



**3rd International Conference
on Public Policy (ICPP3)
June 28-30, 2017 – Singapore**

Panel T03 P06 Session 3

Policy, Values and Human Behaviour

**Political values, voting intentions and policy attitudes: An
exploratory study from Australia**

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Date of presentation

June 30

Abstract

This paper is part of a larger project considering the role and analytical potential of values in politics and policy processes. In order to develop this work, we consider if and how, personal values translate through political and policy preferences to actual policy responses. We explore the relationships between a set of political values items, voting intentions and attitudes to three issues: coal seam gas extraction, wind farm developments and climate change. We present the results of the empirical analyses and then consider the implications for theorising the relationships between individual values, parties and their policy and proclaimed values and ideology.

Key words : Political values ; ideology ; political parties ; values in policy

Introduction

Research in psychology has long recognised the role of values in human behaviour and attitude formation, however policy theorists have generally only given it passing attention. Values are referenced in the work of Lindblom (1959), Simon (1944, 1957), and later scholars (for example Stewart 2009, Thacher and Rein 2004) , but not given the prominence that perhaps they warrant.

This paper builds on some of the work of Schwartz and colleagues (Schwartz, Caprara, and Vecchione 2010), which is only starting to 'catch on' (Schwartz, pers com) in political science. We have taken the opportunity, provided through a survey of attitudes to particular issues amongst a sample of Australians, to examine the links between 'political' values and voting intentions and then to search for links between those political values and attitudes to particular policies.

This paper is a presentation of very preliminary results and a discussion of potential further research. It is very much a draft paper and therefore not for citation. We first provide some background to values research, give a brief overview of the Australian party system since one of the key variables in the research is voting intention, and then describe the methods for data collection and analysis.

From the results we note that there appear to be some triangular and significant relationships between responses on political values items, intention to vote for particular parties and attitudes to the selected policy issues. These issues are climate change, coal seam gas extraction and wind farm developments. We also note though that the capacity for each set of items to explain variance amongst other items is relatively weak and possible reasons for this are discussed.

The development of values research

Schwartz's work has an impressive genealogy building on more than half a century of work on values. In his pioneering work on human values, Milton Rokeach (1973) proposed a two dimensional freedom-equality model which formed the basis of much subsequent research (for example Braithwaite 1982, Schwartz and Bilsky 1987). At about the same time as Rokeach's work was

published, Inglehart (1971) was reporting on his work on values change findings and his identification of ‘post-bourgeois’ or ‘postmaterialist values’. These researchers used different methodologies to arrive at their definitions and the question of how to measure, identify and classify values continues to be debated in the literature (for example Alwin and Krosnick 1985). Although there remains a plethora of definitions and typologies, and even some argument that lack of definitional clarity is not necessarily a bad thing (Kuklinski 2001, 362), in our work we take as a starting point the most enduring definition of values, that proposed by Kluckhohn in the early 1950s:

A value is a conception, explicit or implicit, distinctive of an individual or characteristic of a group, of the desirable which influences the selection from available modes, means, and ends of action. (Kluckhohn 1952, 395 – italics in original)

Based on this and other definitions in the literature, Schwartz and Bilsky (1987, 551) concluded that ‘values are (a) concepts or beliefs, (b) about desirable end states or behaviors, (c) that transcend specific situations, (d) guide selection or evaluation of behavior and events, and (e) are ordered by relative importance’. Links are made in the literature between the origins of values and their role in societal and individual preservation and effective functioning (Schwartz and Bilsky 1987, 551, Rokeach 1973, 3, Kluckhohn 1952, 417). While the nuances of definitions and methodology are important in the psychological literature, for the purposes of conceptualising the role of values in politics and the policy process, we propose that the extensive work of Schwartz and his colleagues (for example Barnea and Schwartz 1998, Caprara et al. 2006, Piurko, Schwartz, and Davidov 2011, Schwartz 1996, Schwartz and Bilsky 1987, Schwartz 1992, 1994, Schwartz, Caprara, and Vecchione 2010) is a good starting point. This research has been described as ‘laying claim to the intellectual territory once staked out by Rokeach’ (Kilburn 2009, 870).

Building on the Rokeach values surveys, Schwartz’s work began from the premise that values are ‘cognitive representations of three universal requirements: (a) biological needs; (b) interactional requirements for interpersonal coordination; and (c) societal demands for group welfare and

survival' (Schwartz and Bilsky 1987, 550). From there, eight 'motivational domains' of values were identified: enjoyment, security, social power, achievement, self-direction, prosocial, restrictive conformity, and maturity. This work was further developed and refined and initially tested across 20 countries (Schwartz 1992). The authors built on the schema of values to produce the now widely used Schwartz 'wheel' (Figure One) which has formed the basis for a large body of research across many nations. As of 2006, the Schwartz theory of ten universal human values and the relationships between them had been tested in 67 countries and found to be robust (Caprara et al. 2006, 8).

Schwartz et al., (2010) then further developed this work to test links between personal values and 'core political values'. According to Schwartz et al. (2010, 422), political values had previously been inferred, by political scientists, from 'agreement with prescriptions of how government or society should function'. Schwartz (1994) had previously argued that 'basic personal values' underpin political ideologies and attitudes. Schwartz et al (2010) reviewed proposals on political values and created a set (outlined below) that is encompassing of several, more parsimonious sets of values. They then compared, using survey data from Italy, two modelled explanations of variance in attitudes: one using personal values and one using a self-location on a left-right political axis and concluded that the values analysis explained more of the variance (Schwartz et al. 2010, 446). They concluded that

Basic values may provide the unconscious motivational grounding that constrains and organizes core political values. In contrast, left-right placement may summarize individual party's stances on political issues descriptively. (446)

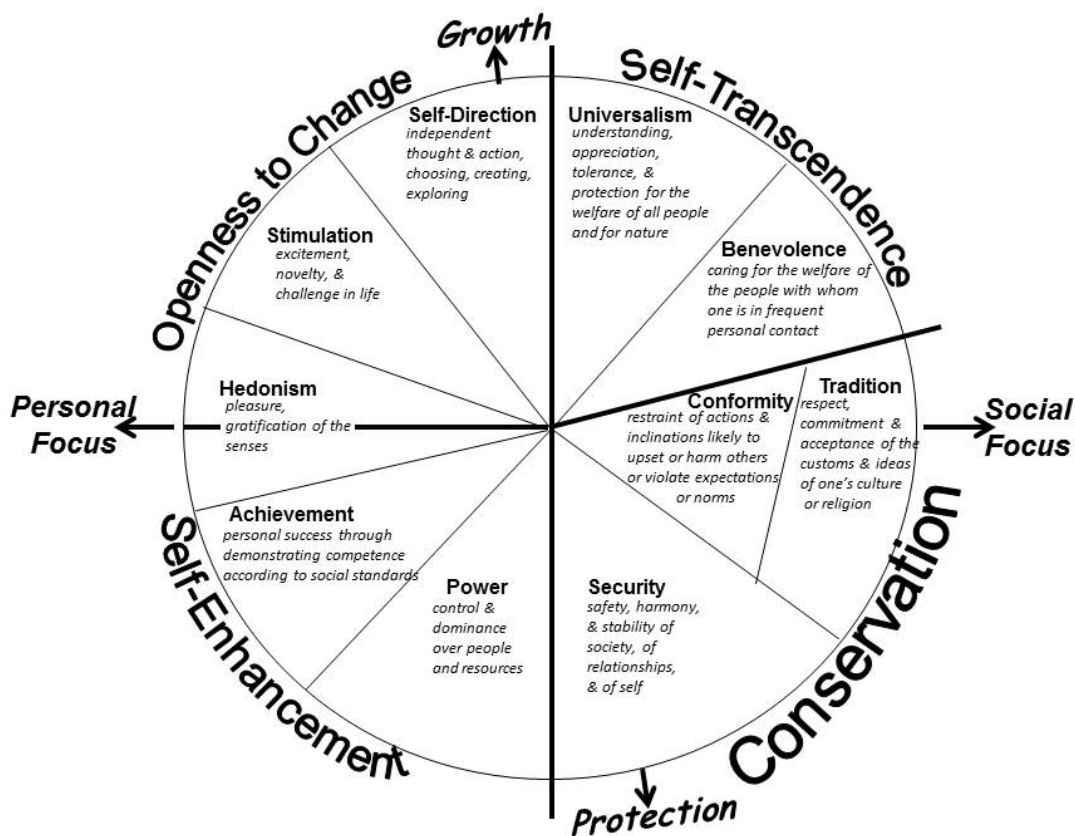


Figure 1: Schwartz's value circle. Graphic provided to authors by personal correspondence

Feldman (2003, 477) argues that research in political and social psychology is fairly definitive in its conclusion that the average, politically unsophisticated voter does not think in ideological or left-right terms but rather their political attitudes are based in their values. This research suggests that, apart from a small number of participants in the democratic process (Converse 2004 [1964]), voters resort to decision heuristics that are largely responses to values cues (Hochschild 2001, 334). In terms of electoral choice, therefore, rather than analyse policy manifestoes or platforms in detail to weigh up party positions on an array of issues, voters 'form an impression of possible consequences of voting for one party rather than another for the attainment of their values' (Schwartz 1996, 10). Examining the values positions of voters can provide a sense of whether those with shared values broadly align with particular parties and whether they are therefore useful predictors of voting intention. Even if voters don't *think* in left-right terms the values of the various political parties, may nevertheless lead them to *vote* this way.

The Australian Party System

At first glance, the Australian party system has the characteristics of a strong two-party system, with competition at elections essentially between the centre-left Australian Labor Party (ALP) and the centre right coalition of the Liberal and National (formerly Country) Parties. Australia was the first country to have a government formed by the political wing of organised labour; as Bryce (1923, 189) described it, Australia was the first democracy in which 'the labouring masses first gained control of the legal government and displayed their quality as rulers'. The writing on the formation of Australia's political parties tends to then explain the evolution of the political program of the Labor Party's opponents in terms of reaction to this rather (at the time) novel situation (for example Overacker 1952, Hancock 1961 [1930]). Such was the reaction of the non-Labor individuals and groups engaged in politics at that time (1901-1911) that the founding forerunner of the Liberal Party included protectionists and 'free-traders', which would seem to be a remarkable accommodation around values relating to economic freedom. The coalition parties have also accommodated other value or ideological spectra.

In addition to the cleavage between Labor and non-Labor, there was a somewhat weaker division between the urban and the rural. In reaction to the domination at the time of two urban based parties, the Country Party was formed and entered the Federal Parliament in 1920. Although it initially declared its independence of the other two parties, it very quickly moved into coalition with the predecessor of the modern Liberal Party and has spent more time in government than in opposition. Now known as the National Party, it retains its strong rural roots and is one of the few remaining agrarian parties in the developed world. Although demography and economics appear to be moving against the party's interests, it remains remarkably persistent, defying frequent predictions of its demise (for example Aitkin 1973, 424, Malcolm 1989, 134, Richmond 1978, 132).

Unlike coalition arrangements in many other democratic systems, the agreement between the Coalition parties generally endures, at the national level, in opposition and government alike,

such that the term 'Coalition' functions as a name for the two in combination. Voters know that when they vote for either the Liberal Party or the National Party, they are voting for the Coalition which goes into each election campaign with a single party platform and policy program. It is therefore unsurprising that the writing about Australian politics tends to regard Australia as a strong two-party system. Sartori attempted to capture the nature of the coalition relationship by describing it as a 'coalescence' (1976, 188) and 'symbiotic' (1990, 341). Because of the stability of the arrangement, the Australian electorate and political commentators are uncomfortable with balance of power politics in the lower house. Following the formation of a minority Labor government in 2010, Australian politics was variously described as 'toxic', 'dysfunctional' (Jaensch 2012) and a 'failed system' (Brown 2012). Australian democracy was described as being afflicted by 'an awful disaster of doubt and impotence' (Brown 2012). The election of the established Coalition however elicits no such response, even though these are in effect Liberal minority governments.

Overall, the two Coalition parties are centre-right, encompassing liberalism, conservatism and agrarianism, with touches of populism and economic nationalism evident on occasions. When disagreements arise the Nationals are very vocal defenders of issues that matter to their constituents and, even when they don't get their way, their presence in the Parliament is valued by their supporters. Overall, the National Party can be understood as a 'wing' party on the right hand side of the Australian party system, not a 'hinge' party in the centre (Siaroff 2003, 277, 285). As such we would expect there to be overlap in the values positions of the two parties' supporters, particularly as the agrarianism which is so much part of the National Party's image is sufficiently widespread across the Australian community (Cockfield and Botterill 2012) to almost constitute a 'cultural truism' (McGuire 1964). The Nationals espouse 'family values' and nationalism and have tried to position themselves as a conservative party (Richmond 1978) but there is now also a considerable orientation to social conservatism within the Liberal Party.

In addition to Labor and the Coalition, the Greens have emerged in recent years as a third, although still minor, force in Australian politics. While originally developing from the environmentalist movement, the Greens have since adopted a number of broader post-materialist policies such as support for marriage equality and other progressive, or 'left libertarian' (Manning and Rootes 2004, 404) social policies. Although the party itself claims to be 'neither left nor right but out in front' (Manning and Rootes 2004, 406), it is generally regarded as sitting further to the left than Labor on some economic issues, such as taxation, social welfare and state owned enterprises and has somewhat different views on refugees (more sympathetic) and military engagements overseas (more opposed).

Finally, Australia, especially in rural areas, has some 'wildfire', populist parties. These are generally in favour of western traditional values, variously interpreted, and economic nationalism, including protectionism, and are anti-elitist in rhetoric and style. The best example of recent times is the One Nation Party, which arose in the late 1990s, faded during the 2000s as it was beset by problems typical of such parties, and then surprisingly resurged in 2016. Unfortunately, the administration of the survey for this study just pre-dates this resurgence so we were unable to clearly capture supporters of this party. We did seek supporters of Katter's Australian Party (KAP), a minor party largely based in the north of the state of Queensland and centred around a former National Party politician (Bob Katter). Again unfortunately, at the time of the survey support for the KAP had declined somewhat and our sub-sample is too small for valid statistical analysis, though we do note some indications of how this small group differ in their responses from other parties.

Methods

Data were collected in mid-2015 from the responses of 1450 Australians to a number of survey items. The primary purpose of that survey was to explore the attitudes of rural and regional Australians to a range of issues to see what, if any, characteristics or attitudes about a range of issues

correlate to voting intention or attitudes to other issues. Three political/policy issues were chosen for their currency, prominence and relevance (to the sample) and likely salience.

Coal seam gas extraction is a major point of conflict in regional areas. In Australia, landholders (including farmers) only have rights to the topsoil and underneath that, all minerals and gases are deemed to be common wealth, managed by governments. Governments can allocate mining rights, and legal access to property to exercise these rights overrides landholders' right of exclusion.

Furthermore, establishing gas wells involves considerable landscape change, there are concerns about watershed contamination and the development phase of extraction can involve an influx of workers, which leads to considerable and sometimes unwelcome social change in regional communities (Phelan and Dawes 2017; Sherval and Hardiman, 2014). For political parties, on the one hand, CSG extraction brings development, and especially regional development, and royalties for public finance but on the other, there is a potential imposition on rural people who are important constituents for the parties, especially the National Party. We would therefore expect to see opposition to CSG across political parties.

Wind farms so far have much smaller footprints than CSG wells, but they are a highly visible in some rural landscapes and there are local groups, working through networks and on-line communities (see Botterill and Cockfield 2016), in strong opposition to these developments. In line with overseas studies (see for example Cowell 2010; Wolsink 2007a; 2007b), Australian researchers have identified a range of concerns about windfarms. These include visual impacts, noise, health effects, community division and impact on property values (AMR Interactive, 2010; Hall et al. 2012; Hindmarsh 2014).

Hall et al. (2012) conclude there is a high level of broad community support for wind farm development, including from some potentially affected residents but there is also active opposition. These divisions also have some reflection in the political parties, with the Labor Party and the Greens favouring higher targets and levels of support for renewable energy while the Coalition parties have struggled internally with the issue. Some, often identified as conservatives and centring on former

Prime Minister Tony Abbott, want to reduce support for renewable energy and restrict wind farm construction, while others are more favourably disposed. We might therefore expect to see stronger support for wind farms amongst intending Labor and Greens voters and somewhat less support from the Coalition parties' supporters.

Statements on attitudes to climate change were included in this survey primarily as a variable that might be related to attitudes to CSG and windfarms, however as a biophysical phenomenon and political issue, it is of considerable importance to regional areas in its own right and it is in regional areas where there is a notable divide on the actuality of climate change (Buys et al.2012). The projections for climate change in Australia suggest a reduction in rainfall in crop production seasons in many areas, a reduction in the availability of irrigation and domestic water and a harsher climate, which could contribute to adverse health outcomes and accelerated depopulation in some areas. On the other hand, agriculture produces significant emissions and so would be affected by policies to curb and/or increase the cost of emissions (through carbon taxes or similar). Furthermore, Australia is relying to a great extent on vegetation based sequestration to meet emissions reduction targets and so restricting land clearing and, therefore farmers' property rights, can help with that. As with wind farms, with the two issues closely related, the political parties diverge. The Greens favour strong action to limit emissions and Labor governments developed and introduced a 'carbon tax', while the Coalition parties have struggled with this issue. The current Prime Minister (Malcolm Turnbull) lost his position as leader of the Opposition, largely over negotiating with the Labor Government of the time to introduce an emissions trading scheme. His successor, Tony Abbott oversaw the repeal of Labor's carbon tax and expressed his strong support for the coal industry. Turnbull is currently negotiating for a compromise position of emissions targets that will necessarily but not require renewable energy targets. Again, there should be strong support from intending Labor and especially Greens voters.

The survey was undertaken by a commercial polling firm, specialising in rural and regional opinion research and using a sampling frame to achieve a geographical distribution across states and regions and including a range of ages. Two thirds of respondents live in rural or regional areas, and the remaining third live in the cities of Canberra, Sydney, Melbourne, Brisbane, Adelaide, Darwin, Perth and Hobart. The 'urban' third were included for comparative purposes. The gender distribution was 49% male and 51% female, reflecting the Australian population distribution (ABS 2016).

Eight 'core political values', adapted from Schwartz et al (2010) were assessed by asking respondents to indicate how much they agreed or disagreed with eight statements. This is one question for each of the eight political values, whereas Schwartz et al used a set of several questions for each value and then created indices for those for further analysis. This study was necessarily restricted by the size of the questionnaire and our ambition at this stage was to see if there was something in the data to warrant more comprehensive analyses. Responses were recorded on a seven-point Likert-type scale ranging from strongly disagree (=1) to strongly agree (=7). Each item, its mean score and standard deviation are shown in Table 1.

Table 1: Rural Values Research survey respondents' level of agreement with different value statements

Personal values 'quadrant' association¹	Political Value	Survey item	Mea n	Std. Dev.
Conservation	Traditional morality (TM)	It is important to defend our traditional religious and moral values	5.39	1.35
	Patriotism ² (P)	It is unpatriotic to criticise this country	4.33	1.75
	Law & order (LO)	The Government has a duty to limit individual freedoms so as to maintain security	4.32	1.56
To	Foreign military intervention (FMI)	Australia should join other democratic nations in sending troops to fight dangerous regimes	3.88	1.59
Self-enhancement	Free enterprise (FE)	There should be more incentives for individual initiative even if this reduces equality in the distribution of wealth	4.33	1.29
Self-transcendence	Civil liberties (CL)	It is important to respect the freedom of individuals to believe whatever they want	5.20	1.35

To		If people were treated more equally in this country, many of our problems would go away	4.47	1.59
Openness to change	Equality (E)			
	Accepting immigration (AI)	Most people who come to live here from other countries make Australia a better place to live	4.35	1.53

¹From Schwartz et al 2010, p 440. ²Schwartz et al use the term ‘blind patriotism’ but we prefer the more neutral descriptor.

Voting intentions were derived from the question: *If there was a federal election held next Saturday, who would you vote for?* Respondents were able to select from the list of parties in Table 2, which also shows the number and percentage of respondents who selected each party. Voting intentions differed by state. In Queensland and the Northern Territory there are parties from amalgamations of the Liberal and National parties, or their forerunners, with the *Liberal National Party* (LNP) in Queensland and *Country Liberal Party* (CLP) in the Northern Territory. If LNP and CLP candidates are elected in national elections, they then align with either the National or Liberal parties in the Australian Parliament. Their alignment is generally known during election campaigns but not necessarily well in advance of that, as was the case with the timing of this survey.

Table 2 Voting intentions of Rural Values Research survey respondents

If a Federal election were held next Saturday, who would you vote for?	n	%
Labor Party	454	31.31
Liberal Party	307	21.17
Greens	137	9.45
National Party	68	4.69
Liberal National Party (Queensland amalgamated party)	78	5.38
Country Liberal Party (Northern Territory amalgamated party)	37	2.55
Katter’s Australia Party	23	1.59
Other	346	23.86
Total	1,450	100

Our analysis was further complicated as some parties do not contest all, or even most, seats. The *Liberal National Party* only run candidates in Queensland and the *Country Liberal Party* only run candidates in the Northern Territory, whereas the *National Party* and *Katter’s Australia Party* only run candidates in selected seats. As such, no respondent would have had the option of voting for all of the parties listed, and, for many, the *Labor Party*, the *Liberal Party*, and the *Greens* would have

been the listed parties for which they could vote. The dataset included a large minority of respondents (23.86%) that indicated they would vote for 'other' or who declined to state a preference and these are excluded from the analysis.

Analytic approach

We began our analysis by considering two hypotheses from Schwartz et al (2010).

- Valuing free enterprise, law and order, traditional morality, (blind) patriotism, and military intervention lead to voting for the centre-right.
- Valuing equality, civil liberties, and accepting immigrants lead to voting for the centre-left (Schwartz et al., 2010, 431–432).

We created two new variables in which respondents were grouped based on their stated voting intention. The centre-left group comprised respondents who stated that they would vote for the *Labor Party* or the *Greens*. The centre-right group comprised respondents who stated they would vote for the *Liberal Party*, the *National Party*, the *Liberal National Party*, and the *Country Liberal Party*. The Katter Party was left out of this first analysis because of the small number of respondents and because of a supposition that the party is not easily classified in left to right terms. We then performed a series of logistic regressions where voting intention was the dependent variable. Predictor variables were the eight 'core political values' and the composite variables from principal components analysis. We also controlled for age and gender.

The second stage was to examine differences amongst respondents based on their intention to vote for particular parties against the responses to the values questions. We compared the mean ratings (with ANOVA) for responses to each of the items, sorted according to voting intention. The third stage was to analyse voting intention against attitudes on each of the policy/political issues. There were multiple questions for each of the issues, 10 for windfarms, eight for CSG and four for climate change, so a Principal Component Analysis (PCA) with varimax rotation was undertaken (see tables

A1, A2 and A3 in Additional Tables for more detail). The resulting factor loadings were then used to include items in one dimension for each topic, defined as *Opposition to coal seam gas*, *Opposition to wind farms* and *Concern about climate change*. Questions which loaded sufficiently on the PCS (>0.7) were summed to create an index for each of those themes and total ratings for those were computed against voting intention. Again, mean ratings (with ANOVA) were computed. The final step was to compare responses to the political values items with those to the three issues (indices). This was done by running linear regressions for each item against the composite issues indices. That is for example, seeing how higher ratings for free enterprise might correlate to ratings for opposition to wind farms and CSG and concern about climate change.

Results

For the aggregated left-right modelling, responses to statements are as expected with a right orientation being positively associated with greater support for items representing *Traditional morality*, *Law and order* and *Patriotism* (Table 1). *Foreign military intervention* also showed a positive direction but the result was not significant. The right orientation was negative in relation to the *Civil liberties* item but the result was not significant. A left orientation was positively associated with higher ratings on *Equality* and negatively associated with *Free enterprise* responses. There was no difference between the groups on *Accepting immigration*.

Table 3: Regression table for centre-left and centre right

Variable	Left party model	Right party model
Traditional morality	-0.14*** (0.04)	0.19***(0.05)
Patriotism	-0.04 (0.04)	0.08* (0.04)
Law & order	-0.09* (0.04)	0.12** (0.04)
Foreign military intervention	0.02 (0.04)	0.06 (0.04)
Free enterprise	-0.17*** (0.04)	0.18*** (0.05)
Civil liberties	0.00 (0.05)	-0.06 (0.05)
Equality	0.15*** (0.04)	-0.16*** (0.04)
Accepting immigration	0.03 (0.04)	0.07 (0.04)
Gender (female = 1)	0.08 (0.11)	-0.29* (0.12)
Age group	-0.03 (0.02)	0.05* (0.02)

Constant	0.83* (0.38)	-3.14*** (0.42)
Pseudo R ²	0.05	0.08
N	1450	1450

* p<0.05, ** p<0.01, *** p<0.001.

The results for the analysis of values and each political party do show some additional differences (Table 4). There are statistically significant differences amongst intending voters by party, on all items. As expected, the intending voters for Coalition parties tend to cluster in their mean responses. They tend to be higher on *Law and order*, *Traditional morality*, *Patriotism*, *Foreign military intervention* and *Free enterprise*, and lower on *Civil liberties*, *Equality* and *Accepting immigration*. There are hints of regional differences, with the LNP (based in Queensland) being on the extreme end of this spectrum on a number of issues, notably *Traditional morality* and *Equality*. The CLP respondents are high on *Free enterprise* but also relatively high on *Civil liberties* and *Accepting immigration*. The Northern Territory is highly multi-cultural, with the highest proportion of First Peoples and strong economic and cultural influences from south east Asia.

The KAP cohort seem to cross 'quadrants' to some extent, being relatively high on *Traditional morality* and low on *Civil liberties* and *Accepting immigration*, as might be expected, but low on *Law and order* and *Free enterprise*. The intending Greens voters are most different, to those intending to vote for other parties, on all items.

Table 4: Mean ratings for political values items by party

Political Party	LO	TM	P	FMI	FE	CL	E	AI
LNP	4.9	6.0	4.9	4.3	4.6	4.8	3.9	4.3
Liberal Party	4.8	5.6	4.5	4.3	4.7	5.0	4.3	4.6
CLP	4.8	5.3	4.1	4.3	5.3	5.4	4.6	5.0
National Party	4.4	5.6	4.4	3.9	4.6	5.4	4.6	4.4
Labor Party	4.2	5.1	4.1	3.9	4.3	5.1	4.7	4.6
KAP	3.6	5.5	4.2	3.8	4.4	4.8	4.7	3.9
Greens	3.4	4.2	3.0	3.4	3.8	5.6	5.2	5.4

Shading highlights where parties have the higher or lower ratings. The full statistics are in Table A4 in Additional Tables.

Similarly, the Greens are most different on the policy issues (Figure 2), with the highest mean ratings for *Opposition to CSG* and *Concern about climate change* and the lowest rating for *Opposition to wind farms*, though the mean is just over 15 on a 21 point scale so at least some of them still have some issues with such developments.

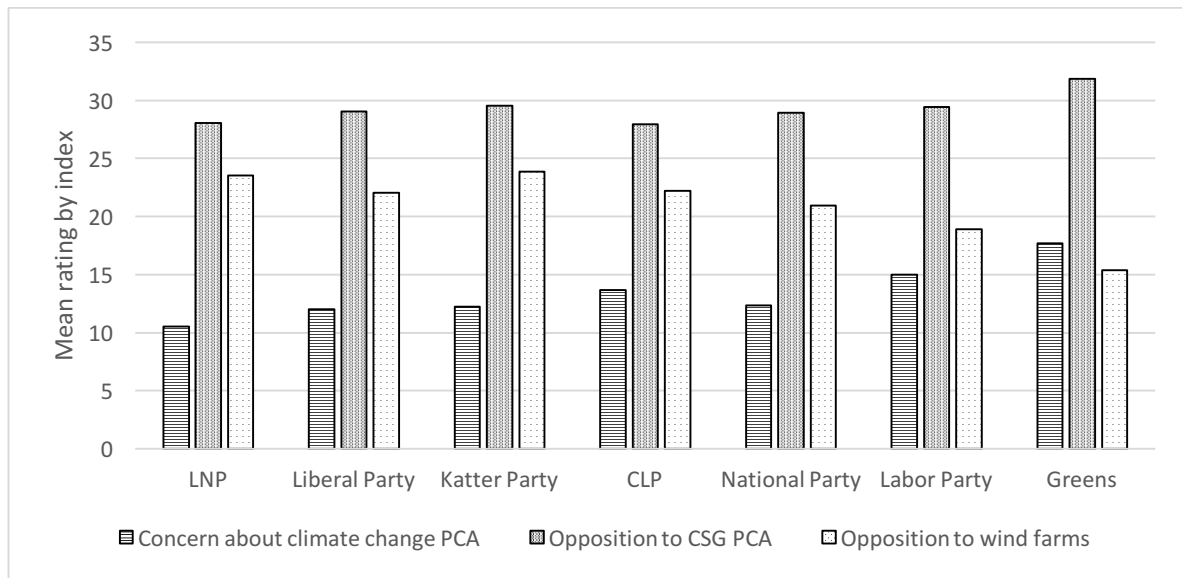


Figure 2: Mean ratings for attitudes to policy issues by voting intention

See Table A5 for regression statistics. All were significant, though the contributions to explaining variances in responses are weak.

Finally, there are also correlations between the responses to the political values items and the three issues (Table 5). As might be expected, completing the triangle of values, party preference and issues, there is some association between political values and particular issues.

Opposition to wind farms has something of a conservation values orientation, with positive correlations to *Patriotism*, *Law and order* and *Free enterprise*. On the other hand, there is a negative correlation to *Accepting immigration* (openness), that is, those with a higher rating on this value tend to be more in favour of wind farms. Conversely, concern about climate change is negatively correlated to *Patriotism*, *Traditional morality* and *Free enterprise*. Concern about climate change is correlated to *Equality* and *Accepting immigration*. On the other hand, the political ambiguity for the Coalition may also have some reflection amongst this sample of respondents. *Opposition to CSG* is correlated to the items in a very similar way to Concern about climate change, but it is also positively correlated to support for *Traditional morality*, which may reflect rural sentiment. In addition, the

responses on *Opposition to CSG* are not normally distributed (skewed to the higher end). It is not an unpopular issue amongst this sample.

Table 5: Values statements and attitudes to issues

Values items	Sig.		
	Opposition to CSG	Opposition to wind farms	Concern about climate change
It is important to defend our traditional religious and moral values.	(+) 0.000 **		(-) 0.005*
It is unpatriotic to criticise this country.		(+) 0.000**	(-) 0.001*
The Government has a duty to limit individual freedoms so as to maintain security.	(-) 0.035*	(+) 0.002*	
Australia should join other democratic nations in sending troops to fight dangerous regimes.		(+) 0.011*	
There should be more incentives for individual initiative even if this reduces equality in the distribution of wealth. It is important to respect the freedom of individuals to believe whatever they want.	(-) 0.019*	(+) 0.000**	(-) 0.028*
If people were treated more equally in this country, many of our problems would go away.	.(+) 0.012 *		(+) 0.000**
Most people who come to live here from other countries make Australia a better place to live.	(+) 0.000**	(-) 0.005*	(+) 0.000**

Implications for further research

These data and analyses are so far quite limited. One limiting factor may be the use of just one item per political value as an indicator of that value. The finding of significant, though weak, relationships, and Schwartz et al.'s (2010) findings suggest it is worth pursuing further work with sets of questions around each value to see if we can increase the validity of modelled relationships. Another reason for the low explanatory power may be the distributions of responses. A quick review of box plots of responses on values and issues by voting intention, shows a wide distribution. That is, for example, we have plenty of intending Labor voters with responses that look like those that might be expected

of conservative voters and vice versa. Nor are National Party voters quite as clustered on issues as might be expected. Hence, there are likely to be factors other than values determining voting intention, which could be more fully explored, even from these data.

These results suggest that it may be possible to use values as means of differentiating amongst party support. A values analysis can show more of a wheel effect, as in Figure 3. This would also enable comparison of party supporters' values across countries. The question though, is: does this provide anything more useful than a slightly deeper look at ideological orientation? The use of the left-right spectrum as a heuristic and the application of left/right labels, both perjoratively and approvingly, are widespread. It is also suggested by these results that the values do cluster around party preference. So, even though *Law and order* and *Traditional morality*, presumably denoting social conservatism, for example, could be argued to be on a different ideological axis to *Free enterprise* (liberalism), they seem to conflate within at least many individuals.

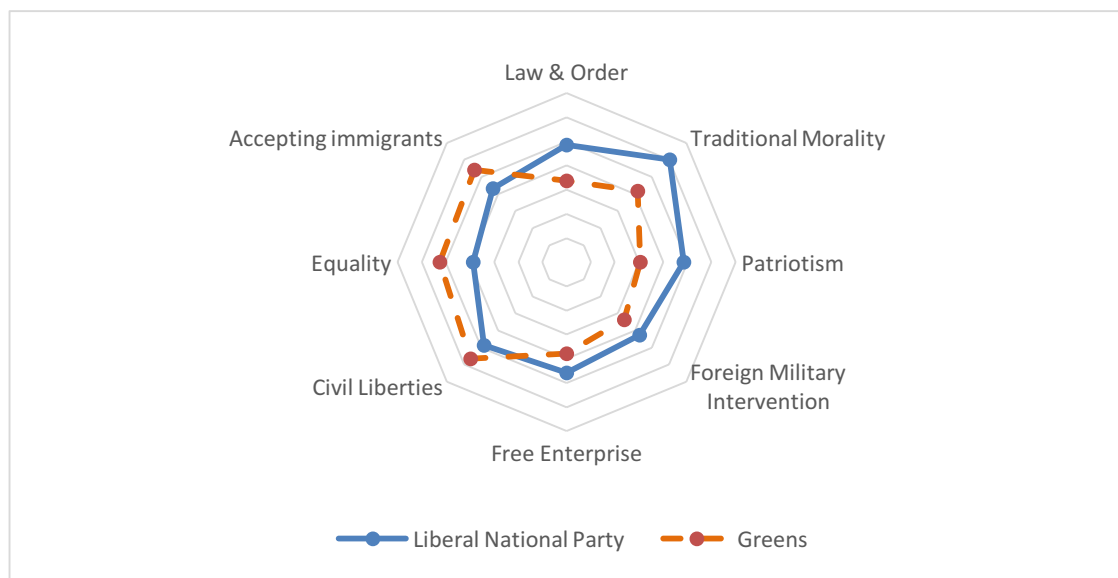


Figure 3: Responses values and issues by voting intention (Greens and Liberal National Party)

Perhaps a productive area of work might be to analyse issues by the values orientation or mix, which could then give greater depth to the analysis of how and why particular parties respond to issues.

From this work, we see that *Opposition to wind farms* appears to have a social conservative and liberal orientation. This is somewhat logical as wind farms affect a traditional activity (farming) and

traditional (rural) communities. In addition, they are effectively subsidised (against free enterprise). We can further examine this by looking at particular statements related to wind farms for the next version of this paper. With *Opposition to CSG* we see indicators of how environmental and farming groups might be able to work together in opposing such developments. This is an issue that is universalist (global climate change) but also about disruption of farming and rural communities. *Concern about climate change* is on the other hand also universalist, but accepting climate change implies accepting disruption to farming and the economy more generally. While, such values could also be determined from case studies of issue activism, this preliminary work does extend the work on values and suggests the potential for further work.

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Additional tables

Table A1: Principal Component Analysis for wind energy items

	Component	
	1	2
Wind farms will never be economically viable.	.799*	-.059
Australia needs wind farms to help meet its energy needs.	-.644	.562
Wind farms look wrong on farmland.	.863*	.009
Wind farms upset the physical wellbeing of people living near them.	.822*	.201
Wind farms make an unpleasant noise.	.831*	.209
Building wind farms is a noisy and dirty process.	.786*	.167
Wind farms are an eyesore.	.870*	-.018
Wind farms look nicer than mines or coal-fired power stations.	-.551	.677
Wind farms cause community division in rural areas.	.624	.429
Australia needs coal seam gas to help meet its energy needs.	.275	.191

*Used to create *Opposition to wind farms* index

Table A2: Principal Component Analysis for coal seam gas items
*Used to create *Opposition to coal seam gas* index

Item	Component	
	1	2
Coal seam gas causes community division in rural areas.	.729*	.282
Establishing coal seam gas operations is noisy and dirty.	.836*	.044
Coal seam gas wells are an eyesore.	.825*	.006
Coal seam gas wells look wrong on farmland.	.773*	.182
Coal seam gas wells look nicer than wind farms.	-.536	.548
Coal seam gas wells look nicer than mines or coal-fired power stations.	-.327	.836
Coal seam gas contaminates the water table.	.859*	.137
Coal seam gas causes dangerous gases to escape into the air we breathe.	.838*	.074

*Used to create *Opposition to coal seam gas* index

Table A3: Principal Component Analysis for *Concern about climate change*

	Component 1
People have been made to worry needlessly about climate change.	-.812*
The world will start cooling as soon as greenhouse gas emissions stop rising.	.411
Climate change will make life more difficult in the future.	.895*
I am worried about climate change.	.912*

*Items aggregated for regressions

Table A4 : ANOVA for voting intention political values items

		Sum of Squares	df	Mean Square	F	Sig.
The Government has a duty to limit individual freedoms so as to maintain security.	Between Groups	232.979	7	33.283	13.374	.000
	Within Groups	3588.605	1442	2.489		
	Total	3821.583	1449			
It is important to defend our traditional religious and moral values.	Between Groups	260.533	7	37.219	17.046	.000
	Within Groups	3148.563	1442	2.183		
	Total	3409.096	1449			
If people were treated more equally in this country, many of our problems would go away.	Between Groups	129.721	7	18.532	7.156	.000
	Within Groups	3734.175	1442	2.590		
	Total	3863.896	1449			
Australia should join other democratic nations in sending troops to fight dangerous regimes.	Between Groups	121.464	7	17.352	6.569	.000
	Within Groups	3809.039	1442	2.641		
	Total	3930.503	1449			
There should be more incentives for individual initiative even if this reduces equality in the distribution of wealth.	Between Groups	117.767	7	16.824	9.476	.000
	Within Groups	2560.097	1442	1.775		
	Total	2677.865	1449			
It is important to respect the freedom of individuals to believe whatever they want.	Between Groups	54.290	7	7.756	4.049	.000
	Within Groups	2762.279	1442	1.916		
	Total	2816.569	1449			
It is unpatriotic to criticise this country.	Between Groups	253.162	7	36.166	11.712	.000
	Within Groups	4453.000	1442	3.088		
	Total	4706.163	1449			
Most people who come to live here from other countries make Australia a better place to live.	Between Groups	126.312	7	18.045	7.742	.000
	Within Groups	3360.863	1442	2.331		
	Total	3487.175	1449			

Table A5: ANOVA for Voting intention and policy issue indices

			Sum of Squares	df	Mean Square	F	Sig.
Concern about climate change	Between Groups	(Combined)	4785.712	7	683.673	38.100	.000
	Within Groups		25875.185	1442	17.944		
	Total		30660.897	1449			
Opposition to CSG	Between Groups	(Combined)	1107.683	7	158.240	3.443	.001
	Within Groups		66266.080	1442	45.954		
	Total		67373.763	1449			
Opposition to wind farms	Between Groups	(Combined)	6440.436	7	920.062	15.013	.000
	Within Groups		88374.505	1442	61.286		
	Total		94814.941	1449			

Table A6: Regression model for values items and concern about climate change

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.336 ^a	.113	.108	4.34449

	Sum of Squares	df	Mean Square	F	Sig.
Regression	3462.658	8	432.832	22.932	.000 ^b
Residual	27198.238	1441	18.875		

	B	Std. Error	Beta	t	Sig.
(Constant)	13.364	.753		17.740	.000
The Government has a duty to limit individual freedoms so as to maintain security.	-.121	.080	-.043	-1.521	.128
It is important to defend our traditional religious and moral values.	-.235	.083	-.079	-2.824	.005
If people were treated more equally in this country, many of our problems would go away.	.399	.077	.142	5.189	.000
Australia should join other democratic nations in sending troops to fight dangerous regimes.	-.056	.074	-.020	-.753	.452
There should be more incentives for individual initiative even if this reduces equality in the distribution of wealth.	-.200	.091	-.059	-2.199	.028
It is important to respect the freedom of individuals to believe whatever they want.	.074	.091	.023	.818	.414
It is unpatriotic to criticise this country.	-.244	.072	-.096	-3.385	.001
Most people who come to live here from other countries make Australia a better place to live.	.444	.085	.150	5.233	.000

Table A7: Regression model for values items and opposition to wind farms
ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	8940.047	8	1117.506	18.752	.000b
Residual	85874.894	1441	59.594		
Total	94814.941	1449			

	B	Std Error	Beta	t	Sig.
(Constant)	15.114	1.339		11.291	.000
The Government has a duty to limit individual freedoms so as to maintain security.	.434	.142	.087	3.069	.002
It is important to defend our traditional religious and moral values.	.280	.148	.053	1.891	.059
If people were treated more equally in this country, many of our problems would go away.	-.225	.137	-.046	-1.651	.099
Australia should join other democratic nations in sending troops to fight dangerous regimes.	.335	.132	.068	2.539	.011
There should be more incentives for individual initiative even if this reduces equality in the distribution of wealth.	.585	.161	.098	3.623	.000
It is important to respect the freedom of individuals to believe whatever they want.	-.233	.162	-.040	-1.438	.151
It is unpatriotic to criticise this country.	.492	.128	.110	3.837	.000
Most people who come to live here from other countries make Australia a better place to live.	-.422	.151	-.081	-2.796	.005

Table A8: Regression model for values items and opposition to coal seam gas extraction

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
	.206 ^a	.043	.037	6.69041		
	Sum of Squares	df	Mean Square	F	Sig.	
Regression	2872.396	8	359.049	8.021	.000 ^b	
Residual	64501.367	1441	44.762			
Total	67373.763	1449				
		B	Std Error	Beta	t	Sig.
(Constant)		25.636	1.160		22.097	.000
The Government has a duty to limit individual freedoms so as to maintain security.		-.259	.123	-.062	-2.114	.035
It is important to defend our traditional religious and moral values.		.499	.128	.112	3.888	.000
If people were treated more equally in this country, many of our problems would go away.		.299	.118	.071	2.523	.012
Australia should join other democratic nations in sending troops to fight dangerous regimes.		-.134	.114	-.032	-1.177	.240
There should be more incentives for individual initiative even if this reduces equality in the distribution of wealth.		-.328	.140	-.065	-2.347	.019
It is important to respect the freedom of individuals to believe whatever they want.		.171	.140	.035	1.221	.222
It is unpatriotic to criticise this country.		-.060	.111	-.016	-.542	.588
Most people who come to live here from other countries make Australia a better place to live.		.502	.131	.114	3.839	.000