head offices typically structured their party communications program so as to provide voters, and the news media, with a steady flow of positive campaign announcements throughout the campaign period, building momentum to an intensive phase in the final week before election day. This intensive phase often included the policy 'launch' and a final advertising blitz.²³ This structure was designed to have maximum impact on undecided voters as close as possible to when they were casting their ballots. On election day, party volunteers would turn out to meet voters and hand them how-to-vote cards immediately before they enter the polling area.

Most respondents in our interviews agreed that the increased numbers of people voting before election day has 'severely compromised' that typical campaign model. There is 'no point' making a campaign announcement in the final week of the campaign when perhaps 30 per cent of the electorate has already voted (Peter Phelps interview). Campaign directors have had to adjust their thinking accordingly:

all of a sudden you have this incredibly complex messaging challenge to find your way through. In the old system ... we would build to a crescendo ... so in those last couple of weeks you would get the messages out. But now that doesn't work, because thirty per cent of the people have already voted before they get to [election day] (James Hayward interview).

Parties have met this challenge by bringing forward the release of most policies to before the start of pre-poll voting. Early voting means early policy announcements. In the 2017 WA State General Election, both the governing Liberal Party and opposition Labor Party decided to bring their policy launches forward to Sunday 19 February, the day before the commencement of pre-poll voting, which ran for three weeks until election day on 11 March. The clash of dates effectively reduced media coverage of each event, but head officials of both parties defended the timing as deliberate using virtually identical phrases—it was not an 'accident' (Andrew Cox interview; Patrick Gorman interview).

Head offices of both major parties then proceeded to bring forward many of their policy announcements. The Liberal Party devoted the second week of pre-poll voting to 'our

_

²³ In Federal elections, paid electronic advertising on licensed broadcasting channels is subject to a 'blackout' after the final Wednesday. These restrictions do not apply to online advertisements on platforms such as Google or Facebook (Smith and Mills 2017: 301).

announcements at local electorate levels of upgrades to footy clubs and all the community infrastructure things.' The Liberal head office 'had a time line for all of those to be done, because of early voting'. As a result, 'all' the party's announcements had been made 'before the last week' (Andrew Cox interview). The Labor opposition also had 'a lot of our local promises' out well ahead of election day: 'You want the person who is walking in [to vote] on the 19th to be thinking about the same thing as the person who is walking in on the 11th' (Patrick Gorman interview).

This dynamic operates as much for by-elections as it does for general elections. In the NSW seat of Canterbury, the Labor candidate observed:

I think that we wanted to get, well all our policies out before pre-poll. And I think you will see that in general elections. And this is going to be the trend going forward, that parties will announce their policies before pre-poll. And it is going to [be] targeted around pre-poll. So if they need to refine their message, or refine/tweak then they have the two weeks [of pre-poll voting] to do that. But it is standard now, that they will announce policy two weeks before the actual election day. Of course during a general election there might be a general sweetener policy the week before or so, but most of the policies have been announced (Sophie Cotsis interview).

The liberalisation of voting choice means in effect that the campaign is running concurrently with voting:

What is happening now is you are voting before the campaign is finished and if there is a hot potato that comes out you can't withdraw your vote. The percentage of people that used to vote [early] was very small, and you had to give a reason. Now you don't have to give a reason. If you want to put in a postal vote you just put it in. If you want to arrive at a pre-polling centre you can just do that (Michael Sutherland interview).

One result of this overlap between campaigning and voting is that opportunities are created for parties to 'game' the timing of announcements. On one hand, there is an incentive 'not to do anything controversial in the last two weeks' of the campaign (Filip Despotoski interview). On the other hand, 'there is nothing to say that you won't be gazumped by your political opponents promising more' (Peter Phelps interview).

Further, it is clear that while parties may have an electoral incentive to make early announcements of positive news, the logic may be reversed for news that the parties do not wish to make public. Both major parties in WA continued the practice of releasing their statement of policy costings—which can reveal unpopular fiscal or

distributional details of previously announced policies—in the final week of the campaign. Early voting may also reduce the negative consequences incurred by campaign 'gaffes' late in the campaign.

It is quite frustrating when your opposition candidate makes a mistake, or does something that hurts their campaign in the last couple of days when you have pre-poll. Because all of those people who have pre-polled weren't aware of that, and as you know you can't cast your vote again. You can't change your mind. ... It is the major parties that sometimes are hesitant to come out with something controversial in those two weeks, facing attack from us (Filip Despotoski interview).

At the same time, party officials acknowledged that voters for whom policy costings were important were able to wait and vote on election day:

I think that if you are a voter who is really concerned about the final cent and comparing our costings and theirs, and you know that both parties are saying that we will do it in the final week, you have the opportunity to wait, analyse that and make the decision. So people get to make those choices, as do political parties. It's not like, if that is your issue, you can't choose to wait. That is totally fine (Patrick Gorman interview).

A further headache for head office caused by pre-poll voting was the compressed timetable for the organisation, printing and distribution of how-to-vote cards. This presented particular difficulties for parties with dispersed regional electorates, where postal deliveries are slower and freight costs higher (Lisa Cole interview). The large number of people voting early may also have contributed to an increase in complaints about delays in providing postal votes at the 2017 WA State General Election (Western Australian Electoral Commission 2017a: 19), although delays by parties handling postal vote applications may also have played a role (see Section 7.3 above).

8.7 Challenges for Local Campaigns: 'A Massive Logistical Operation'

These centralised decisions around the scheduling of policy announcements are recognised and fully endorsed at the ground level campaign in individual electorates. You have got to get your messages and announcements out earlier,' said one candidate (John Carey interview). Another said, 'with election dates moving forward, campaigns need to move forward as well. There is no doubt we have to get things started earlier' (Eleni Evangel interview).

The major impact of new patterns of voting at the ground level is not in relation to policy announcements but staffing—specifically, the recruiting, training and deployment of volunteers to staff the pre-poll voting centres. Unlike the traditional model of campaigning, which required a substantial volunteer effort on a single day, the advent of pre-poll voting requires parties and candidates to have volunteers working for eleven days (in NSW with a two week pre-poll period) or seventeen days (in WA with a three weeks pre-poll period), as well as election day. Many interviewees described the significant new level of effort required to campaign at pre-poll voting centres:

We needed to have people manning [pre-poll voting centres] for three weeks. Day in, day out, 9am to 5pm. It was a very big drain on our campaign resources (Lisa Cole interview).

We were struggling to get people other than the election day. So we had one volunteer per day pre-election. We couldn't get anyone [else] because they were working/had commitments (Frank Alban interview).

It's no secret that [pre-poll voting] massively affects it in terms of your logistical and organisational side. You have to coordinate people to hand out how to vote cards, and how to votes for seats at all pre-polling stations, if you want to do well, of course (Filip Despotoski interview).

It is a massive logistical operation and it is also a huge volunteering engagement and coordination effort to make sure that there are people there for most pre-poll and polling day (Andrew Beaton interview).

Even though the number of voters using pre-poll has been steadily increasing, some candidates were still caught unawares:

We didn't pick that. We didn't pick that because we thought there was going to be an influx of voters, it was just what you did. But that

is a trend there. [In future] your 35 (percent) will probably be 50 to 60 percent (Frank Alban interview).

I guess, in hindsight we didn't realize that that many people would be early voting, so had I have known that there would be that many people voting early, I probably would have spent more time there (Eleni Evangel interview).

The resource implications of this trend include larger number of volunteers being required to staff pre-poll voting centres, as well as individual volunteers working longer hours and on more days. While election day always falls on a Saturday, pre-poll voting runs through the working week, presenting challenges for, or limiting the available pool of, volunteers (Michael Baldock interview). In turn, the need to recruit, train and deploy volunteers creates new demands on party organisations. The WA Greens provided an insight into this effort:

In the ramp-up to the campaign, we put in a lot of effort. By about six weeks out [from election day], we have people making calls and engaging the volunteers to be at pre-poll and on polling day. We have that list of people who are comfortable with that, or people that are skilled up in that—'captains', 'team leaders' or whatever term you want to use. Then from about two weeks out, it gets a bit exponential, so we change our volunteer contacts from 'we want you to come door knocking' [and] take a very conscious pivot towards an all-out push towards 'we need you there at polling day'. On training, the WA Greens understood they needed to make sure also that people are engaged and confident in what they are doing ... that they know how to talk about the key points that we are addressing in the campaign (Andrew Beaton interview).

It seems likely that parties with large and enthusiastic supporter bases are better resourced to fulfil these tasks than smaller parties and individual candidates. This applies especially to State-wide election campaigns; at by-elections smaller parties can 'import' volunteers from elsewhere. ²⁴ Further, not all parties have equal capacity—managerial and organisational know-how—to perform these volunteer-related tasks. Those with experience in volunteer recruitment from previous elections will be better placed than those starting out. Those who can engage the 'skilled up' team leaders who manage this process will be better placed than parties lacking that layer of managerial capacity.

_

²⁴ As happened with, for example, SFFP candidate Phil Donato's successful campaign in the Orange by-election.

8.8 Challenges for Candidates: 'The Voters Come to You'

Local candidates will be closely involved in these volunteer-related tasks. Pre-poll voting has generated a range of changes in the work of local candidates. Before the advent of pre-poll voting, candidates would seek to meet voters in their homes (door-knocking) or in high-traffic areas (at street walks, shopping centres and commuter terminals such as bus and train stations). Now, candidates are expected to personally attend pre-poll centres, meeting voters as they prepare to vote. Pre-poll voting centres have become the default location for candidate-voter interaction during the campaign. 'The simple reality', according to Andrew Beaton of the WA Greens, 'is that the voters come to you, rather than you coming to the voters' (Andrew Beaton interview). To the extent that candidates perform other local activities to meet voters, such as door-knocking, these need to be completed before the opening of pre-poll voting (Kaila Murnain interview).

The expectation on candidates to attend pre-poll centres is in some cases the result of direction from head office:

We encouraged all candidates to attend pre-polling centres in their location or in their upper house region ... and be there just as a voter contact point so they could have conversations with voters about why they should vote Green (Andrew Beaton interview).

We definitely ask them [candidates] to try and prioritise their time to get to pre-poll voting as often as possible (Lisa Cole interview).

The candidate needs to be on pre-poll. You would have noticed from the Gosford by-election that the Labor and Liberal candidates were on pre-poll for the entirety of the campaign (Kaila Murnain interview).

One candidate commented that pre-poll voting allows a candidate to 'actually get their face in front of a lot more voters than would be possible with voting only on election day' (Michael Baldock interview). Not only is this efficient, it can boost a candidate's local profile and reputation:

Even if they don't want to take a how-to-vote from me, or talk to me, if they can see the poster and go, 'Oh, she is actually here'. I do actually think that people rate that (Felicity Wilson interview).

Another candidate regarded it as a 'duty in some respects' to be there for the whole time in pre-poll:

They are long days but that is the least you can do really. I mean you are there to show the people that you are there to work hard for them and support them, and I think that sends a good message (Phil Donato interview).

With pre-poll campaigning now the norm, candidates and parties need to avoid the potential negative consequences of non-attendance:

Voters always expect to see people giving them how to vote cards. And if they don't see a volunteer [for] a particular party, some of them will think that party isn't running anymore ... which is feedback we have been given by voters (Filip Despotoski interview).

Party leaders are sometimes pressed into pre-poll duty. WA Labor's Patrick Gorman recalls of the 2017 campaign:

Mark [McGowan, Labor Leader] visited a few of those booths to really gee up the candidates and the volunteers; he was really good about that. If he could swing back past something on the way back from an event he would, which I really liked (Patrick Gorman interview).

We again observed variation in the capacity of candidates to maximise the benefits of attending pre-poll voting centres. Major party candidates and incumbent MPs have considerably more support and capacity to do this than minor party and Independent candidates, who often must continue to work at their day jobs. Nonetheless, minor party and Independent candidates without enough volunteer support to engage voters in other ways may be advantaged by pre-poll voting, which presents them with increased opportunity to contact voters as they vote.

8.9 Overall Implications for Campaign Communications

The interviews with candidates and parties have demonstrated that the expansion of convenience voting has had a profound impact on the way they communicate with voters. A range of campaign directors and candidates spoke of the tendency to bring forward positive policy announcements, whether at the State-wide or local level, so that they could be considered by the electorate ahead of the commencement of early voting. Likewise, there was evidence that the timing of policy announcements in the future might be 'gamed', so that some material which may adversely impact sections of the electorate, especially the way a party might pay for its election promises, might be held off until late in the campaign. It would appear that this occurred in the WA State General Election in 2017 (Drum and Bourne 2017).

Organisationally, the rise in convenience voting means that parties and candidates need to roll out their campaign infrastructure very quickly, in a range of areas, including policies, advertising and human resources. This means the parties need to be prepared prior to an election being called. In States and Territories with fixed term elections, this is less of an issue than in jurisdictions, including the Commonwealth, in which governments have some power over the timing of elections.

The parties and candidates identified human resources as a particularly challenging area, given the need for additional volunteers to staff pre-poll booths for two or three weeks prior to election day. This in turn means that the role of volunteer coordination will become more pressing for parties.

Conversely, there are specific opportunities in the changing environment. Supervised forms of early voting can be quite appealing to well-organised candidates and campaigns, delivering a steady stream of voters to one or two locations in each electorate. This provides opportunities for the candidates (and sometimes party leaders) to speak directly to more voters one on one at the point of voting. At the same time, there are challenges for 'part-time' candidates who cannot spend as much time on pre-poll voting booths as the major parties.

9. The Challenges of Different Voting Channels: Casting Votes

9.1 Introduction

The second group of tasks considered in this report concerns the processes directly involved in allowing people to cast their votes: managing people waiting to vote, determining people's eligibility to vote, dealing with people at the wrong polling places, marking voters off electoral rolls, keeping the ballot secret and receiving votes.

Given the nature of the tasks involved, this group of tasks is more likely to produce problems for electoral workers than the earlier set of tasks involved in preparing for the vote. Most of them call for face-to-face interactions between election workers and voters. Many voters turn up at polling places unsure about key elements of the voting process, a level of uncertainty that is undoubtedly increased by the fact that voting is compulsory (Smith *et al.* 2015). Election workers are under pressure to balance giving those voters a smooth voting experience with maintaining the integrity of the election. Increasing expectations of convenience for busy citizens who vote at a polling place adds to this pressure. These challenges cannot be dismissed as trivial matters of people management, since failure to carry them out properly will affect core elements of electoral integrity, such as ensuring proper access to the ballot.

9.2 Problems During the Process of Casting Votes

The online survey results presented in Table 9.1 confirm the expectation that tasks involved at the point of voting are more likely to present problems for election workers. Determining people's eligibility to vote and dealing with people at the wrong polling place or early voting centre are particularly common issues. This might have been expected to be the case at the NSW Local Government Elections and by-elections, since only some people in particular geographic areas were required to vote at these elections (see Section 6.13 above). The NSW Local Government Elections produced particularly high levels of problems of this sort, with almost a half of relevant election workers dealing with people turning up at an incorrect polling place and a third encountering problems determining voter eligibility.

These issues should not have been as acute at the WA State General Election, since it involved all voters and polling places were equipped to allow voters to vote at any polling place in the State. In that sense, voters could not turn up at the 'wrong' polling place. Nonetheless, around a fifth of WA election workers experienced or observed

this problem, perhaps because of the difficulties election workers had finding the correct electorates and regions for out of area voters.

Table 9.1. Problems Encountered or Observed by Election Workers: Casting Votes

			NSW By-Elections	2016-17	WA State Election 2017	
	Encountered or Observed Problem	Percentage of Problems Thought Very or Extremely Serious	Encountered or Observed Problem	Percentage of Problems Thought Very or Extremely Serious	Encountered or Observed Problem	Percentag e of Problems Thought Very or Extremely Serious
Managing people waiting to vote	19.5	11.4	11.8	5.9	15.9	6.0
Determining people's eligibility to vote	33.7	8.3	22.9	4.2	21.7	5.4
Dealing with people at the wrong polling place or EVC.	45.5	10.2	22.0	5.0	20.4	13.2
Electronically marking off voters	16.7	7.0	12.8	3.4	18.7	6.8
Marking voters off on paper roll	16.2	5.9	12.9	6.6	9.1	5.3
Ensuring voters could keep vote secret	3.3	13.0	3.0	21.0	3.1	17.2
Receiving iVotes*	N/A	N/A	4.2	0.0	10.0	0.0

^{*}A small number of respondents was engaged in this task, which means the results should be treated with caution.

As part of a more general process of moving from paper-based to electronic processes, the NSW and WA electoral commissions have both begun to roll out electronic mark-off systems using tablet devices or netbooks to replace paper rolls. In NSW, this system was first trialled in four locations at the 2016 Canterbury By-Election, with paper rolls acting as a back-up to the tablets. Data from the tablets was not transmitted electronically to Head Office but the tablets were physically returned after the close of voting. The NSW Electoral Commission considered the trial successful enough to warrant its expansion in subsequent elections. (NSW Electoral Commission 2017c: 26). At the 2017 State General Election, the WA Electoral Commission expanded its use of electronic mark-off devices, using them for almost all early and declaration votes (WA Electoral Commission 2017c: 21).

Table 9.1 suggests that the full benefits of the shift from paper to electronic roll mark-off are yet to be realised. At the NSW Local Government Elections and NSW by-elections, election workers experienced or observed the same rates of problems with electronic mark-offs as for paper mark-offs. Observations at one polling place at the 2016 Canterbury By-Election suggest that the polling officials using tablets sometimes took longer to find electors than polling officials using paper rolls. Paper mark-offs seemed to produce fewer problems than electronic mark-offs in WA. There are several possible reasons for this difference in WA, including the much larger numbers of voter names stored on electronic rolls than on paper rolls, referral of particularly difficult names to polling staff using electronic rolls, and technical issues with tablet navigation, power supply, screen refreshes and so on. Growing familiarity with electronic mark-off systems and devices is likely to reduce issues of this kind in future elections.

Finally, the election workers experienced very few issues with ensuring that voters could vote in secret or with receiving votes cast using the iVote system or via the post (for postal votes, see Table 10.1 below). (It should be noted that some problems of vote secrecy and ballot transmission will be less evident to election workers dealing with remote unsupervised voting channels than they will be for election workers dealing with supervised in-person voting.) Election workers judged none of the few problems receiving votes cast using the iVote system to be serious. By these measures, the process of casting votes appears to have been carried out well in NSW and WA.

9.3 The Effects of Convenience Voting on These Problems: Pre-Poll Voting

Convenience voting affects the process of casting votes in two quite different ways. In person pre-poll voting extends the voting period but requires same processes to be performed at early voting centres as are performed at polling places on election day. If insufficient locations, staff and resources are provided to meet the demand for pre-poll voting, then any shift from in person ordinary voting on election day to in person pre-poll voting will not reduce problems or increase voter convenience. It may simply shift those problems to a different period in the voting cycle, or even increase them.

Table 9.2. Problems Managing Voters: Ordinary Votes on Election Day versus Ordinary Pre-Poll Votes

	NSW Local Elections 2017		NSW By-Elections	2016-17	WA State Election 2017	
	Ordinary Votes on Election Day	Ordinary Pre-Poll Votes	Ordinary Votes on Election Day	Ordinary Pre-Poll Votes	Ordinary Votes on Election Day	Ordinary Pre-Poll Votes
Managing people waiting to vote	19.1	19.9	10.0	23.3	13.8	29.5
Determining people's eligibility to vote	32.4	34.2	21.0	34.7	17.6	28.7
Dealing with people at the wrong polling place or EVC.	44.9	41.1	20.3	32.6	20.0	19.7
Electronically marking off voters	15.4	22.3	10.7	25.9	15.6	18.1
Marking voters off on paper roll	15.7	15.9	13.3	18.5	8.2	10.5

There is some evidence of such problem shifting in the online surveys of election workers. Table 9.2 compares selected problems observed and experienced by election workers who dealt with in-person ordinary voting on election day with those observed or experienced by workers who dealt with pre-poll voting. In each case, the results are either similar or else the problems are more common during the pre-poll voting period. For the NSW Local Government Elections, each problem was observed or experienced at a similar rate. At the NSW by-elections, all the problems appear to have occurred more frequently in the pre-poll period. The 2017 WA State General Election results are more mixed, but pre-poll election workers experienced or observed problems managing voters waiting to vote and determining people's eligibility to vote at rates considerably higher than their election day counterparts.

These results suggest that the staffing and resource implications of increasing numbers of people wanting to vote early in person have not been entirely satisfactorily addressed. It will be difficult to address them, given the uncertain rates of pre-poll voting, which may lead to over-investment in pre-poll voting and under-investment in election day voting (or the reverse), as well as the impossibility of finding new pre-poll venues once an election has begun in response to higher than anticipated demand.

9.4 The Effects of Convenience Voting on These Problems: Postal and Remote Electronic Voting

Increases in postal and remote electronic voting present different potential challenges. They do not require the provision of specific venues and they shift much of the management of casting votes onto citizens themselves. A citizen's postal voting pack or iVote credentials confirm a right to vote in a particular election and to enrolment in a particular electoral district. Citizens receiving them know they need to vote; they cannot turn up to the wrong polling place; and they do not have to be 'marked off' the electoral roll by an electoral official prior to voting. Voters using these channels can cast their votes when it is convenient for them, without having to factor in possible congestion and queues at polling places. Once postal voting packs and iVote credentials are delivered to voters, those voters are responsible for completing and returning their ballots within the prescribed voting period.

As is the case for receiving voting materials (see Section 8.3 above), casting postal and remote electronic votes is not exactly the same. For citizens who could use either, the iVote system has at least two advantages over postal voting. First, citizens can deliver their votes far more quickly electronically than they can by post. Second, citizens using the iVote system are provided with an electronic receipt confirming that they have voted (New South Wales Electoral Commission 2016), whereas postal voters do not know prior to the close of the polls whether or not their vote has been received and entered into the count.

Some voters who have received postal ballot papers or iVote credentials may still interact with election workers if they lose these materials or have other problems completing their votes. Others may not submit a postal or remote electronic vote and instead cast an ordinary vote at a polling place (NSW Electoral Commission 2015: 82-83). Some will hand deliver postal ballots to a polling place. These exceptions aside, most postal and remote electronic voting requires no such interaction with electoral workers. The responsibility for a smooth and successful experience of casting a vote shifts away from election workers at polling places to the capacities of voters who choose to engage with the iVote or postal voting systems.

10. The Challenges of Different Voting Channels: Determining the Result

10.1 Introduction

The final group of tasks centres on the count and determination of the election result. It includes sorting ballots, determining the validity of votes, counting votes, handling declaration envelopes and entering and transmitting vote data. Unlike the second group of tasks, this group involves management of voters. Instead, it is characterised by mechanical and administrative tasks—tallying votes, recording the results and storing ballot papers and other materials in case further counts and checking are required. The only external interactions at this stage are between election workers and the candidate and party representatives who scrutinise the count process.

The large numbers of ballot papers, large numbers of candidates, and the relatively complex preferential systems of voting used for NSW and Western Australian elections, all make hand counting of ballot papers time-consuming and relatively difficult for election workers. Increased convenience voting increases the difficulty of the process, where election workers are required check the validity of declaration and postal ballots by comparing signatures on the ballot envelopes with those on electoral commission records, while at the same time preserving the secrecy of the votes recorded on the ballots themselves. As noted earlier in this report, electoral regulators have reduced this burden by simplifying the requirements for postal and declaration voting. Nonetheless, these forms of voting add to the complexity of the count by requiring the compilation of different voting channel results, including those from remote electronic voting, into an overall tally.

10.2 Problems During the Process of Determining the Result

Table 10.1 sets out the problems encountered by electoral workers at this stage of the election. The results of the online surveys indicate that the most common problems election workers experience at this stage concern the mechanical process of determining the formality of paper ballots filled out in pencil and counting the votes that are determined to be valid. These problems were less common at the NSW by-elections than at the NSW Local Government Elections and the WA State General Election. This possibly reflects the involvement of carefully selected 'A Team' workers for the smaller by-election events (see Section 6.13 above); however, it also likely reflects the greater complexity of the count in NSW local government and WA State General Elections. It is worth noting that although problems were more common in these latter elections, Table 10.1 suggests that when they did occur, they were no more

likely to be considered 'very' or 'extremely' serious than the problems that occurred at the NSW by-elections.

In the case of the NSW Local Government Elections, election workers were only responsible for initial counts in the complex elections for councillors, with the final preferential counts to determine the successful candidates conducted electronically (NSW Electoral Commission no date b). This approach does not seem to have resolved the problems of counting ballot papers at the Local Government Elections. It may have displaced some of these problems onto the election workers in those elections who were responsible for entering vote data onto computers, given that 22 percent of them experienced or observed problems with this task, a rate considerably higher than for workers carrying out the same task at the NSW by-elections and the WA State General Election.

10.3 Scrutiny and Transparency

Most of the other tasks at this stage—including handling, storing and transporting ballots and other materials—were apparently carried out with relatively few problems. From the perspective of electoral workers, candidate and party scrutineers also posed relatively few problems (see also Section 11.2 below). Party representatives and candidates interviewed for this report expressed general satisfaction with existing arrangements concerning counting and scrutiny of the vote. Scrutineers were present for the paper counts at each of the three election types. Despite invitations from the NSW and WA electoral commissions, almost none of the candidates or parties sent scrutineers to any of the iVote decryption ceremonies. Possibly this reflects a lack of relevant information technology expertise among the candidates, parties and their supporters, or perhaps it reflects the view that observing the ceremony would tell the candidates and parties little about what was actually going on inside the iVote system 'black box'.

Table 10.1. Problems Encountered or Observed by Election Workers: The Count and Result

	NSW Local Election	ons 2017	NSW By-Elections 2016-17		WA State Election 2017	
	Encountered or Observed Problem	Percentage of Problems Thought Very or Extremely Serious	Encountered or Observed Problem	Percentage of Problems Thought Very or Extremely Serious	Encountered or Observed Problem	Percentage of Problems Thought Very or Extremely Serious
Handling completed ordinary ballot papers	5.7	11.8	3.7	10.6	5.8	10.0
Handling postal ballot papers	4.5	16.4	6.0	0.0	5.7	9.1
Handling declaration envelopes	13.1	9.5	5.7	12.0	10.5	8.0
Sorting ballot papers	12.7	11.1	4.4	20.8	12.0	7.9
Determining vote formality	23.0	7.9	11.6	6.4	19.5	4.0
Counting ballot papers	18.3	12.7	11.1	11.5	21.8	8.6
Counting iVotes	N/A	N/A	8.1	0.0	14.5	22.2
Dealing with scrutineers	9.3	14.4	11.7	5.5	8.0	7.0
Entering vote data onto system	22.3	14.8	13.8	0.0	14.3	16.0
Transmitting data electronically	12.4	13.5	10.8	0.0	3.7	0.0
Transporting completed ballot papers	2.9	20.9	2.5	40.0	1.8	8.3
Storing iVotes securely*	N/A	N/A	0.0	0.0	0.0	0.0

^{*}A small number of respondents was engaged in this task, which means the results should be treated with caution.

10.4 The Effects of Convenience Voting on Problems in the Count

The rise of convenience voting appears to have variable effects on the integrity of the vote counting process. Table 10.1 suggests that election workers have no greater difficulties processing postal ballots than they do ordinary ballot papers. Problems with declaration envelopes do appear to occur more frequently than with other ballot materials, at least at the NSW local government election and the WA State General Election. This suggests that any continuation of recent moves away from the use of declaration envelopes will reduce problems in the counting process (see Section 6.5 above).

The iVote system radically simplifies tasks of processing, sorting and counting ballots and recording the results that otherwise have to be carried out by hand. Electronic counts, in contrast to hand voting, can deal with large numbers of ballots in a few moments. These systems also eliminate the common problems with hand counts noted above of, first, deciding whether particular pencil or pen markings have made a ballot paper informal and, second, determining whether voters have ordered their preferences for different candidates in one way or another.

The iVote system used at the 2016 and 2017 NSW by-elections and the WA State General Election did this by forcing voters to make their intentions absolutely clear. The system did allow voters to cast intentional informal votes but only if those voters did not click on any of the boxes next to the candidates' names (in NSW) or did not click on the required number of boxes (in WA).²⁵ The system warned voters who had not clicked on enough boxes that they were about to cast an informal vote. Voters then had to take an additional step to lodge such an informal vote. To express preferences using the system, voters did not enter numbers but double-clicked in the box for their most preferred candidate, then on their next preferred candidate, and so on. The iVote system translated these preferences into numbers that were visible to the voter. Double numbering or skipping numbers by voters was prevented.²⁶

-

²⁵ Some commentators argue that this feature eliminates desirably 'creative' ways of spoiling a ballot that can be expressed on paper (see, for example, Orr 2014: 85-86).

²⁶ Interested readers can experience these features of the iVote system used in NSW via the following demonstration web pages: https://bypractise.ivote.nsw.gov.au/#/remote-login (for a general election) or https://bypractise.ivote.nsw.gov.au/#/remote-login (for a by-election). This does not eliminate the possibility that flaws or security vulnerabilities in an electronic voting system will mis-record preferences in ways that ultimately make votes informal; however, it does mean that voters themselves are less likely to be the source of such unintended informal voting. Overall informal voting at the NSW state by-elections in 2016 to 2017 ranged from 1.9 percent (North Shore) to 4.9 percent (Blacktown) (NSW electoral Commission no date g). Overall informal voting at the 2017 WA State General Election was 4.5 percent for the Legislative assembly and 2.7 percent for the Legislative Council (WA Electoral Commission 2017d).

A remote electronic voting system that has been correctly and securely programmed and can be kept secure and functional during the election period can help to resolve common problems associated with hand counting. This shifts the burden of delivering an accurate count away from a large group of election workers mostly employed on a short-term basis and onto a smaller group of highly-skilled specialist workers who are responsible for electronic counting systems.

These advantages of electronic counts are obviously reduced in cases where remote electronic votes are printed off so that they can be included in the overall paper count, as was the case for the NSW by-elections and the 2017 Western Australian State General Election. In NSW, individual ballot papers were printed from iVote records. In the WA case, printed 'vote records' were produced, with each printed form showing a specific aggregation of preference flows and the number of votes cast using those flows. Even where these types of printing are involved, printed materials are likely to be clearer than hand-filled ballot papers.

11. What Happens When Things Go Wrong?

11.1 Introduction

Problems at the NSW and WA elections under review in this report appear to be infrequent. When they do occur, they also tend to be relatively minor. Nonetheless, a range of problems arose at each of the elections. This chapter examines the causes of those problems, as well as the way they are handled when they come to the attention of election workers.

11.2 The Causes of Problems

It was not practically possible to ask election workers to identify the causes of each of the specific problems they encountered during the election. Instead, the online survey presented respondents who had identified at least one problem with a more general question: 'To what extent do you think any of the following factors contribute to the problems that occurred at the location/s in which you worked during the [...] election?'. The responses for the three types of elections in the study are presented in Tables 11.1 to 11.3, with the causes ranked from most to least common in each table. Not all of these contributing factors would have been equally relevant to each of the problems encountered by election workers. Since many election workers experienced or observed more than one problem, it is impossible to link particular factors definitively with particular problems.

The results can be used to identify the overall patterns of more or less important perceived causes of problems in the elections. Ranking the factors from those most likely to be seen as a contributing factor to problems to those least likely produces very similar patterns across the three tables. In each election, human error by election staff was seen as the most common cause of problems by some margin, while unreasonable candidate or supporter behaviour was among the least likely factors behind problems that occurred. The other factors more or less occupy the same place in each of the tables.

Table 11.1. Contributing Factors to Problems, NSW Local Government Elections 2017

	Not a	Minor	Moderate	Major
	Factor	Factor	Factor	Factor
Human Error by Staff	33.7	34.7	20.8	10.8
Time Pressures	43.1	27.5	19.9	9.5
Inadequate Training of Election Staff	47.8	30.4	15.5	6.3
Unreasonable Voter Behaviour	49.8	30.8	13.3	6.0
Unclear Rules and Procedures	51.5	26.3	14.7	7.4
Too few Staff	57.3	17.5	13.4	11.8
Technological Issues	61.4	19.5	12.5	6.5
Too Few Materials Provided	63.9	16.3	10.5	9.4
Unreasonable Candidate or Supporter Behaviour	81.1	11.1	5.1	2.6

Table 11.2. Contributing Factors to Problems, NSW By-Elections 2016-2017

	Not a	Minor	Moderate	Major
	Factor	Factor	Factor	Factor
Human Error by Staff	40.4	37.5	11.8	10.3
Time Pressures	51.3	24.4	17.7	6.6
Unclear Rules and Procedures	57.0	23.5	12.5	7.0
Inadequate Training of Election Staff	58.1	23.5	13.2	5.1
Unreasonable Voter Behaviour	58.6	28.4	7.5	5.6
Technological Issues	64.6	19.6	8.9	7.0
Too few Staff	68.3	13.7	10.0	8.1
Unreasonable Candidate or Supporter Behaviour	72.2	15.2	8.1	4.4
Too Few Materials Provided	73.5	16.2	5.5	4.8

Table 11.3. Contributing Factors to Problems, WA State General Election 2017

	Not a	Minor	Moderate	Major
	Factor	Factor	Factor	Factor
Human Error by Staff	30.4	34.8	23.6	11.1
Inadequate Training of Election Staff	45.3	32.2	15.4	7.1
Time Pressures	48.7	26.1	18.4	6.8
Unclear Rules and Procedures	51.7	25.7	16.4	6.2
Too Few Materials Provided	63.5	17.0	9.6	9.9
Technological Issues	64.1	20.1	10.3	5.5
Too few Staff	67.7	15.6	9.8	7.0
Unreasonable Voter Behaviour	68.3	22.3	6.9	2.5
Unreasonable Candidate or Supporter Behaviour	86.9	8.6	3.3	1.2

The consistent patterns in Tables 11.1 to 11.3 also help to flesh out some of the trends identified in Chapters 8 to 10. Five key points can be made here. First, resourcing

issues—too few staff, technological issues and too few materials—were less likely to be identified as a source of election problems than human factors—human error, time pressures and inadequate training. While inadequate resources feature as a perceived cause of some election problems in NSW and WA, they seem to be relatively minor causes of election problems.

The second and third points have to do with election worker training. Despite the fact that most election workers were satisfied with their own training (see Section 8.4 above), 'inadequate training of election staff' sits fairly high in the list of causes of problems. Some election workers may have been reflecting on their own training here, since respondents' satisfaction with their own training and their views on the importance of inadequate training as a factor in election problems were negatively associated. The more satisfied respondents were with their own training, the less important they thought inadequate training was as a cause of election problems (gammas of -.47 for the NSW local government sample; -.54 for the NSW by-election sample; and -.50 for the WA State General Election sample). Nonetheless, these relationships are only moderately strong, and the item wording 'Inadequate training of election staff' directed respondents' attention beyond their own experiences. While most respondents thought their own training was sound, they seemed less confident that the election workers around them were trained well enough to prevent problems.

Third, around half the election workers in each sample who had encountered problems identified unclear rules and procedures as one of the causes. This might seem slightly odd, since relatively few election workers (between 14 and 24 percent) thought that their training would have been improved by 'more detailed information on procedures and rules' (see Section 8.4 above). Perhaps the solution to this apparent conundrum is presented by other responses in Section 8.4: election problems could be reduced not through election workers gaining more detailed abstract knowledge of the rules and procedures but with more practical 'hands on' training to show how those rules and procedures apply to the real circumstances that those workers face doing their work.

Fourth, the prominence of 'time pressures' as a cause of problems helps explain why more problems arise during the period when votes are cast than during either the preparation period or the count. The time pressure on election workers is highest in this period (see Section 9.1 above). Election workers also come into the most direct contact with voters in this period of the election. Tables 11.1 to 11.3 indicate that 'unreasonable' voter behaviour increases when voters become confused about whether and how they are meant to participate in elections, given that unreasonable voter behaviour was a relatively minor factor at the WA State General Election and most prominent at the NSW Local Government Elections.

Finally, Tables 11.1 to 11.3 reinforce the finding in Section 10.3 above that candidates and their supporters contribute comparatively little to the problems faced by election

workers. There is a hint in these results that they may add most to problems running Local Government Elections, perhaps because some council candidates have less experience of election processes and etiquette than candidates running at State level.

11.3 How Well Were Problems Resolved?

Tables 11.4 to 11.6 present evidence about how well problems were resolved during each of the three stages of the elections. They are set out in the same way as Tables 8.1, 9.1 and 10.1. The first column for each election type presents the percentages of relevant election workers who experienced or observed each problem. The second column shows the proportion of problems that those election workers considered were dealt with 'not at all', 'not very' or 'moderately' well.

It was difficult to find a reasonable cut-off point to divide the problems into those that were perceived to be satisfactorily resolved and those that were not. Excluding the 'moderately well' responses and including just the 'not at all' and 'not very' well responses would have dramatically lowered the proportions of problems that were not seen to be well resolved. In the end, we decided that the tougher cut-off point provided by combining 'moderately' with 'not at all' and 'not very' gave a fairer indication of election workers' success in dealing with the problems they encountered or observed. The full sets of figures are provided in Appendix 4.

Multiplying the two pairs of figures for each problem provides an overall rate at which election workers experienced or observed problems that were not dealt with successfully. For example, relevant workers at the 2017 NSW Local Government Elections judged that 45.0 percent of problems with polling place security were not dealt with very or extremely well; however, it is worth remembering that this was the experience of only three percent (45.0% x 6.6%) of all the election workers who dealt with this task at the election.

Table 11.4 How Well Were Problems Dealt With: Preparing for the Vote

-	NSW		NSW		WA		
	Local Election	ns 2017	By-Elections 2	2016-17	State Election	2017	
		Percentage of		Percentage of		Percentage of	
		Or Problems		or Problems		Or Problems	
	Encountered	Dealt with	Encountered	Dealt with	Encountered	Dealt with	
	or Observed	Less than	or Observed	Less than	or Observed	Less than	
	problem	Very Well	problem	Very Well	problem	Very Well	
Security of polling places	6.6	45.0	5.6	31.1	5.5	36.7	
Communicating with candidates	7.8	47.2	5.9	41.7	6.2	38.3	
Communicating with EC workers in other locations	11.7	68.8	6.1	47.1	4.9	64.1	
Delivery of ballot papers	4.2	49.0	2.5	50.0	6.7	52.5	
Storing unused ballot papers	2.2	57.1	1.2	60.0	2.4	59.5	
Storing rolls, ERS machines and tablets securely	2.1	47.7	0.2	100.0	1.5	63.7	
Providing postal voting packs to voters	9.9	49.9	16.1	33.3	15.5	64.3	
Providing iVote credentials to voters	N/A	N/A	0.0		25.0	100.0	

A focus on how well problems were dealt with reveals much more variation across the three types of election than has generally been the case in other parts of this report. Overall, the election worker teams dealing with problems during the NSW byelections did so most successfully (see Tables 11.4 to 11.6). This is probably due to the by-elections being comparatively simple and small contests, as well as the ability of the NSW Electoral Commission to deploy its 'A Teams' for these events (see Section 6.13 above). Nonetheless, the by-election teams were not best at handling all the types of problems. Each of the three groups of election workers were best and worst at handling at least some of the problems.

Table 11.5 How Well Were Problems Dealt With: Casting the Vote

	NSW		NSW	0	WA	
	Local Election	s 2017	By-Elections 2	2016-17	State Election	2017
	Encountered or Observed Problem	Percentage of Problems Dealt with Less than Very Well	Encountered or Observed Problem	Percentage of Problems Dealt with Less than Very Well	Encountered or Observed problem	Percentage of Problems Dealt with Less than Very Well
Managing people waiting to vote Determining	19.5	45.2	11.8	20.6	15.9	33.1
people's eligibility to vote	33.7	31.0	22.9	25.6	21.7	34.8
Dealing with people at the wrong polling place or EVC.	45.5	34.1	22.0	21.3	20.4	40.6
Electronically marking off voters	16.7	40.4	12.8	37.9	18.7	38.2
Marking voters off on paper roll	16.2	26.8	12.9	49.1	9.1	30.6
Ensuring voters could keep vote secret	3.3	36.1	3.0	66.7	3.1	55.2
Receiving iVotes	N/A	N/A	4.2	0.0	10.0	75.0

There is also no consistent pattern in Tables 11.4 to 11.6 of commonly occurring problems being more or less well handled than less commonly occurring problems. Table 11.4, for example, shows consistent results for maintaining the security of a polling place and communicating with candidates in all three samples. These problems were seen to be handled relatively well across the board. The results for other tasks in Table 11.4 vary considerably. Communicating with other electoral commission workers, for example, was both a relatively common problem and one dealt with least successfully dealt according to workers at the NSW Local Government Elections; however, it was less common and/or more likely to be resolved well in the NSW by-elections and the WA State General Election.

Table 11.6 How Well Were Problems Dealt With: The Count and Result

NSW NS	SW W	VA
--------	------	----

	Local Elections 2017		By-Elections 2	2016-17	State Election 2017		
	Encountered or Observed Problem	Percentage of Problems Dealt with Less than Very Well	Encountered or Observed Problem	Percentage of Problems Dealt with Less than Very Well	Encountered or Observed Problem	Percentage of Problems Dealt with Less than Very Well	
Handling completed ordinary ballot papers	5.7	28.8	3.7	22.3	5.8	41.8	
Handling postal ballot papers	4.5	48.4	6.0	36.9	5.7	43.0	
Handling declaration envelopes	13.1	32.1	5.7	56.0	10.5	54.1	
Sorting ballot papers	12.7	50.6	4.4	58.4	12.0	44.1	
Determining vote formality	23.0	34.6	11.6	28.6	19.5	33.3	
Counting ballot papers	18.3	40.5	11.1	35.0	21.8	40.7	
Counting iVotes	N/A	N/A	8.1	0.0	14.5	44.5	
Dealing with scrutineers	9.3	49.7	11.7	36.1	8.0	40.7	
Entering voting data onto the system	22.3	41.2	13.8	23.1	14.3	56.0	
Transmitting data electronically	12.4	39.3	10.8	28.5	3.7	50.0	
Transporting completed ballot papers	2.9	62.5	2.5	55.6	1.8	58.3	
Storing iVotes securely	N/A	N/A	0.0		0.0		

The clearest patterns across the three tables have to do with differences in handling problems at the different stages of the election process. Problems during preparations for the vote were generally less well handled than problems that arose when people were casting their votes or problems during the count and determination of the result. Chapters 8 to 10 showed that problems were more likely to occur in the later two stages but that the election workers were generally not likely to consider these any more serious than the problems that occurred during the period of preparations for the vote. One interpretation of Tables 11.4 to 11.6 is that more commonly occurring problems allow election workers more opportunities to improve the way they handle those

problems. Election workers dealing with uncommon problems may only have one chance to resolve it well, while election workers dealing with more persistent problems can learn from the first few times they encounter those problems.

11.4 Where Do Election Workers Turn to Try to Resolve Problems?

How do election workers go about resolving problems that occur? The online surveys dealt with one important aspect of that question by asking those who had encountered at least one problem: 'How helpful were each of the following in dealing with problems that occurred?'. The response categories and results are set out in Table 11.7. Sources of help are ranked from the most to the least helpful, using combined 'very' and 'extremely' helpful categories. These rankings are virtually identical across the NSW Local Government Elections, the NSW by-elections and the WA State General Election.

The results in Table 11.7 show that although some avenues are considered more helpful than others in resolving election problems, there is no one best source of help for dealing with every problem. Election workers rely on multiple sources of help, with the best sources partly dependent on the problem at hand. It may initially seem strange that any election workers find candidates, scrutineers and voters helpful in resolving problems; however, some election tasks rely heavily on the cooperation of candidates, scrutineers and/or voters for their success, making their help essential to resolving any problems that occur.

Table 11.7 also shows that, like other 'street level' bureaucrats (Lipsky 1980), election workers very often rely on their initiative and common sense to resolve problems. They are more likely to draw on their own resources than they are to rely solely on either their training or on official manuals. This is something of a double-edged sword. On the one hand, initiative and common sense are likely to be essential to cover inevitable gaps in training and official manuals. On the other hand, election workers may be increasingly tempted to substitute their own common sense for the rules, using their own initiative to make up practices that run counter to official policies. Thousands of election workers using their individual common sense and initiative may produce widely inconsistent practices.

Table 11.7. Sources of Help Used By Election Workers With Different Levels of Experience ('very' and 'extremely' helpful combined)

	Number of Previous Elections				
	0-1	2-4	5+	All	
Own Common Sense and					
Initiative					
NSW LGE 2017	73.9	80.0	85.4	81.5	
NSW By-Elections 2016-2017	81.9	82.6	88.0	85.0	
WA SGE 2017	71.1	77.1	83.3	77.8	

Direct Supervisor				
NSW LGE 2017	73.1	64.4	55.8	61.8
NSW By-Elections 2016-2017	57.6	72.9	62.4	66.2
WA SGE 2017	68.1	61.3	55.9	61.1
EC Manuals/Online Advice				
NSW LGE 2017	49.7	48.4	53.4	50.8
NSW By-Elections 2016-2017	43.8	53.1	50.8	50.9
WA SGE 2017	42.9	37.5	45.5	42.0
EC Training				
NSW LGE 2017	41.4	39.1	40.9	40.3
NSW By-Elections 2016-2017	36.4	39.1	36.1	37.4
WA SGE 2017	23.9	22.8	32.0	26.6
Other Officials				
NSW LGE 2017	37.8	28.6	22.7	27.3
NSW By-Elections 2016-2017	39.4	41.3	25.8	33.8
WA SGE 2017	34.9	29.5	23.1	28.6
Candidates and Scrutineers				
NSW LGE 2017	18.9	10.3	6.6	9.9
NSW By-Elections 2016-2017	9.1	11.8	6.5	9.0
WA SGE 2017	12.4	7.3	5.8	8.1
Voters				
NSW LGE 2017	5.4	5.9	4.1	5.2
NSW By-Elections 2016-2017	9.4	4.5	5.7	5.6
WA SGE 2017	5.8	2.6	2.1	3.3

The potential difficulties produced by election workers relying on their common sense and initiative are possibly mitigated by two other patterns found in Table 11.7. The first is that election work seems hierarchical, with workers likely to turn to their supervisors rather than other colleagues for help when they encounter problems. Since those supervisory roles are generally filled by people who have more electoral experience, are specifically selected by the commissions and receive more training than other election workers, the instructions and advice they give should ensure greater uniformity when dealing with problems than would otherwise be the case.

Second, Table 11.7 indicates that the least experienced election workers tend to less likely to rely on their own initiative and more likely to see their supervisors as sources of help for solving problems. These trends are not strong; however, they point to an understandable pattern in which the more seasoned election workers have learned how to deal with problems from past experiences and therefore do not need to consult others. Perhaps importantly for the consistency of electoral administration, the more

experienced election workers are no less likely than newer recruits to find training and manuals helpful sources when problems arise.

12. Future Trends in Voting Channel Use

12.1 Introduction

While there is a range of drivers for the increased use of different voting channels, including financial and logistical constraints on electoral commissions, the major driver appears to be demand from voters themselves (see Chapters 3 and 4). It is difficult to predict precisely how this demand will grow in future and at what point growth in demand for particular voting channels may start to taper off or even decline. One source of information about likely overall demand, as well as variations in demand in different geographical regions, is the election workers who dealt with voters in particular areas. The information collected in the online survey does not allow us to identify demand in specific electorates or local government areas but it does allow us to identify predicted demand across broader regions within NSW and WA.

12.2 Election Workers Predictions of Overall Demand

The election workers in this study were not asked for their own attitudes towards remote electronic voting. Instead, election workers who had been involved in taking votes were asked to reflect on likely voter demand for different voting channels, including remote electronic voting, in the location in which they had worked: 'If the following ways of voting were **all** made available **to whoever wanted them** in future ... elections, how much demand do you think there would be for each of them from the voters who live in the area where you worked at the ... election?' (emphasis in questionnaire item).

Table 12.1 presents the responses from the three samples. For each election, the columns on the left show percentages of *all election workers* who predicted high or very high demand for a voting channel; those on the right show the percentages doing so among those election workers *who had worked with the relevant voting channel* at the election. The main differences between the two columns are that those election workers who have worked with a voting channel are more likely to see it as having high future demand (mostly because fewer of these workers gave a 'don't know' response).

As might be expected, election workers predict that high demand for ordinary voting on election day will remain widespread. Nonetheless, among election workers who had worked with specific voting channels, predicted demand for pre-poll voting was slightly higher than predicted demand for ordinary voting. This was true across all three samples. There is a hint here of pre-poll voting rivalling or overtaking ordinary

voting on election day as the most common method of voting. Another hint of future change is evident in the comparison between remote voting channels. Election workers in all three samples predict that the demand for remote electronic voting will be as high, if not slightly higher, than the traditional option of postal voting.

Table 12.1. Predicted Demand for Voting Channels ('high' and 'very high' combined)

	WA State Election 2017		NSW By-Elections 2016-17		NSW Local Elections 2017	
	All respondents	Those who worked with the voting type	All respondents	Those who worked with the voting type	All respondents	Those who worked with the voting type
Ordinary election day voting	70.0	70.4	72.0	72.0	70.8	70.9
Absent (WA); Declaration voting (NSW)	58.4	67.6	38.5	41.3	44.8	52.6
Ordinary prepoll voting	56.5	81.4	54.4	84.9	52.8	78.9
iVote (web or telephone)	41.6	44.4	42.3	43.4	46.8	N/A
Declaration pre-poll voting	N/A	N/A	37.0	51.3	38.3	52.5
Postal voting	37.7	35.1	35.5	50.6	39.0	47.0
Remote/mobile voting (WA); Declared institution voting (NSW)	33.4	56.0	21.2	39.0	21.6	39.1

As these overall figures suggest, very few election workers see high demand for just one voting channel in the areas in which they worked. The mean number of voting channels expected to have high or very demand were 3.2 for the WA sample and 3.4 for both of the NSW samples. Among those election workers who predicted high demand for ordinary voting on election day, only 20 percent (NSW by-elections), 17 percent (NSW Local Government Elections) and nine percent (WA State General Election) thought that it would be the only voting channel for which there would be high demand in their area. Interestingly, the next highest result for high demand for a single voting channel was for remote electronic voting, with 12 percent (NSW by-elections), nine percent (NSW Local Government Elections) and eight percent (WA State General Election) predicting that the iVote system would be the only channel with

high demand if it were made available to all voters. Negligible proportions of election workers predicted exclusively high demand for either pre-poll voting (just two percent in each sample) or postal voting (one percent or less in each sample).

12.3 Future Demand in Different Regions

Somewhat surprisingly, there are few differences in predicted vote channel demand between States, or between different locations within States. Comparing NSW and WA (Table 12.1), the only clear difference is the higher predicted demand for declaration (absent etc.) voting and remote or mobile voting in WA compared with NSW. Anticipated demand for other voting channels is quite uniform between the two States.

It is tempting to see the differences in declaration (absent etc.) voting and remote or mobile voting as having to do with WA's larger size and sparser population outside Perth. Table 12.2, however, gives little support for this explanation, since predicted demand for declaration (absent etc.) voting in WA does not vary significantly between metropolitan, region and rural or remote contexts. Early voting does differ across settlement types in WA, as it does in NSW; however, it is regional towns and cities where predicted demand is strongest. This might be because it is more feasible for people in and around regional towns and cities to attend a voting centre during the early voting period than it is for voters in rural and remote areas, while metropolitan voters have other options. Having said that, predicted demand for pre-poll voting is relatively high across each of the different contexts (see Table 12.2).

The other variation in Table 12.2 worth comment is the predicted lower demand for remote internet voting in rural and remote areas than in the other contexts. This again might seem counter-intuitive, especially in NSW, where one of the eligibility criteria for accessing remote electronic voting is living at least 20 kilometres from the nearest polling place. The probable answer has to do with the notoriously poor telephone and internet reliability in parts of rural and remote Australia, which might dampen enthusiasm for using the iVote system to cast a vote.

Table 12.2 Predicted Demand for Voting Channels by Region ('high' and 'very high' combined)

nigh combined)		Regional		
		Town or	Rural or	
	Metropolitan	City	Remote	Sig
Ordinary election day voting	•	/		
WA State Election	71.4	74.6	74.4	
NSW By-Elections	75.3	76.9	67.0	
NSW Local Government Elections	73.8	71.7	73.4	
Declaration election day voting				
(absent voting etc.)				
WA State Election	61.7	59.1	61.6	
NSW By-Elections	39.9	43.8	36.8	
NSW Local Government Elections	50.2	45.1	36.9	***
Ordinary Pre-poll voting				
WA State Election	60.4	70.9	55.9	***
NSW By-Elections	55.2	66.7	64.4	*
NSW Local Government Elections	55.5	64.1	58.0	***
Declaration Pre-poll voting ^a				
NSW By-Elections	42.1	50.0	33.7	*
NSW Local Government Elections	43.9	46.4	40.5	
iVote (web or telephone)				
WA State Election	58.9	53.0	41.6	***
NSW By-Elections	55.0	47.8	44.4	
NSW Local Government Elections	59.1	59.3	43.1	***
Postal voting				
WA State Election	40.6	43.9	47.0	
NSW By-Elections	38.6	41.0	41.3	
NSW Local Government Elections	44.4	45.4	43.4	
Remote or mobile voting (WA);				
Declared institution voting (NSW)				
WA State Election	43.6	44.9	36.7	
NSW By-Elections	27.1	38.9	26.0	
NSW Local Government Elections	32.0	37.3	27.9	*

^aNot a separate category of voting in WA.

12.4 Party and Candidate Perceptions of Future Demand

^{*} p <.05; *** p < .001

The party and candidate interviewees believed that increases in early voting were inevitable, and that they would need to continue to devote resources to deal with this growing demand. In NSW, this attitude was also evident with respect to remote electronic voting. Any relaxation of access to remote electronic voting in WA would likely see the State replicate the growth in this mode of voting experienced in NSW between 2011 and 2015. In its review of the WA election, the WAEC reported that those who used the iVote system generally wanted to see its availability expanded to include remote, overseas and general early voters (Western Australian Electoral Commission 2017a: 19). The Community Development and Justice Standing Committee of the WA Parliament, which oversees the conduct of elections in Western Australia, was more cautious, stating that expansion should not occur until further risk assessment is conducted (Community Development and Justice Standing Committee [WA] 2018).

The high rates of postal voting in WA appear to be linked with a campaign by the Liberal Party, which demonstrates that political parties still have some capacity to shape citizens' preferences about voting channels (Andrew Cox interview). The Labor Party has not put resources into postal voting; nor have other parties. Given the increasing expense of promoting postal voting, it is questionable how long the Liberal Party will be able to keep up this form of campaigning.

The sense that remote electronic voting could replace postal voting is held more strongly among interviewees in NSW than in WA. Nonetheless, there is no reason to suspect that a reluctant acceptance of remote electronic voting will not emerge among candidates and parties in WA if more citizens are legally permitted to access it, in a pattern similar to that seen in NSW.

Party representatives also tend to perceive a changing relationship between pre-poll and postal voting. As set out earlier in Figures 3.3 and 3.4, pre-poll voting is increasing much faster than postal voting. For several interviewees, the ease of pre-poll voting will erode the rationale for postal voting:

I feel that [postal voting] is becoming less and less relevant with the longer early vote (Lisa Cole interview).

[W]e were more concerned [in 2017 that] the trend that you saw towards pre-polling would increase, and that turned out to be the case, so we were focusing on putting our efforts into the pre-polling and just making sure the pre-polling was well staffed (Simon Millman interview).

Some interviewees also suggested that remote electronic voting may erode the appeal of postal voting for remote voters:

There is a potential for it to become the defacto postal voting for the remote and difficult to get to areas (Peter Phelps interview).

If you are introducing the internet/i-voting, that kind of makes postal voting redundant ... unless you're not connected (Eleni Evangel interview).

The overall predicted trends among interviewees have some similarities to those of election workers. Although there appears to be an acceptance that ordinary voting on election day is likely to decline further, perhaps through a combination of increased pre-poll and remote electronic voting, no single voting channel is predicted to dominate in future elections.

13. Conclusions

13.1 Managing Changes to Voting Channels in Australia

The snapshot of NSW and WA presented in this report suggests that the electoral commissions and parties are responding to the challenges presented by the 'quiet revolution' in Australian voter expectations and behaviour. The evidence indicates that the NSW by-elections, NSW Local Government Elections and WA State General Election were all well run. Small proportions of the thousands of election workers employed to run the elections experienced or observed problems. The problems that did occur were generally not considered to be serious. In most cases, they were dealt with successfully.

These findings confirm the point that recent reforms to the ways in which Australians vote have not been provoked by crises in electoral administration, as has been the case in some countries, including mature democracies such as the USA. Instead, it has come about as a series of responses to demands for more flexible voting, generated by shifts in social and employment patterns. This gives electoral lawmakers and administrators space to make considered adjustments to voting processes.

13.2 Changing Voting Channels Assessed

In Chapter 5, we advanced seven criteria for assessing election channels—participation, communication, access, ballot secrecy, security and fraud resistance, accuracy, and transparency. We return to each of these in the light of the evidence presented in Chapters 7 to 12.

13.2.1. Participation

As noted earlier in this report, compulsory voting changes the challenges of electoral participation. Rather than electoral management bodies and candidates having to get out the vote, they have to manage the large number of voters who must vote. As Chapter 9 showed, this management task presents some of the most common problems for election workers, particularly in contexts where citizens may be confused about whether or not they are required to vote. The shift from ordinary voting on election to pre-poll voting may shift these problems for electoral commissions, rather than reducing or removing them. Remote voting channels place more of the burden of managing voting on voters themselves. This is particularly the case for remote internet

voting, which gives voters most freedom about when and where to participate in the vote.

13.2.2 Communication

As expected, the qualitative evidence in this report showed that the rise of flexible voting presents new communications challenges for candidates and parties. The better resourced parties—the Liberal, Labor and National parties—are better placed to meet these challenges than minor parties and Independents. There is evidence that they are adjusting to the new environment by making strategic decisions about which voting channels to emphasise in their election communication campaigns.

13.2.3 Access

The evidence in this report suggests that no single voting channel provides the best access to the ballot for all citizens. Citizens have a range of abilities and needs, which make different voting channels more or less accessible. The development of laws about who can access different voting channels has been incremental. The resulting laws have produced inconsistencies regarding access. Citizens have sometimes taken matters into their own hands, voting in the ways that suit them even where they are not eligible to do so.

One approach to resolving these issues might be for electoral commissions to offer the four most common voting channels—ordinary voting on election day, pre-poll voting, postal voting and remote electronic voting—to anyone who wants to access them. Citizens would then be free to access the ballot in the ways most suitable to their needs.

Electoral commissions may have some difficulty planning which resources would need to be provided and where; however, these problems seem to be no greater than those that exist under the current rules. They may even be reduced if more citizens are able to take up the remote electronic voting option. The weather challenges in WA discussed in Section 6.9, for example, are likely to be an ongoing issue, making internet voting a potentially cheaper and more reliable option than trying to drive or fly ballot papers to remote areas.

13.2.4 Ballot Secrecy

The evidence in this report indicates that keeping the ballot secret does not present widespread difficulties for election workers. Voters who vote in person at polling places, whether on election day or earlier, appear to be able to keep their electoral decisions secret. The question of whether this applies to votes cast in unsupervised environments via postal ballots or the iVote system cannot be answered with the evidence gathered here. In theory, paper and electronic forms of unsupervised voting both carry risks to secrecy, with the difference primarily one of scale. The secrecy of postal votes could be breached on an opportunistic vote by vote basis, while the secrecy of all electronic votes could potentially be breached. More broadly, issues surrounding secrecy in electronic voting remain unsettled within the academic community.

13.2.5 Security and Fraud Resistance

The election workers surveyed for this report identified few problems with keeping polling places secure, or with the handling, transport and storage of ballot papers and related materials. The same was true of storing votes cast via the iVote system, although the nature of electronic voting is such that problems with storing votes would not typically be evident to election workers. It should be noted that on the small number of occasions when problems were experienced or observed in these security related tasks, election workers were likely to judge them as not being dealt with 'very' or 'extremely' well. Without further research on specific incidents, it is not possible to know why election workers made these judgements. The electoral commissions regularly review their approaches to issues of security and fraud. They clearly need to continue to do this as they allow voters to exercise more flexible voting options.

13.2.6 Accuracy of the Count

The evidence gathered for this report indicates that hand-counting ballot papers and related tasks produce relatively high levels of problems for election workers. These problems are mostly not serious and are mostly dealt with well. Electronic counts are faster and—assuming the computers involved are secure and programmed correctly—more likely to be accurate.²⁷ Nonetheless, electronic voting only fully removes the issues of hand-counting if all ballots are cast and counted electronically. The approach to vote counting likely to continue in NSW and WA--in which paper and electronic ballots are both included in the count—requires some elements of hand-counting and

_

²⁷ Formal proofs of the accuracy of vote tallying computer programs for large-scale voting systems remain rare (see Verity and Pattinson 2016).

manual data entry to produce the final tally. The problems arising from universal hand-counting will thus be reduced but not eliminated.

13.2.7 Transparency

Australia has long had a tradition of electoral transparency maintained, in part, by the ability of candidates' representatives to scrutinise voting and counting processes. For the most part, the evidence in this report suggests that this tradition continues to work well. Election workers rarely find the behaviour of scrutineers a problem. Indeed, on some occasions, scrutineers appear to help election workers resolve the problems they encounter.

Similar traditions of transparency and scrutiny are yet to develop around the iVote counting process and around the increasing use of data entry from paper ballots for electronic counting. As noted in Section 10.3, candidates are invited to send scrutineers to iVote decryption ceremonies; however, very few have taken up this invitation. Scrutiny of the iVote count is carried out via by the publication of both the input data (the electronic ballot preferences) and the count process description. This allows the independent checking of the results by members of the public with relevant skills, who can run the published preference data through their own independently developed programs to confirm whether or not the published preferences have been correctly counted. This is an important process that to date has not been formally considered to be a valid scrutiny process. Electronic voting and counting are still relatively new in Australia,²⁸ so new traditions of scrutiny may well develop over time as electronic voting and counting mature. It is also probable that the current scrutiny processes set out in legislation will need to be supplemented.

²⁸ Computerised counts for WA Legislative Council elections were introduced in 1996. Supervised electronic voting was first used in Australian Capital Territory elections in 2001.

13.3 Conclusion: An Ongoing Challenge

Nothing in this report suggests that the 'quiet revolution' in the ways in which Australian citizens are casting votes can or should be reversed. A counter-revolutionary return to the era when almost all citizens dutifully made time to vote on a single Saturday at a local polling place does not seem possible or desirable. The election workers surveyed for this report believe that the growing demand for flexible voting will only continue. No single voting channel is likely to replace ordinary voting on election day as *the* new dominant form of voting. Use of pre-poll voting may well overtake use of ordinary voting on election day; however, it will not achieve the position of near universality that ordinary voting once held. Instead, for the foreseeable future, different voters will want to use different voting channels. Australian lawmakers, electoral commissions and election candidates all face continuing challenges to meet reasonable expectations among citizens that voting will continue to be made more convenient and more easily accessible.

Appendix 1. Text of the Election Worker Questionnaire (WA State General Election Version)

Implications of Changes to Voting in Australia

Western Australian 2017 State Election Survey

This survey is designed to understand the experiences and views of people employed by the Western Australian Electoral Commission at the recent 2017 State election. A range of voting methods were used at the elections, including ordinary voting on election day, absent voting, pre-poll voting, postal voting, remote or mobile polling and the iVote. We would like to gain an accurate picture of how well those different voting methods were managed at all stages of the election process. Your views and experiences will be very important for helping to create this picture, regardless of your particular role and which stage or stages of the election you worked on.

Your answers to this questionnaire will be anonymous. You cannot be identified by any of the answers you provide. The Western Australian Electoral Commission will not know whether you have taken part in the study or how you have answered any question.

Further details about this questionnaire, including information relating to your consent and confidentiality, can be found in the Participant Information Statement sent as an attachment to the email inviting you to participate in the study.

Once again, behalf of the Electoral Regulation Research Network research team, thank you for participating in the study.

Professor Rodney Smith
Department of Government and International Relations
University of Sydney

The research study and the content of this questionnaire have been approved by a University of Sydney Human Research Ethics Committee.

Click here to begin the survey: ['Begin' button.]

1. Which of the following official roles best describe your work for the Western Australian Electoral Commission at the recent 2017 State election? Please indicate by clicking one or more buttons next to the relevant role or roles.

Polling Place Manager (Ordinary or Early Voting)
Polling Place Election Official
Returning Officer
Returning Officer Liaison Officer
Early Vote Issuing Officer
Project Manager
Project Leader

2. Are you a permanent employee of the Western Australian Electoral Commission, or were you employed on a contract or casual basis by the Western Australian Electoral Commission specifically for the 2017 State election?

Permanent employee Contracted for the 2017 State election Casual employee for the 2017 State election

3. Including the 2017 State election, how many elections have you worked on in some capacity as a permanent or contract employee of the Western Australian Electoral Commission, or another electoral commission in Australia? Please enter the number in the space provided. If the 2017 State election was the first election at which you worked, enter a '1':

I have worked at election/s.

4. Excluding any training sessions, at which of the following environments did you work for the Western Australian Electoral Commission at the 2017 State election? Please indicate as many as apply by clicking the button or buttons.

Polling Place
Early Voting Centre
Mobile and remote polling locations
Western Australian Electoral Commission Head Office
Western Australian Electoral Commission Count Centre
Early Voting Interstate Centre
Early Voting Overseas Centre

5. [If answer to Q 4 is Polling Place, Early Voting Centre or Mobile and Remote Polling Locations.] Which of the following best describe the location or locations where you worked? Please indicate as many as apply.

Metropolitan Regional city or town Rural Remote

6. The 2017 State election involved ordinary voting on election day, absent voting, pre-poll voting, postal voting, remote and mobile polling, and the iVote. Thinking about all the stages of the election, from start to finish, which types of voting methods did your work for the Western Australian Electoral Commission involve? Please indicate each voting method to which your work directly contributed in some way over the whole course of the election.

Ordinary voting at a polling place on election day.
Absent voting at a polling place on election day.
Pre-poll voting.
Postal voting.
Remote or mobile polling.
iVote (web or telephone-IVR).

7. How well prepared would you say you were for the tasks that you were required to undertake at the 2017 State election?

Extremely well prepared Very well prepared Moderately well prepared Not very well prepared Not at all well prepared

8. How satisfied were you with the training you received from the Western Australian Electoral Commission prior to the 2017 State election?

Not at all satisfied Not very satisfied Moderately satisfied Very satisfied Extremely satisfied 9. Could anything be done to improve the training? Please indicate as many as apply.

Allow more time to cover the material.

Provide more detailed information on procedures and rules.

Use more practical examples.

Provide better training materials.

Provide more hands on training.

Better testing of how well information was understood.

Other (please specify):

10. Overall, how well would you say the tasks involved in administering the election were carried out in the location/s in which you worked at the 2017 State election?

Extremely well
Very well
Moderately well
Not very well
Not at all well

11. Based on your direct experiences and observations while working at the 2017 State election, did any problems occur while any of the following tasks were being carried out at the location or locations in which you worked?

This task was not applicable to my work location/s.

Yes, at least one problem occurred during this task.

No problem occurred during this task.

Maintaining the security of a polling place or early voting centre. Taking initial delivery of ballot papers. Storing unused ballot papers securely. Providing postal voting packs to eligible voters. **Providing internet** voting credentials to eligible voters. Managing people waiting to vote at a

polling place or early

voting centre.

Dealing with people

attending the wrong

polling place or early

voting centre.

Determining

people's eligibility to

vote.

Electronically

marking off voters.

Marking off voters

on a paper roll.

Ensuring voters

could keep their

vote secret.

Handling completed

ordinary ballot

papers.

Handling postal

votes.

Handling declaration

envelopes.

Determining the

formality of votes.

Receiving internet

votes (iVotes).

Sorting ballot

papers.

Counting ballot

papers.

Transporting

completed ballot

papers.

Dealing with

scrutineers.

Storing internet

votes (iVotes)

securely.

Counting internet

votes (iVotes).

Storing rolls, ERS

machines and

tablets securely.

Entering data onto

the computerised

system

Transmitting data electronically to a count centre.
Communicating with candidates.
Communicating with officials from the Western Australian Electoral
Commission in other locations.

12. Again, based on your direct experiences and observations while working at the 2017 State election, how serious were the problems that occurred while the following tasks were being carried out at the location or locations in which you worked? [Respondents will only be offered items that they indicated had occurred in Q11.]

Maintaining the security of a	Not at all serious	Not very serious	Moderately serious	Very serious	Extremely serious
polling place or early voting centre.					
Taking initial delivery of ballot papers.					
Storing unused ballot papers securely.					
Providing postal voting packs to eligible voters.					
Providing internet voting credentials to eligible voters.					
Managing people waiting to vote at a polling place or					
early voting centre.					

Not at all Not very Moderately Very Extremely serious serious serious serious

Dealing with people attending the wrong polling place or early voting centre.
Determining people's eligibility to vote.

Electronically

marking off

voters.

Marking off voters

on a paper roll.

Ensuring voters

could keep their

vote secret.

Handling

completed

ordinary ballot

papers.

Handling postal

votes.

Handling

declaration

envelopes.

Determining the

formality of votes.

Receiving internet

votes (iVotes).

Sorting ballot

papers.

Counting ballot

papers.

Transporting

completed ballot

papers.

Dealing with

scrutineers.

Storing internet

votes (iVotes)

securely.

Counting internet

votes (iVotes).

	Not at all	Not very	Moderately	Very	Extremely
Storing rolls, ERS machines and tablets securely. Entering data onto the computerised system Transmitting data electronically to a count centre. Communicating with candidates. Communicating with officials from the Western Australian Electoral Commission in other locations.	serious	serious	serious	serious	serious
5tc. 155dt161151					

13. Again, based on your direct experiences and observations while working at the 2017 State election, how well were the problems dealt with after they occurred? [Respondents will only be offered items that they indicated had occurred in Q11.]

	Not at all well	Not very well	Moderately well	Very well	Extremely well
Maintaining the security of a polling place or early voting centre. Taking initial delivery of ballot papers. Storing unused ballot papers securely. Providing postal voting packs to eligible voters. Providing internet voting credentials		•	•		•
to eligible voters.					

Not at all	Not very	Moderately	Very well	Extremely
well	well	well		well

Managing people waiting to vote at a polling place or early voting centre.

Dealing with people attending the wrong polling place or early

voting centre.

Determining

people's eligibility

to vote.

Electronically

marking off

voters.

Marking off voters

on a paper roll.

Ensuring voters

could keep their

vote secret.

Handling

completed

ordinary ballot

papers.

Handling postal

votes.

Handling

declaration

envelopes.

Determining the

formality of votes.

Receiving internet

votes (iVotes).

Sorting ballot

papers.

Counting ballot

papers.

Transporting

completed ballot

papers.

Dealing with

scrutineers.

	Not at all well	Not very well	Moderately well	Very well	Extremely well
Storing internet					
votes (iVotes)					
securely.					
Counting internet					
votes (iVotes).					
Storing rolls, ERS					
machines and					
tablets securely. Entering data					
onto the					
computerised					
system.					
Transmitting data					
electronically to a					
count centre.					
Communicating					
with candidates.					
Communicating					
with officials from					
the Western					
Australian Electoral					
Commission in					
other locations.					
other locations.					

14. To what extent do you think any of the following factors contribute to the problems that occurred at the location/s in which you worked during the 2017 State election?

	Not a factor	A minor factor	A moderate factor	A major factor
Time pressures Human error by election staff. Technological issues. Inadequate training of election staff.	Not a factor	A minor factor		A major lactor
Too few election staff.				
Unclear rules				
and procedures.				
p. 0 2 2 2 3 .				

Too few materials provided. Unreasonable behaviour by voters. Unreasonable behaviour by candidates or their supporters.

15. How helpful were each of the following in dealing with problems that occurred?

Did not Not at all Not very Moderately Very Extremely apply to helpful helpful helpful helpful helpful helpful any problems

My own common sense and initiative Manuals

and online

advice

provided by

the Western

Australian

Electoral

Commission.

Advice or

action from

candidates

and

scrutineers.

Advice or

action from

my direct

supervisor.

Advice or

action from

officials

other than

my direct

supervisor.

Training
sessions
provided by
the Western
Australian
Electoral
Commission.
Advice or
action from
voters.

Extremely

16. In your view, how important is it that the election process achieves the following goals?

Verv

Moderately

Not very

Not at all

	important	important	important	important	important
People can choose the	·	·	·	·	·
way of voting					
that's most					
convenient to					
them.					

People with different needs are

given as equal

access as

possible to

voting.

People cast

their votes in

secret.

People cannot

be coerced

while voting.

Voting fraud

is prevented.

Votes are

processed

securely after

they are cast.

Votes are

recorded

accurately.

Election

results are

announced quickly. The vote counting process is independently scrutinised. The cost of running the election is minimised.

17. [Only for respondents who indicated in Q.4 that they worked in a Polling Place, Early Voting Centre or Mobile and remote polling locations.] If the following ways of voting were **all** made available **to whoever wanted them** in future WA State elections, how much demand do you think there would be for each of them from the voters who live in the area where you worked at the 2017 State election?

	NO	LOW	Medium	High	very nigh	Don't
	demand	demand	demand	demand	demand	know
Ordinary voting at a polling place on election day. Absent voting at a polling place on election day. Pre-poll voting.	demand	demand	demand	demand	demand	know
Postal voting						
Remote or mobile polling. iVote (web or telephone-IVR).						

18. In your own words, could you briefly say why you think demand for [insert voting methods seen as 'high' or 'very high' demand] would be high or very high?

[Free text box.]

Now a few brief questions about you to finish the survey:

19. Which of the following age groups do you fall into?
Under 25 25-34 35-44 45-54 55-64 65-74 75 or over
20. Are you?
Female Male Other
21. What is your highest educational qualification?
High school or trade certificate Undergraduate tertiary degree Postgraduate tertiary degree
22. [Only for contract or casual workers] Which of the following categories best describes your usual occupation? If you are usually retired or unemployed, please indicate your most recent occupational category. If you are usually a full-time student, use the 'Student' category.
Manager Professional Technician or trade worker Community or personal service worker Clerical or administrative worker Sales worker Machinery operator or driver Labourer Student
Thank you for completing the survey. If you have any comments to make about the questions, or comments on issues that you do not think we have covered adequately in the survey, please type them into the space below. Otherwise, please submit your survey now by clicking on the button below.
[Free text box.]
['Submit Survey' button.]

Appendix 2. Schedule for Semi-Structured Interviews

Implications of Changes to Voting in Australia

Interview schedule for candidates, campaign workers and party officials.

[Please note that this schedule is designed for semi-structured interviews and that not all questions will necessarily be asked of all participants. In some cases some relevant information will have already been gained from published documentary sources. Some questions will only apply to some participants.]

- 1. Introduction of interviewer; any preliminary questions about the research; signing of participant consent form.
- 2. How many election campaigns have you been involved in and in what capacities? [Only necessary where information is unavailable from published documentary sources.]
- 3. Based on your experiences at the recent [name] election, how well do you think the [New South Wales or Western Australian, as appropriate] Electoral Commission managed the election?
- 4. Were there any aspects of the election that you thought the [New South Wales or Western Australian, as appropriate] Electoral Commission managed particularly well?
- 5. Were there any aspects of the election where you thought the [New South Wales or Western Australian, as appropriate] Electoral Commission could have significantly improved its management?
- 6. In the election, people were able to vote via a range of methods [only mention the options that were available for the relevant election]:
 - a. an ordinary vote at a local polling place on election day
 - b. an absentee vote
 - c. a pre-poll (early) vote at an early voting centre
 - d. a remote or mobile polling vote
 - e. a postal vote
 - f. a telephone or internet vote (iVote)
 - g. a vote at an interstate or overseas voting centre.

How, if at all, did the availability of these different voting options affect your election campaign?

- 7. [Follow up to Q. 6.] Did you or other members of your campaign team:
 - a. Allocate people to hand out how-to-vote information at polling places on election day?
 - b. Encourage or advertise early voting at pre-poll centres?
 - c. Allocate staff to hand out how-to-vote information at pre-polling centres?
 - d. Encourage or advertise postal voting?
 - e. Allocate resources to printing, distributing, receiving and forwarding postal voting applications?
 - f. Encourage internet or telephone voting (iVoting)? [Only asked where available.]
 - g. Allocate resources to online advertising to try to reach voters using the iVote?

- h. Make changes to the timing of policy announcements, the campaign launch, advertising or other campaign activities specifically to target people who were likely to vote before election day?
- 8. Would you like to see any of the following voting methods made widely available to voters in [state or local government, as appropriate] elections? Should any methods be offered on a more restricted basis than they are now? Should any be completely removed as a voting option? Why?
 - a. absentee voting
 - b. pre-poll (early) voting at an early voting centre
 - c. remote or mobile voting
 - d. postal voting
 - e. telephone or internet voting (iVote)
 - f. voting at an interstate or overseas voting centre.
- 9. Any further comments by on issues that the interviewee believes have not been adequately covered during the interview.
- 10. Thank you; reminder of the arrangements for transcribing the interview.

Appendix 3. Problems Encountered by Role and Level of Experience

Full List of Problems Encountered by Election Workers, NSW Local Government Elections 2017

	All Relevant Election			
	Workers	Polling Place Managers	Returning Officers	5+ Elections
Counting ballot papers	18.3 (492)	15.0 (105)	20.0 (25)	15.5 (189)
Determining people's eligibility to vote	33.7 (880)	37.6 (265)	23.8 (30)	35.9 (431)
Dealing with people at the wrong polling place or EVC.	45.3 (1168)	48.7 (332)	40.2 (49)	45.1 (523)
Determining the formality of votes	23.0 (603)	14.8 (103)	23.6 (29)	20.2 (243)
Electronically marking off voters	16.7 (204)	18.2 (56)	16.9 (12)	18.0 (96)
Managing people waiting to vote	19.5 (504)	20.2 (140)	20.3 (25)	20.9 (246)
Sorting ballot papers	12.7 (341)	8.1 (57)	20.3 (26)	10.2 (125)
Entering voting data onto the computerised system	22.3 (82)	24.1 (20)	17.4 (4)	24.2 (46)
Handling declaration envelopes	13.1 (288)	15.7 (108)	14.7 (15)	12.4 (134)
Marking voters off on paper roll	16.2 (400)	7.6 (122)	14.5 (17)	14.9 (166)
Providing postal voting packs to voters	9.9 (17)	11.1 (5)	20.0 (4)	12.1 (12)
Providing iVote credentials to voters				
Dealing with scrutineers	9.3 (219)	8.9 (58)	12.9 (13)	9.8 (106)
Delivery of ballot papers	4.2 (93)	4.8 (33)	7.1 (7)	4.9 (51)
Communicating with candidates	7.8 (92)	7.2 (2)	4.7 (3)	8.3 (44)
Handling completed ordinary ballot papers	5.7 (151)	4.0 (28)	9.7 (12)	4.9 (59)
Handling postal ballot papers	4.5 (63)	3.6 (15)	10.4(8)	3.5 (25)
Security of polling places	6.6 (166)	5.3 (37)	6.8 (8)	6.6 (77)
Counting iVotes	-			
Communicating with WAEC in other locations	11.7 (169)	14.2 (69)	8.3 (6)	13.6 (93)
Transmitting data electronically	12.4 (30)	17.0 (9)	10.0 (2)	16.4 (21)
Receiving iVotes	-			
Ensuring voters could keep vote secret	3.3 (87)	1.9 (13)	5.8 (7)	2.7 (32)
Storing unused ballot papers	2.2 (54)	1.3 (9)	2.7 (3)	2.1 (24)
Transporting completed ballot papers	2.9 (58)	4.4 (30)	4.5 (4)	3.4 (33)
Storing rolls, ERS machines and tablets securely	2.1 (44)	1.3 (9)	7.6 (7)	1.9 (20)
Storing iVotes securely	·	·	·	

Full List of Problems Encountered by Election Workers, NSW By-Elections 2016-17

	All Relevant Election			
	Workers	Polling Place Managers	Returning Officers	5+ Elections
Counting ballot papers	11.1 (61)	7.9 (10)	6.7 (1)	7.1 (19)
Determining people's eligibility to vote	22.9 (122)	18.4 (23)	33.3 (5)	21.1 (55)
Dealing with people at the wrong polling place or EVC.	22.0 (104)	23.8 (25)	42.9 (6)	23.0 (52)
Determining the formality of votes	11.6 (63)	9.5 (12)	7.7 (1)	8.2 (22)
Electronically marking off voters	12.8 (29)	14.6 (6)	10.0(1)	14.3 (15)
Managing people waiting to vote	11.8 (60)	12.2 (15)	38.5 (5)	10.5 (26)
Sorting ballot papers	4.4 (24)	2.4(3)	0.0 (0)	3.4 (9)
Entering voting data onto the computerised system	13.8 (13)	14.3 (2)	40.0 (2)	11.9 (5)
Handling declaration envelopes	5.7 (26)	4.8 (6)	8.3 (1)	5.0 (12)
Marking voters off on paper roll	12.9 (63)	13.6 (17)	23.1 (3)	12.6 (30)
Providing postal voting packs to voters	16.1 (9)	28.6 (2)	0.0 (0)	15.6 (5)
Providing iVote credentials to voters	0.0 (0)	n/a	n/a	0.0 (0)
Dealing with scrutineers	11.7 (61)	12.0 (15)	7.1 (1)	10.4 (26)
Delivery of ballot papers	2.5 (11)	5.0 (6)	7.7 (1)	3.7 (8)
Communicating with candidates	5.9 (12)	4.2 (2)	11.1 (1)	4.2 (4)
Handling completed ordinary ballot papers	3.7 (20)	2.4(3)	0.0 (0)	1.9 (5)
Handling postal ballot papers	6.0 (19)	2.3 (2)	20.0 (2)	4.7 (8)
Security of polling places	5.6 (29)	6.3 (8)	0.0 (0)	4.8 (12)
Counting iVotes	8.1 (3)	n/a	50.0(1)	13.3 (2)
Communicating with WAEC in other locations	6.1 (19)	8.9 (8)	0.0 (0)	4.0 (6)
Transmitting data electronically	10.8 (7)	22.2 (2)	25.0(1)	7.4(2)
Receiving iVotes	4.2 (1)	0.0 (0)	0.0 (0)	0.0 (0)
Ensuring voters could keep vote secret	3.0 (16)	0.0 (0)	7.7 (1)	0.8 (2)
Storing unused ballot papers	1.2 (6)	0.8 (1)	0.0 (0)	0.8 (2)
Transporting completed ballot papers	2.5 (10)	5.7 (7)	0.0 (0)	3.3 (7)
Storing rolls, ERS machines and tablets securely	0.2 (1)	0.0 (0)	0.0 (0)	0.0 (0)
Storing iVotes securely	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)

	All Relevant	Polling Place Managers	Returning Officers	5+ Elections
	Election Workers			
Counting ballot papers	21.8 (445)	16.7 (72)	21.9 (34)	15.8 (116)
Determining people's eligibility to vote	21.7 (415)	24.9 (108)	24.8 (33)	21.8 (158)
Dealing with people at the wrong polling place or EVC.	20.4 (347)	23.1 (84)	20.2 (23)	22.2 (139)
Determining the formality of votes	19.5 (379)	13.0 (55)	16.9 (24)	16.7 (117)
Electronically marking off voters	18.7 (215)	19.9 (67)	20.0 (15)	19.5 (101)
Managing people waiting to vote	15.9 (288)	19.2 (82)	15.1 (18)	19.4 (133)
Sorting ballot papers	12.0 (243)	8.4 (36)	13.2 (20)	9.2 (67)
Entering voting data onto the computerised system	14.3 (26)	14.3 (3)	13.1 (8)	22.8 (13)
Handling declaration envelopes	10.5 (179)	11.2 (47)	11.2 (13)	11.0 71)
Marking voters off on paper roll	9.1 (155)	8.8 (37)	14.5 (17)	8.1 (51)
Providing postal voting packs to voters	15.5 (15)	n/a	28.6 (2)	12.5 (4)
Providing iVote credentials to voters	25.0 (1)	n/a	0.0(0)	0.0(0)
Dealing with scrutineers	8.0 (144)	7.9 (33)	5.6 (7)	7.5 (48)
Delivery of ballot papers	6.7 (107)	9.5 (40)	2.7 (3)	7.3 (46)
Communicating with candidates	6.2 (48)	10.6 (22)	3.4(2)	7.2 (19)
Handling completed ordinary ballot papers	5.8 (115)	3.7 (16)	7.9 (11)	3.5 (25)
Handling postal ballot papers	5.7 (70)	4.2 (15)	7.4(6)	4.7 (22)
Security of polling places	5.5 (101)	4.7 (20)	6.6 (8)	4.9 (34)
Counting iVotes	14.5 (9)	0.0 (0)	0.0(0)	14.3(2)
Communicating with WAEC in other locations	4.9 (55)	6.6 (22)	3.9 (3)	5.3 (23)
Transmitting data electronically	3.7 (4)	0.0 (0)	2.0(1)	12.1 (4)
Receiving iVotes	10.0 (4)	0.0 (0)	0.0 (0)	10.0(1)
Ensuring voters could keep vote secret	3.1 (60)	3.4 (15)	2.3 (3)	2.9 (21)
Storing unused ballot papers	2.4 (44)	2.3 (10)	2.4 (3)	2.6 (18)
Transporting completed ballot papers	1.8 (24)	2.4 (10)	2.2 (2)	1.9 (10)
Storing rolls, ERS machines and tablets securely	1.5 (23)	3.1 (13)	2.0 (2)	1.9 (11)
Storing iVotes securely	0.0(0)	0.0 (0)	0.0(0)	0.0(0)

Appendix 4. How Well Were Problems Dealt With: Full Responses

How Well Were Problems Dealt With, NSW Local Government Elections 2017

	Not At All	Not Very	Moderately	Very	Extremely
Counting ballot papers	3.8	9.2	27.6	42.1	17.4
Determining people's eligibility to vote	1.9	4.5	24.5	54.6	14.6
Dealing with people at the wrong polling place or EVC.	1.9	4.8	27.6	48.5	17.4
Determining the formality of votes	1.2	6.4	26.9	49.8	15.6
Electronically marking off voters	5.1	5.1	30.3	47.7	11.8
Managing people waiting to vote	2.1	8.0	35.1	44.5	10.3
Sorting ballot papers	1.8	10.8	28.0	43.1	16.3
Entering voting data onto the computerised system	2.5	16.3	22.5	50.0	8.8
Handling declaration envelopes	3.2	10.7	27.1	44.3	14.6
Marking voters off on paper roll	1.3	3.6	21.9	52.6	20.6
Providing postal voting packs to voters	0.0	18.8	31.3	18.8	31.3
Providing iVote credentials to voters					
Dealing with scrutineers	4.2	12.7	32.9	36.2	14.1
Delivery of ballot papers	3.3	11.1	34.4	38.9	12.1
Communicating with candidates	6.7	6.7	33.7	38.2	14.6
Handling completed ordinary ballot papers	2.7	5.5	20.5	50.0	21.2
Handling postal ballot papers	5.0	10.0	33.3	28.3	23.3
Security of polling places	3.7	11.1	30.2	41.4	13.6
Counting iVotes					
Communicating with NSWEC in other locations	9.6	19.2	40.1	24.0	7.2
Transmitting data electronically	0.0	14.3	25.0	50.0	10.7
Receiving iVotes					
Ensuring voters could keep vote secret	1.2	8.4	26.5	42.2	21.7
Storing unused ballot papers	8.2	16.3	32.7	24.5	18.4
Transporting completed ballot papers	7.1	23.2	32.1	21.4	16.1
Storing rolls, ERS machines and tablets securely	4.5	13.6	29.5	40.9	11.4
Storing iVotes securely					

How Well Were Problems Dealt With	, NSW By-Elections 2016-2017
-----------------------------------	------------------------------

	Not At All	Not Very	Moderately	Very	Extremely
Counting ballot papers	5.0	6.7	23.3	46.7	18.3
Determining people's eligibility to vote	0.8	5.8	19.0	53.7	20.7
Dealing with people at the wrong polling place or EVC.	0.0	4.9	16.5	57.3	21.4
Determining the formality of votes	6.3	1.6	20.6	46.0	25.4
Electronically marking off voters	6.9	6.9	24.2	34.5	27.6
Managing people waiting to vote	2.9	1.0	16.7	51.0	28.4
Sorting ballot papers	4.2	16.7	37.5	33.3	8.3
Entering voting data onto the computerised system	0.0	0.0	23.1	69.2	7.7
Handling declaration envelopes	4.0	8.0	44.0	28.0	16.0
Marking voters off on paper roll	1.6	13.1	34.4	27.9	23.0
Providing postal voting packs to voters	0.0	11.1	22.2	22.2	44.4
Providing iVote credentials to voters	9.1	9.1	27.3	27.3	27.3
Dealing with scrutineers	4.9	6.6	24.6	45.9	18.0
Delivery of ballot papers	10.0	20.0	20.0	40.0	10.0
Communicating with candidates	0.0	16.7	25.0	50.0	8.3
Handling completed ordinary ballot papers	5.6	5.6	11.1	44.4	33.3
Handling postal ballot papers	0.0	5.3	31.6	36.8	26.3
Security of polling places	10.3	0.0	20.7	44.8	24.1
Counting iVotes	0.0	0.0	0.0	100.0	0.0
Communicating with NSWEC in other locations	17.6	11.8	17.6	29.4	23.5
Transmitting data electronically	0.0	0.0	28.6	42.9	28.6
Receiving iVotes	0.0	0.0	0.0	0.0	100.0
Ensuring voters could keep vote secret	13.3	6.7	46.7	13.3	20.0
Storing unused ballot papers	40.0	20.0	0.0	40.0	0.0
Transporting completed ballot papers	11.1	11.1	33.3	44.4	0.0
Storing rolls, ERS machines and tablets securely	0.0	100.0	0.0	0.0	0.0
Storing iVotes securely					

How Well Were Problems Dealt With, WA State General Election 2017

	Not At All	Not Very	Moderately	Very	Extremely
Counting ballot papers	2.7	8.7	30.2	39.8	18.5
Determining people's eligibility to vote	1.0	7.7	26.1	48.8	16.4
Dealing with people at the wrong polling place or EVC.	3.6	9.0	27.9	42.6	16.8
Determining the formality of votes	1.6	5.1	26.6	50.5	16.1
Electronically marking off voters	1.9	11.6	24.6	43.0	18.8
Managing people waiting to vote	2.4	6.3	24.4	44.9	22.0
Sorting ballot papers	2.9	8.8	32.4	39.9	16.0
Entering voting data onto the computerised system	0.0	24.0	32.0	36.0	8.0
Handling declaration envelopes	2.9	12.6	38.5	35.6	10.3
Marking voters off on paper roll	1.4	6.1	23.1	45.6	23.8
Providing postal voting packs to voters	14.3	28.6	21.4	28.6	7.1
Providing iVote credentials to voters	0.0	100.0	0.0	0.0	0.0
Dealing with scrutineers	1.4	11.4	27.9	45.0	14.3
Delivery of ballot papers	5.0	14.9	32.7	36.6	10.9
Communicating with candidates	0.0	6.4	31.9	46.8	14.9
Handling completed ordinary ballot papers	4.5	7.3	30.0	41.8	16.4
Handling postal ballot papers	0.0	6.2	36.9	46.2	10.8
Security of polling places	4.1	8.2	24.5	35.7	27.6
Counting iVotes	0.0	11.	33.3	33.3	22.2
Communicating with NSWEC in other locations	9.4	17.0	37.7	34.0	1.9
Transmitting data electronically	0.0	0.0	50.0	25.0	25.0
Receiving iVotes	0.0	0.0	75.0	25.0	0.0
Ensuring voters could keep vote secret	6.9	17.2	31.0	31.0	13.8
Storing unused ballot papers	11.9	14.3	33.3	38.6	1.9
Transporting completed ballot papers	4.2	29.2	25.0	37.5	4.2
Storing rolls, ERS machines and tablets securely	9.1	27.3	27.3	22.7	13.6
Storing iVotes securely					

References

- Aberbach, J. D. & Rockman, B. A. 2002. Conducting and Coding Elite Interviews. *PS: Political Science and Politics* 35(4): 673-6.
- Aggarwal, K. 2016. Issues in Implementing of Online Voting System in India. *The International Journal of Engineering Science and Computing* 6: 5285-5288.
- Alexandre, A. 2018. US: West Virginia Completes First Block-Chain Supported State Elections [Press release]. Accessed at https://cointelegraph.com/news/us-west-virginia-completes-first-blockchain-supported-state-elections
- Alvarez, R. Michael, Atkeson, Lonna Rae and Hall, Thad E. 2013. *Evaluating Elections: A Handbook of Methods and Standards*. Cambridge: Cambridge University Press.
- Alvarez, R. Michael, and Hall, Thad E. 2008. *Electronic Elections: The Perils and Promises of Digital Democracy*, Princeton, Princeton University Press.
- Alvarez, R. Michael, Hall, Thad E., and Hyde, Susan D. (eds.). 2008. *Election Fraud: Detecting sand Deterring Electoral Manipulation*. Washington: Brookings.
- Alvarez, R. Michael, Hall, Thad E. and Trechsel, Alexander. 2009. Internet Voting in Comparative Perspective: The Case of Estonia, *PS*, pp. 497-505.
- Alvarez, R. Michael, Levin, Ines and Sinclair, J. Andrew. 2012. Making Voting Easier: Convenience Voting in the 2008 Presidential Election. *Political Research Quarterly* 65(2) 248-262.
- Alvarez, R. Michael, Levin, Inez and Li, Yimeng. Fraud, Convenience, and E-Voting: How Voting Experience Shapes Opinions About Voting Technology. *Journal of Information Technology and Politics* 15(2) 94-105.
- Ashok, Vivekinan, Daniel Feder, Mary McGrath, and Eitan Hersh. 2016. "The Dynamic Election: Patterns of Early Voting Across Time, State, Party, and Age." *Election Law Journal* 15 (2): 115-128.
- Australian Electoral Commission. 2016. *Informal Voting: 2016 House of Representatives Elections*. Accessed at: https://www.aec.gov.au/About_AEC/research/files/informal-voting-2016.pdf
- Australian Electoral Commission. 2017. *Annual Report* 2016-17. Canberra: Commonwealth of Australia.
- Barrett i Esteve, J., Goldsmith, B. and Turner, J. 2012. *International Experience with E-Voting*. Washington: International Foundation for Electoral Systems.
- Barry, Colin. 2012. Submission of the NSW Electoral Commissioner to the Comprehensive Review of the *Parliamentary Electorates and Elections Act* 1912 and the *Election Funding, Expenditure and Disclosure Act* 1981 by the Joint Standing Committee on Electoral Matters. Sydney: Parliament of NSW. Accessed at: https://www.parliament.nsw.gov.au/ladocs/submissions/50910/Submission%2018%20-%20Electoral%20Commission%20of%20NSW.pdf
- Barry, C., Dacey, P., Pickering, T. and Evans, T. 2002. *eVolution not Revolution*. Electronic Voting Status Report. Canberra: Australian Electoral Commission.

- Bernhard, Matthew, Benaloh, Josh, Halderman, J. Alex, Rivest, Ronald L., Ryan, Peter Y.A., Stark, Philip B., Teague, Vanessa, Vora, Poorvi L. and Wallach, Dan S. 2017. Public Evidence from Secret Ballots, in Robert Krimmer, Melanie Volkamer, Nadja Braun Binder, Norbert Kersting, Olivier Pereira, Carsten Schürmann (eds.), Electronic Voting. Second International Joint Conference, E-Vote-ID 2017. Bregenz, Austria, October 24–27, 2017 Proceedings. Springer.
- Biggers, Daniel R. and Hamner, Michael J. 2015. Who Makes Voting Convenient? Explaining the Adoption of Early and No-Excuse Absentee Voting in the American States. *State Politics and Policy Quarterly* 15(2): 192-210.
- Birch, Sarah. 2011. Electoral Malpractice. Oxford: Oxford University Press.
- Birch, Sarah, Cockschott, Paul and Renaud, Karen. 2014. Putting Electronic Voting Under the Microscope. *The Political Quarterly* 85(2): 187-194.
- Braun, N., and Brändli, D. 2006. Swiss e-voting pilot projects: Evaluation, situation analysis and how to proceed. *Gesellschaft für Informatik*.
- Brent, Peter. 2006. The Australian Ballot: Not the Secret Ballot. *Australian Journal of Political Science* 41(1): 39-50.
- Breuer, Fabian and Trechsel, Alexander H. (2006) *E-Voting in the 2005 Local Elections in Estonia*. Florence: Report for the Council of Europe.
- Brightwell, I. 2018. Online Voting. Lessons from (NSW) Australia's iVote Project. Presentation to WebRoots Democracy. Committee Room 17, House of Commons, Palace of Westminster, 8 May.
- Brightwell, I., Cucurull, J., Galindo, D., and Guasch., S. 2015. *An Overview of the iVote 2015 Voting System*. Paper presented to the VoteID 2015: The Fifth International Conference on Voting and Identity, Bern, September 2, 2015. Accessed at: https://www.voteid15.org/conference-program/
- Burden, Barry C., and Gaines, Brian J. 2015. Presidential Commission on Election Administration: Absentee and Early Voting: Weighing the Costs of Convenience. *Election Law Journal* 14 (1): 32-37.
- Christin, Thomas and Trechsel, Alexander H. 2004 Who Votes Via the Internet? A Scientific Approach to Polling in Carouge and Meyrin. Geneva: Geneva State Chancellery.
- Clark, Alistair. 2014. Investing in Electoral Management. In Pippa Norris, Richard W, Frank and Ferran Martinez i Coma (eds.), *Advancing Electoral Integrity*. Oxford: Oxford University Press, pp. 165-188.
- Clark, Alistair. 2017. The Relationship Between Political Parties and Their Regulators. *Party Politics*. 23(6): 646-656.
- Clark, Alistair and James, Toby. 2016. Why Volunteer? The Motivations of Polling Station Workers on Election Day. Paper presented to the PSA Annual Conference, Brighton (United Kingdom).
- Clifford, Eamonn, Green, Antony, Clune, David, Smith, Warwick and Hogan, Michael. 2006. *The Electoral Atlas of New South Wales, 1856-2006*. Bathurst: New South Wales Dept. of Lands.

- Community Development and Justice Standing Committee (WA). 2018. 2017 WA State Election. Maintaining Confidence in Our Electoral Process. Accessed at: http://www.parliament.wa.gov.au/Parliament/commit.nsf/(Report+Lookup+b y+Com+ID)/AF9E28D58010F9FD482582330018A9DC/\$file/20180201%20-%20RPT%20-%20Full%20Report%20-%20FINALISED%20-%20Online%20version.pdf
- Conway, Andrew, Blom, Michelle, Naish, Lee and Teague, Vanessa. 2016. An Analysis of New South Wales Electronic Vote Counting. Accessed at: https://arxiv.org/abs/1611.02015
- Cowlishaw, S. 2018. Online Voting Back on the Agenda. *Newsroom*. Accessed at https://www.newsroom.co.nz/2018/03/13/96302/online-voting-back-on-the-agenda#
- Desilver, Drew. 2017. U.S. Trails Most Developed Countries in Voter Turnout. Pew Research Centre. Accessed at: http://www.pewresearch.org/fact-tank/2018/05/21/u-s-voter-turnout-trails-most-developed-countries/
- Drum, Martin and Bourne, Glenda. 2017. Western Australia's State Election of 2017: What Are the Implications? *Australasian Parliamentary Review* 32(1): 59-73.
- Elections ACT. 2017. Report on the ACT Legislative Assembly Election 2016. Canberra: ACT Electoral Commission.
- Electoral Commission of Queensland. 2015a. How to Vote. Accessed at: https://www.ecq.qld.gov.au/voters-and-voting/how-to-vote
- Electoral Commission of Queensland. 2015b. 2015 State General Election Evaluation Report and Statistical Return. Brisbane: Electoral Commission of Queensland.
- Electoral Commission South Australia. 2014. Election Statistics. State Election 2014. Adelaide: Electoral Commission South Australia.
- Electoral Council of Australia and New Zealand. 2017. Eleven Essential Principles for an Australian Internet Voting Service. Endorsed 4 July.
- Elgood, Jessica, Clark, Stuart, Rath, Nathan and McKinnon, Natalie. 2016. 2015 New South Wales State General Election Research: Prepared for the NSW Electoral Commission. North Sydney: IPSOS.
- Finseraas, Henning and Vernby, Kåre. 2014. A Mixed Blessing for the Left? Early Voting, Turnout and Election Outcomes in Norway. *Electoral Studies* 33: 278-291.
- Galicki, Celestyna. 2017. Convenience Voting and Voter Mobilisation: Applying a Continuum Model. *Representation* 53(3-4): 247-261.
- Germann, Mischa and Serdült, Uwe. 2017. Internet Voting and Turnout: Evidence from Switzerland. *Electoral Studies* 47: 1-12.
- Giammo, Joseph, and Brian Brox. 2010. Reducing the Costs of Participation: Are States Getting a Return on Early Voting? *Political Research Quarterly* 63(2): 295-303.
- Gimpel, James, Dyck, Joshua, and Shaw, Daron. 2006. Location, Knowledge and Time Pressures in the Spatial Structure of Convenience Voting. *Electoral Studies* 25(1): 35-58.
- Goodman, Nicole and Smith, Rodney. 2017. Internet Voting in Sub-National Elections: Policy Learning in Canada and Australia. In Robert Krimmer, Melanie

- Volkamer, Jordi Barrat, Josh Benolah, Nicole Goodman, Peter Y.A. Ryan and Vanessa Teague (eds.), *Electronic Voting*. First International Conference, E-Vote-ID 2016, Bregenz, Austria, October 18-21 2016, Proceedings, Springer Lecture Notes in Computer Science 10141, 2017.
- Goodman, Nicole and Stokes, Leah C. 2018. Reducing the Cost of Voting: An Evaluation of Internet Voting's Effect on Turnout. *British Journal of Political Science*: 1-13
- Gore, Rajeev and Lebedeva, Ekatarina. 2016. Simulating STV Hand-Counting by Computers Considered Harmful: A.C.T., in Robert Krimmer, Melanie Volkamer, Jordi Barrat, Josh Benolah, Nicole Goodman, Peter Y.A. Ryan and Vanessa Teague (eds.), *Electronic Voting*. First International Conference, E-Vote-ID 2016, Bregenz, Austria, October 18-21 2016, Proceedings, Springer Lecture Notes in Computer Science 10141.
- Gosnell, Harold F. 1927. Getting out the Vote. Chicago: University of Chicago Press.
- Gronke, Paul. 2012. Early Voting: The Quiet Revolution in American Elections. In Matthew Streb (ed.), *Law and Election Politics: the Rules of the Game*. New York: Routledge.
- Gronke, Paul, Galanes-Rosenbaum, Eva, Miller, Peter and Toffey, Daniel. 2008. Convenience Voting. *Annual Review of Political Science* 11: 437-55.
- Hager, Lisa. 2015. The Predisposing, Motivating and Constraining Factors of Early Voting: Assessing the Impact of Campaign Strategies and Voting Laws. In *Culture, Rhetoric and Voting: The Presidential Election of 2012*, edited by Douglas Brattebo and Tom Lansford. Akron: University of Akron Press.
- Hansen, John Mark. 2016. Mobilization, Participation and Political Change. *Party Politics* 22(2): 149-157.
- Herron, Michael, and Smith, Daniel. 2014. Race, Party, and the Consequences of Restricting Early Voting in Florida in the 2012 General Election. *Political Research Quarterly* 67(3): 646-65.
- Hood, M.V. and Bullock, Charles. 2011. An Examination of Efforts to Encourage the Incidence of Early In-Person Voting in Georgia, 2008. *Election Law Journal* 10(2): 103-113.
- Issenberg, Sasha. 2012. Why Obama is Better at Getting out the Vote. *Slate* 5 November. Accessed at:

 http://www.slate.com/articles/news and politics/victory lab/2012/11/obama s

 get-out-the-vote-effort-why-it-s-better-than-romney-s.html
- James, Toby S. 2014. Electoral Management in Britain. In Pippa Norris, Richard W. Frank and Ferran Martinez i Coma (eds.), *Advancing Electoral Integrity*. Oxford: Oxford University Press, pp. 135-161.
- James, Toby S. 2017. The Effects of Centralising Electoral Management Board Design. *Policy Studies* 38(2): 130-148.
- James, Toby S. and Jervier, Tyrone. 2017. The Cost of Elections: The Effects of Public Sector Austerity on Electoral Integrity and Voter Engagement. *Public Money and Management* 37(7): 461-468.

- Kandekar, S., and Dhande, A. 2011. Internet Voting (e-Voting) in Indian Environment. *International Journal of Advanced Research in Computer Science*, 2, 81-85.
- Keelty, M.J. 2013. *Inquiry into the 2013 WA Senate Election*. Report Commissioned by the Australian Electoral Commission and Produced by M J Keelty AO. Accessed at:
 - https://www.aec.gov.au/About_AEC/Publications/Reports_On_Federal_Electoral Events/2013/files/inquiry-into-the-2013-wa-senate-election.pdf
- Kelly, Norm. 2012. Directions in Australian Electoral Reform: Professionalism and Partisanship in Electoral Management. Canberra: ANU E Press.
- Laing, Matthew, Miragliotta, Narelle and Thornton-Smith, Paul. 2018. *A Review of Convenience Voting in the State of Victoria*. Accessed at: https://law.unimelb.edu.au/__data/assets/pdf_file/0003/2902152/Convenience-Voting-Report-1-October-2018.pdf
- Lindemann, Mark and Stark, Philip B. 2012. A Gentle Introduction to Risk-Limiting Audits. IEEE Security and Privacy, Special Issue on Electronic Voting. Accessed at: https://www.stat.berkeley.edu/~stark/Preprints/gentle12.pdf
- Lipsky, Michael. 1980. Street Level Bureaucracy. New York: Russell Sage Foundation.
- Louth, Jonathan and Hill, Lisa. 2005. Compulsory Voting in Australia: Turnout With and Without It. *Australian Review of Public Affairs* 6(1): 25-37.
- McAllister, Ian and Muller, Damon. 2018. Early Voting, Election Campaigning and Party Advantage in Australia. *Electoral Studies* 52: 103-110.
- McDonald, Michael. 2016. 2016 November General Election Early Voting. United States Elections Project.
- McKenna, Elizabeth, and Han, Hahrie. 2014. *Groundbreakers: How Obama's 2.2 Million Volunteers Transformed Campaigning in America*. New York, NY: Oxford University Press.
- Madise, Ulle and Martens, Tarvi. 2006. E-Voting in Estonia 2005. The First Practice of Country-Wide Binding Internet Voting in the World. In Robert Krimmer (ed.), *Electronic Voting* 2006, Proceedings of the 2nd International Workshop Co-Organized by the Council of Europe, Bonn, GI-Edition.
- Madise, Ulle, Vinkel, Priit and Maaten, Epp. No date. Internet Voting at the Elections of Local Government Councils on October 2005. Accessed at: http://www.vvk.ee/public/dok/report2006.pdf
- Maley, M. 2018. The Secret Ballot in Australia: What Does It Mean and How Secret is It Really? Paper presented to the International Political Science Association World Congress, Brisbane, 21-25 July.
- Massicote, Louis, Blais, André and Yoshinaka, Antoine. 2004. *Establishing the Rules of the Game*. Toronto: University of Toronto Press.
- Mendez, Fernando and Serdült, Uwe. 2017. What Drives Fidelity to Internet Voting? Evidence from the Rollout of Interent Voting in Switzerland. *Government Information Quarterly* (article in press) http://dx.doi.org/10.1016/j.giq.2017.05.005
- Meredith, Marc and Malhotra, Neil. 2011. Convenience Voting Can Affect Election Outcomes. *Election Law Journal* 10(3): 227-253.

- Miller, Peter and Powell, Sierra. 2016. Overcoming Voting Obstacles: The Use of Convenience Voting by Voters With Disabilities. *American Politics Research* 44(1): 28-55.
- Mills, Stephen. 2014. The Professionals: Strategy, Money and the Rise of the Political Campaigner in Australia. Melbourne: Black Inc Books.
- Montjoy, Robert S. 2010. The Changing Nature ... and Costs ... of Election Administration. *Public Administration Review* 70(6): 867-875.
- Murphy, Katharine. 2016. Cory Bernardi and the Liberals are Right to be Scared of Labor's Volunteer Army. *The Guardian* 6 July. Accessed at: https://www.theguardian.com/australia-news/2016/jul/06/election-2016-cory-bernardi-liberals-labor-volunteer-army
- National Conference of State Legislatures. 2017. Absentee and Early Voting. Accessed at: http://www.ncsl.org/research/elections-and-campaigns/absentee-and-early-voting.aspx
- New South Wales Electoral Commission. 2015. Report on the Conduct of the 2015 State General Election. Accessed at: https://www.elections.nsw.gov.au/__data/assets/pdf_file/0011/205688/2015_NS WEC_Report_on_the_Conduct_of_the_2015_State_General_Election_AC.pdf
- New South Wales Electoral Commission. 2016. iVote®. Accessed at: https://www.ivote.nsw.gov.au/
- New South Wales Electoral Commission. 2017a. Is My Council having an Election? Accessed at: http://www.votensw.info/is my council having an election
- New South Wales Electoral Commission. 2017b. iVote Watch the Process—YouTube. Accessed at: https://www.ivote.nsw.gov.au/ivoteprocess.aspx
- New South Wales Electoral Commission. 2017c. Annual Report 2016-17. Accessed at: https://www.elections.nsw.gov.au/ data/assets/pdf file/0003/258294/CM 00-2214 NSWEC AR 2016-17 Final AC.pdf
- New South Wales Electoral Commission. 2018. Technology Assisted Voting. Approved Procedures for NSW State Elections. Accessed at: http://www.elections.nsw.gov.au/voting/ivote/procedures/technology assisted voting approved procedures for nsw state elections#registration
- New South Wales Electoral Commission. No date a. Report on the 2012 Local Government Elections. Accessed at:
- New South Wales Electoral Commission. No date b. NSW Local Council Election Results 2017. Accessed at: http://pastvtr.elections.nsw.gov.au/LGE2017/
- New South Wales Electoral Commission. No date c. By-Elections. Accessed at: http://www.office.elections.nsw.gov.au/past results/by elections
- New South Wales Electoral Commission. No date d. Report on the 2016 Local Government Elections. Accessed at: http://www.office.elections.nsw.gov.au/ data/assets/pdf file/0003/241932/Fin al NSWEC 2016 LGE report restructured 002-2 Accessible.pdf
- New South Wales Electoral Commission. No date e. Report on the 2017 Local Government Elections. Accessed at:

- http://www.office.elections.nsw.gov.au/ data/assets/pdf file/0019/260911/NS WEC LGE2017 Report FINAL.pdf
- New South Wales Electoral Commission. No date f. State By-Election Reports.

 Accessed at:

 http://www.office.elections.nsw.gov.au/about_us/plans and reports/our reports
- New South Wales Electoral Commission. No date g. State By-Election Results. Accessed at: www.office.elections.nsw.gov.au/past_results/by_elections
- New South Wales Electoral Commission. No date h. Data Sets. Accessed at: https://data.nsw.gov.au/data/organization/nsw-electoral-commission
- New Zealand Department of Internal Affairs. 2017. *Online Voting in New Zealand*. Accessed at https://www.dia.govt.nz/online-voting
- Newman, Gerry. 2004. Analysis of Declaration Voting, in Australian Electoral Commission (ed.), *Research Paper 3*. Canberra: Australian Electoral Commission.
- Norris, Pippa. 2005. E-Voting as the Magic Bullet for European Parliamentary Elections? Evaluating E-Voting in the Light of Experiments in UK Local Elections, in Alexander H. Trechsel and Fernanado Mendez (eds), *The European Union and E-Voting: Addressing the European Parliament's Internet Voting Challenge*. London: Routledge.
- Norris, Pippa. 2014. *Why Electoral Integrity Matters*. Cambridge: Cambridge University Press.
- Norris, Pippa, and Garnett, Holly Ann. 2015. Voter Suppression or Voter Fraud in the 2014 US Elections? In *Faculty Research Working Papers*. Cambridge: Harvard Kennedy School.
- Northern Territory Electoral Commission. 2017. 2016 Territory Election Report. Accessed at: http://www.ntec.nt.gov.au/NTEC/reportsandsubmissions/Documents/a.%2020 http://www.ntec.nt.gov.au/NTEC/reportsandsubmissions/ http://www.ntec.nt.gov.au/NTEC/reportsandsubmissions/ http://www.ntec.nt.gov.au/NTEC/reportsandsubmissions/ http://www.ntec.nt.gov.au/NTEC/reportsandsubmissions/ http://www.ntec.nt.gov.au/NTEC/reportsandsubmissions/ http://www.ntec.nt.gov.au/NTEC/r
- NSW Government. 2018. Stronger Councils | Stronger Communities. Accessed at: https://www.strongercouncils.nsw.gov.au/
- Nguyen, Terry. 2018. West Virginia to Offer Mobile Blockchain Voting App for Overseas Voters in November Election. *The Washington Post* 10 August.
- Olembo, M. Maira and Volkamer, Melanie. 2013. E-Voting System Usability: Lessons for Interface Design, User Studies, and Usability Criteria. In Saqib Saeed and Christopher G Reddick (eds.), *Human-Centered System Design for Electronic Governance*. Hershey: Information Science Reference.
- Orford, Scott, Rallings, Colin, Thrasher, Michael and Borisyuk, Galina. 2011. Changes in the Probability of Voter Turnout When Resiting Polling Stations: A Case Study in Brent, UK. *Environment and Planning C: Government and Policy* 29(1): 149-169.
- Orr, Graeme. 2004. The Ritual and Aesthetic in Electoral Law. *Federal Law Review* 32(3): 425-450.

- Orr, Graeme. 2014. Convenience Voting: The End of Election Day? *Alternative Law Journal* 39(3): 151-5.
- Orr, Graeme. 2015. *Ritual and Rhythm in Electoral Systems: A Comparative Legal Account.* Farnham: Ashgate.
- Orr, Graeme, and Arklay, Tracey. 2016. Rethinking Voter Identification: Its Rationale and Impact. *Australian Journal of Political Science* 58(3): 386-399.
- Parliament of New South Wales. 2008. Joint Standing Committee on Electoral Matters, Administration of the 2007 New South Wales Election and Related Matters. Sydney: Joint Standing Committee on Electoral Matters, Report No. 1/54.
- Parliament of the Commonwealth of Australia. 2009a. Joint Standing Committee on Electoral Matters, *Report on the Conduct of the 2007 Federal Election and Matters Related Thereto*. Canberra: Commonwealth of Australia.
- Parliament of the Commonwealth of Australia. 2009b. Joint Standing Committee on Electoral Matters, *Report on the 2007 Federal Election Electronic Voting Trials*. Canberra: Commonwealth of Australia.
- Perth Market Research. 2017. Report on the Western Australian Electoral Commission Survey of Voters—State General Election 2017. Perth: Western Australian Electoral Commission.
- Phillips, Harry C.J. 2013. *Electoral Law in the State of Western Australia: An Overview*, third edition. Perth: Western Australian Electoral Commission.
- Reader, Nathaniel. 2015. Who Votes early in Victoria? Assessing the Demographic Correlates of early Voting in Person at Victoria's State Elections, 2006 to 2014. Electoral Regulation Research Network/Democratic Audit Of Australia Joint Working Paper Series, Working Paper No. 31. Accessed at: https://law.unimelb.edu.au/__data/assets/pdf_file/0004/1556005/WP_31_Reade r1.pdf
- Riker, William, and Peter Ordeshook. 1968. A Theory of the Calculus of Voting. *American Political Science Review* 62(1): 25-42.
- Rokkan, Stein. 1961. Mass Suffrage, Secret Voting and Political Participation. *European Journal of Sociology* 2: 132-152R.
- Rojas, Angelo J., and Muller, Damon A. 2014. Early Voting in Australian Federal Elections: Causes and Consequences. Paper presented to the Australian Political Studies Association Conference, University of Sydney. Accessed at: https://www.aec.gov.au/About_AEC/research/files/apsa-2014-early-voting-in-australian-federal-elections-causes-and-consequences.pdf
- Saglie, J., and Segaard, S. 2016. Internet Voting and the Secret Ballot in Norway: Principles and Popular Understandings. *Journal of Elections, Public Opinions and Parties*, 26, 155-169.
- Sawer, Marian. 2001. Pacemakers for the World?, in Marian Sawer (ed.), *Elections: Full, Free and Fair*? Leichhardt: The Federation Press.
- SBC. 2017a. How Long Before All Swiss Expats Can Use e-Voting? [Press release]. Accessed at https://www.swissinfo.ch/eng/politics/citizen-participation-how-long-before-all-swiss-expats-can-use-e-voting-/43503442

- SBC. 2017b. Swiss e-Voting Poised for Expanded Rollout [Press release]. Accessed at https://www.swissinfo.ch/eng/politics/digital-democracy_swiss-e-voting-poised-for-expanded-roll-out/43087404
- Simms, Marian. 2006. From the Hustings to Harbour Views: Electoral Institutions in New South Wales, 1856–2006. Sydney: University of New South Wales Press.
- Simply Voting. 2018. Green to the Core. Accessed at: https://www.simplyvoting.com/our-green-advantage/
- Smith, Rodney. 2009. International Experiences of Electronic Voting and Their Implications for New South Wales. A research report prepared for the New South Wales Electoral Commission. July.
- Smith, Rodney. 2013. Internet Voting and Voter Interference. A report prepared for the New South Wales Electoral Commission. March.
- Smith, Rodney. 2014. Multiple Voting and Voter Identification. A research report prepared for the New South Wales Electoral Commission. February. Accessed at:
 - https://www.elections.nsw.gov.au/publications/reports/commissioned_reports/Multiple_Voting_and_Voter_Identification.pdf
- Smith, Rodney. 2016. Confidence in Paper-Based and Electronic Voting Channels: Evidence from Australia. *Australian Journal of Political Science* 51(1): 68-85.
- Smith, Rodney, Kildea, Paul, Gauja, Anika and Keenan, Mel. 2015. The Challenge of Informed Voting in the 21st Century. A Research Report Commissioned by the Electoral Regulation Research Network. Accessed at: https://law.unimelb.edu.au/ data/assets/pdf file/0009/1555956/TheChallenge ofInformedVotingFinalReport2.pdf
- Smith, Rodney and Mills, Stephen. 2017. Political Advertising in Australia: The Dominance of Television. In Christina Holz-Bacha and Marion R. Just (eds), *Routledge Handbook of Political Advertising*. London: Routledge.
- Solop, Frederic I. 2001. Digital Democracy Comes of Age: Internet Voting and the 2000 Arizona Democratic Primary Election. *PS* June 289-293.
- Tasmanian Electoral Commission. 2010. Report on Parliamentary Elections 2007 to 2010. Accessed at: https://tec.tas.gov.au/Info/Publications/ElectionReports/2007-2010ParlReport/2007-2010BlueBook.pdf
- Tasmanian Electoral Commission. 2014. Report on Parliamentary Elections 2011 to 2014. Accessed at: https://tec.tas.gov.au/Info/Publications/ElectionReports/Report%20on%20Parliamentary%20elections%202011%20to%202014.pdf
- The Electoral Commission. 2002. *Modernising Elections: A Strategic Evaluation of the* 2002 *Electoral Pilot Schemes.* London: The Electoral Commission.
- Thompson, Dennis. 2004. Election Time: Normative Implications of Temporal Properties of the Electoral Process in the United States. *American Political Science Review* 98(1): 51-63.
- Thompson, M. 2006. *The Seeds of Democracy: Early Elections in Colonial New South Wales*. Leichhardt: The Federation Press.

- Trechsel, Alexander H. No date. E-Voting and Electoral Participation. Accessed at: http://www.initiativesamendment.org/paper_trechsel.pdf
- Trechsel, Alexander H., with Schwerd, Guido, Breuer, Fabian, Alvarez, Michael and Hall, Thad. 2007. *Internet Voting in the March 2007 Parliamentary Elections in Estonia*. Report for the Council of Europe. Florence: Robert Schuman Centre for Advanced Studies, European University Institute, 31 July.
- Tremain, C. 2013. Online Voting to be Trialled at 2016 Elections [Press release]. Accessed at https://www.realme.govt.nz/news/online-voting-be-trialled-2016-elections/
- Twomey, Anne. 2004. *The Consitutuion of New South Wales*. Leichhardt: The Federation Press.
- Urbatcsch, R. 2017. Youthful Hours: Shifting Poll-Opening Times Manipulates Voter Demographics. *Research and Politics* July-September: 1-7.
- Valimised. 2017. *Internet Voting in Estonia*. Accessed at: https://www.valimised.ee/en/internet-voting/internet-voting-estonia
- Verity, Florrie and Pattinson, Dirk. 2016. Modular Synthesis of Provably Correct Vote Counting Programs. In Robert Krimmer, Melanie Volkamer, Jordi Barrat, Josh Benolah, Nicole Goodman, Peter Y.A. Ryan and Vanessa Teague (eds.), *Electronic Voting*. First International Conference, E-Vote-ID 2016, Bregenz, Austria, October 18-21 2016, Proceedings, Springer Lecture Notes in Computer Science 10141, 2017.
- Victorian Electoral Commission. 2015. Report to Parliament on the 2014 State Election.

 Accessed

 https://www.vec.vic.gov.au/files/Report to Parliament on 2014 Vic election

 Full Report.pdf
- Vromen, Ariadne. 2010. Debating Methods: Rediscovering Qualitative Analysis. In D. Marsh and G. Stoker (eds.), *Theory and Methods in Political Science* (3rd ed). Houndmills: Palgrave Macmillan.
- Western Australian Electoral Commission. 2017a. 2017 State General Election Report. Accessed at: https://www.elections.wa.gov.au/sites/default/files/2017%20SGE%20Election%20report%20online%202%20sm.pdf
- Western Australian Electoral Commission. 2017b. 2017 Western Australian State General Election. Procedures for Technology Assisted Voting. Accessed at: https://www.elections.wa.gov.au/sites/default/files/content/Approved%20Procedures%20Internet%20Voting%202017.pdf
- Western Australian Electoral Commission. 2017c. Annual Report 2016-2017. Accessed at:

 https://www.elections.wa.gov.au/sites/default/files/content/2016 17 AR%20 F

 INAL online3.pdf
- Western Australian Electoral Commission. 2017d. 2017 State General Election Results and Statistics. Accessed at:

- https://www.elections.wa.gov.au/sites/default/files/content/documentssge2017/ 2017 SGE Results Stats Report ALLREDUCED.pdf
- Western Australian Electoral Commission. 2018. iVote. Accessed at https://www.elections.wa.gov.au/ivote
- White, I. 2012. Postal Voting and Electoral Fraud 2001-2009. House of Commons Library, Standard Note SN/PC/3667, 14 March.
- Wilkins, Roger. 2018. Report on the Security of the iVote System. Accessed at: http://www.elections.nsw.gov.au/__data/assets/pdf_file/0005/270194/Report_o n_the_Security_of_the_iVote_System_FINAL_PRINT_VERSION.PDF
- Wilks-Heeg, S. 2008. Purity of Elections in the UK: Causes for Concern. York: Joseph Rowntree Reform Trust.
- Williams, George. 2013. AEC Camel's Back is Broken. *The Canberra Times*, 5 November: 4.
- Yao, Y., Okoli, C., Houston, A. and Watson, E. 2006/2007. Demographic Differences in Attitudes Towards Remote Electronic Voting Systems. *The Journal of Computer Information Systems* 47(2): 34-45.
- Zada, Phillip, Falzon, Greg and Kwan, Paul. 2016. Perceptions of the Australian Public towards Mobile Internet E-Voting: Risks, Choice and Trust. *The Electronic Journal of e-Government* 14(1): 117-134.