

Appendix: Methods and tables

Statistical significance, confidence intervals and sources

In all Tables, ** indicates statistical significance at 0.01 or better (99 out of 100 possible samples) and * indicates significance at 0.05 (19 out of a possible 20 samples).

In most figures, confidence intervals at the 95 per cent level have been added. In post-estimation, sometimes statistically significant findings do have confidence intervals that overlap. We report this where necessary, leaving it up to readers to decide for themselves how reliable and robust they consider our findings to be.

All data is drawn from New Zealand Election Study (NZES) 2014, unless noted otherwise.

Weighting

Our dataset contains oversamples of young people and the Māori electorates and is affected by non-response bias that is based on political interest, political knowledge, education and turnout behaviour. We have weighted to correct for oversampling by gender, age and Māori electorates on a cell by cell basis, and on top of that by education, reported vote and validated turnout, on the basis of iterative weighting on the marginal frequencies. For users of the dataset, the weight variable is *dwtfin*.

Chapter 4

Table 4.A1: Multinomial logistic regression party choice at the 2014 election (reference category=National; N=2581)

	Not voting		Labour		Green		NZ First		Conservative		Other		
	Coeff	r.s.e.†	Coeff	r.s.e.	Coeff	r.s.e.	Coeff	r.s.e.	Coeff	r.s.e.	Coeff	r.s.e.	
Female (male)	0.006	0.212	0.147	0.277	0.196	0.401	0.203	0.203	-0.565	0.336	-0.278	0.366	
Age (18 >)	-0.015	0.006	0.005	-0.038	**	0.004	0.007	0.007	-0.009	0.011	-0.003	0.011	
(European and other)													
Māori	1.768	**	0.311	1.483	**	0.268	0.871	**	0.321	1.607	0.365	**	0.344
Pasifika	1.686	*	0.653	1.584	*	0.643	-0.366		0.869	1.317	0.836	**	0.625
Asian	0.729		0.382	-0.090		0.309	-1.838	**	0.523	-16.323	**	0.243	-0.817
(Mid-education)													
Low education	-0.225		0.227	-0.057		0.177	-0.309		0.246	-0.120	0.238	0.403	0.384
High education	-0.552		0.296	0.566	**	0.202	0.869	**	0.219	0.002	0.297	0.295	0.391
Relative income (1-5)	-0.141		0.101	-0.508	**	0.085	-0.379	**	0.102	-0.551	**	0.122	-0.500
(Private)													
Public sector	0.241		0.270	0.339		0.189	0.134		0.216	0.165	0.252	0.492	0.389
Self-employed	0.175		0.281	-0.184		0.226	0.487		0.273	-0.484	0.275	0.083	0.345
(Non-manual)													
Manual	0.231		0.240	0.631	**	0.177	0.000		0.257	0.145	0.250	-0.289	0.385
Farming household	0.151		0.468	-0.644		0.544	-1.338	*	0.585	-0.924	0.590	-0.600	0.537
No occupation Reported	0.442		0.484	-0.594		0.433	0.000		0.693	0.643	0.580	-1.838	1.108
Union household	0.300		0.291	0.922	**	0.205	0.721	**	0.231	0.562	0.295	0.247	0.458
													0.028
													0.458
													0.247
													0.562
													0.295
													0.458
													0.028
													0.383

	Not voting		Labour		Green		NZ First		Conservative		Other		
	Coef	r.s.e.†	Coef	r.s.e.†	Coef	r.s.e.	Coef	r.s.e.	Coef	r.s.e.	Coef	r.s.e.	
Church attendance (0-1)	-0.036	0.184	0.332	0.217	-0.810	0.386	0.373	0.297	2.010	**	0.333	-0.404	0.403
Assets scale (0-4)	-0.334	**	0.093	0.073	-0.247	**	-0.097	0.104	0.139		0.183	-0.125	0.154
On benefit (not)	0.267	0.265	0.248	0.190	0.303	0.235	-0.271	0.310	-0.398		0.486	0.333	0.387
Major urban (not)	0.010	0.106	0.204	0.151	0.391	*	-0.331	0.212	-0.229		0.304	-0.080	0.321
Constant	1.285	*	0.568	0.929	1.431	**	0.196	0.613	-1.238		0.790	-0.492	1.361
R-squared	0.113												

Note: The baseline model employs multinomial logistic regression, with party vote for the National Party as the baseline category. This is one of the best forms of multivariate analysis for an unordered set of categories. By including not voting and all other parties in the model, all choices are accounted for and set against each other. The other category includes the Māori Party, Internet-MANA, the ACT Party, United Future and all other parties. Because these are a mixture of quite different parties, the category is in the model to be added into the overall pattern but are of little relevance in themselves. Not voting is also included, but will be discussed in chapter 11. The figures in this chapter and those following are usually post-estimation probabilities derived from the model, using the post-estimation command margins in Stata, the statistical analysis software primarily used for this book.

Significance: * p < 0.05; ** p < 0.01.

† r.s.e. = robust standard error.

Table 4.A2: Multinomial logistic regression party choice at the 2014 election, with parental party identification and income/assets interaction (reference category=National; N=2581)

	Not voting		Labour		Green		NZ First		Conservative		Other			
	Coef	r.s.e.	Coef	r.s.e.	Coef	r.s.e.	Coef	r.s.e.	Coef	r.s.e.	Coef	r.s.e.		
Female (male)	0.005	0.201	0.228	0.155	0.266	0.195	-0.392	0.206	-0.564		0.345	-0.303	0.368	
Age (18 >)	-0.015	*	-0.003	0.005	-0.042	**	-0.001	0.007	-0.007		0.010	-0.004	0.010	
(European and other)														
Māori	1.574	**	1.170	**	0.282	0.565	1.224	**	0.368	-1.144	1.072	3.406	**	0.340

	Not voting		Labour		Green		NZ First		Conservative		Other	
	Coeff	r.s.e.	Coeff	r.s.e.	Coeff	r.s.e.	Coeff	r.s.e.	Coeff	r.s.e.	Coeff	r.s.e.
Pasifika	0.648	0.401	0.053	0.329	-1.640**	0.520	-14.514**	0.267	-0.777	0.731	1.245	0.769
Asian	1.339*	0.663	1.354*	0.623	-0.672	0.882	0.873	0.832	-13.395**	0.652	1.409	1.163
(Mid-education)												
Low education	-0.287	0.226	-0.204	0.188	-0.428	0.247	-0.239	0.242	0.370	0.381	-0.249	0.365
High education	-0.527	0.295	0.597**	0.213	0.861**	0.226	0.071	0.306	0.281	0.387	0.337	0.484
Relative income (1-5)	-0.378	0.219	-0.702**	0.190	-0.279	0.196	-0.217	0.283	-0.178	0.550	-0.828*	0.323
(Private)												
Public sector	0.204	0.272	0.180	0.200	0.009	0.223	0.002	0.259	0.475	0.390	0.044	0.351
Self-employed	0.086	0.288	-0.251	0.233	0.428	0.264	-0.540	0.283	0.089	0.356	-0.082	0.493
(Non-manual)												
Manual	0.242	0.239	0.575**	0.187	-0.079	0.253	0.071	0.252	-0.279	0.386	-0.588	0.411
Farming household	0.439	0.469	-0.145	0.517	-1.054	0.606	-0.409	0.589	-0.552	0.555	0.306	0.728
No occupation Reported	0.496	0.453	-0.502	0.435	0.185	0.675	0.809	0.576	-1.798	1.112	-1.366	0.872
Union household	0.317	0.302	0.980**	0.220	0.751**	0.233	0.595*	0.296	0.223	0.458	0.025	0.392
Church attendance (0-1)	0.057	0.324	0.311	0.234	-0.681	0.385	0.481	0.311	1.972**	0.328	-0.280	0.399
Assets scale (0-4)	-0.588*	0.243	-0.605**	0.213	-0.091	0.221	0.268	0.260	0.454	0.393	-0.298	0.486
On benefit (not)	0.253	0.251	0.317	0.202	0.394	0.235	-0.145	0.311	-0.342	0.492	0.355	0.369
Major urban (not)	-0.024	0.202	0.016	0.157	0.315	0.185	-0.394	0.215	-0.227	0.307	-0.129	0.295
Parents Labour (0-2)	0.045	0.125	0.567**	0.097	0.657**	0.120	0.660**	0.133	-0.067	0.213	0.125	0.168
Parents National (0-2)	-0.532**	0.148	-0.744**	0.139	-0.223	0.123	-0.398*	0.168	-0.123	0.173	-0.779**	0.219

	Not voting		Labour		Green		NZ First		Conservative		Other	
	Coeff	r.s.e.	Coeff	r.s.e.	Coeff	r.s.e.	Coeff	r.s.e.	Coeff	r.s.e.	Coeff	r.s.e.
Assets*income (interaction)	0.106	0.104	0.079	0.070	-0.043	0.070	0.093	0.126	-0.114	0.166	0.094	0.155
Constant	2.081	1.468	0.784	0.667	1.116	0.742	0.920	0.634	-2.112	1.384	0.229	1.244
R-squared	0.144											

Note: As for Table 4.A1.

Table 4.A3: Baseline model, plus security and insecurity, controlling for economic performance perceptions and aspirations

	Not voting		Labour		Green		NZ First		Conservative		Other	
	Coeff	r.s.e.	Coeff	r.s.e.	Coeff	r.s.e.	Coeff	r.s.e.	Coeff	r.s.e.	Coeff	r.s.e.
Can find job	-0.129	0.085	-0.167	0.072	-0.048	0.091	0.093	0.101	0.132	0.131	-0.141	0.141
Economy better	-0.800	0.116	-1.155	0.103	-0.929	0.107	0.128	0.968	-0.497	**	0.174	-1.070
Better in 10 years	-0.016	0.090	-0.095	0.077	-0.394	0.090	0.100	0.270	0.031	0.128	0.061	0.145
Fear income loss	0.112	0.082	0.184	0.070	-0.043	0.082	0.308	0.308	0.245	0.134	0.169	0.126
Constant	1.782	0.820	1.118	0.760	1.185	0.818	0.947	0.981	-2.486	1.492	-0.391	1.240
N	2581											
R-squared	0.191											

Note: As for Table 4.A1. In addition, all variables in Table 4.A2 were also included in this model as controls, but are not shown here.

Table 4.A4: Left-right position, social structure and aspirations and insecurity

	Model 1		Model 2	
	Coeff	r.s.e.	Coeff	r.s.e.
Female (male)	-0.038	0.097	0.027	0.096
Age (25-65)	0.789 **	0.114	0.867 **	0.126
(European and other)				
Māori	-0.089	0.188	0.024	0.184
Pasifika	0.316	0.354	0.430	0.372
Asian	0.519 *	0.236	0.498 *	0.214
(Mid-education)				
Low education	0.264 *	0.117	0.235 *	0.115
High education	-0.600 **	0.125	-0.568 **	0.124
Relative income (1-5)	-0.009	0.112	-0.171	0.116
(Private)				
Public sector	-0.100	0.130	-0.105	0.128
Self-employed	0.071	0.141	0.049	0.139
(Non-manual)				
Manual	-0.174	0.114	-0.123	0.111
Farming household	0.463	0.330	0.423	0.298
No occupation Reported	-0.438 *	0.201	-0.311	0.205
Union household	-0.286 *	0.146	-0.164	0.142
Church attendance (0-1)	0.127	0.139	0.149	0.137
Assets scale (0-4)	-0.188	0.112	-0.277 *	0.114
On benefit (not)	-0.152	0.127	-0.171	0.124
Major urban (not)	-0.027	0.094	-0.046	0.090
Parents National/Labour (0-2)	0.336 **	0.037	0.290 **	0.036
Assets*income (interaction)	0.101 **	0.037	0.116 **	0.037
Can find job			-0.003	0.041
Economy last year			0.489 **	0.057
Aspirations			0.107 **	0.041
Fear income loss			-0.005	0.038
Constant	4.469 **	0.409	4.724 **	0.419
R-squared	0.159		0.216	
N	2,654		2,654	

Significance: * p< 0.05; ** p< 0.01.

Chapter 5

Table 5.A1: Valence model on the National vote

	Coeff		r.s.e.
Easy to find job	0.104		0.081
Improve in 10 years	-0.080		0.082
Income reduce next year	-0.118		0.074
Economy better or worse over last year	0.201		0.191
Like/dislike John Key	0.198		0.135
<i>Dirty politics</i>	-0.823	*	0.355
<i>Dirty politics</i> *Key like/dislike (interaction)	0.083		0.045
National 2011	2.009	**	0.409
Government performance	0.935	**	0.270
Performance*National 2011 (interaction)	-0.626		0.360
Economy*National 2011 (interaction)	0.037		0.266
Constant	-3.048	*	1.357
R-squared	0.460		
N	2,455		

Note: Controls for baseline social structure model applied but not shown.

Significance: * $p < 0.05$; ** $p < 0.01$.

Table 5.A2: Effects of liking or disliking Labour coalition/support parties on the National vote

	Coeff		r.s.e.
Left-right position	0.052		0.057
Like/dislike Green	-0.069		0.043
Like/dislike NZ First	-0.069		0.043
Like/dislike MANA	0.056		0.058
Like/dislike Internet	-0.115	*	0.059
Constant	-2.314		1.413
R-squared	0.469		
N	2,455		

Chapter 6

Factor analysis enables us to test correlations between these question responses. As Table 6.1 indicates, four factors or dimensions are apparent.

Table 6.A1: Dimensionality of government expenditure preferences

	Targeted benefits	Universal benefits	Environment	Security
Unemployment benefits	0.898	0.045	0.066	-0.055
Welfare benefits	0.895	0.067	0.130	0.024
Health	0.084	0.878	0.052	0.061
Education	0.024	0.806	0.249	-0.005
Superannuation	0.234	0.474	-0.050	0.427
Public transport	0.047	0.143	0.766	0.028
Environment	0.213	0.120	0.716	-0.062
Housing	0.379	0.273	0.576	0.075
Defence	0.117	-0.020	-0.144	0.753
Police and law	-0.155	0.284	0.075	0.668
Business and industry	-0.207	-0.121	0.369	0.582
% variance	26	16	11	10

Note: Principal component analysis, varimax rotation. Loadings in bold are those contributing the most to each factor.

The first dimension refers to the targeted benefits: unemployment and welfare; the second to universal services: health, education and New Zealand Superannuation. The third dimension relates to infrastructure (public transport and housing) and the environment. The last factor can be interpreted as tapping into preferences for security, most clearly through expenditure on defence, police and law enforcement, but also supporting business and therefore direct government investment in underpinning economic growth. The four dimensions amount together to a little under two-thirds of the total variation in responses among all the expenditure questions.

Table 6.A2: Correlates of opinions on universal and targeted benefits

	Universal			Targeted		
	Coeff		r.s.e.	Coeff		r.s.e.
Female	0.015	*	0.007	-0.012		0.011
Age	0.000		0.000	0.001	**	0.000
(European and others)						
Māori	-0.009		0.013	0.054	**	0.018

	Universal			Targeted		
	Coeff		r.s.e.	Coeff		r.s.e.
Asian	-0.015		0.013	-0.082	**	0.031
Pasifika	-0.037		0.024	0.065	*	0.031
(Post-school)						
School qualification	0.007		0.009	0.038	**	0.012
University	-0.011		0.009	0.056	**	0.014
Relative income	-0.009	*	0.004	-0.001		0.006
Wage/salary private						
Public sector	-0.004		0.008	-0.001		0.013
Self-employed	0.003		0.010	0.007		0.017
(Non-manual)						
Manual	-0.002		0.009	0.000		0.013
Farmer	0.001		0.019	0.016		0.030
No occupation	-0.039		0.026	0.099	**	0.029
Union house	0.042	**	0.009	0.001		0.014
Assets scale	-0.004		0.003	-0.021	**	0.005
Religious services	-0.012		0.011	0.047	**	0.014
On benefit	-0.010		0.009	0.070	**	0.013
Parental partisanship	-0.009	**	0.003	-0.008	*	0.004
Subjective working Class	0.003		0.009	-0.029	*	0.013
Could find job	-0.008	**	0.003	-0.018	**	0.005
Economy last year	0.002		0.005	-0.015	*	0.007
Better in 10 years	0.001		0.003	-0.004		0.005
Fears income loss	0.006	*	0.003	0.011	*	0.004
Left-right scale	-0.005	**	0.002	-0.023	**	0.003
Constant	0.708	**	0.022	0.491	**	0.031
R-squared	0.075			0.237		
N	2,672			2,672		

Notes: Age estimated in years. Left-right runs from 0-10, Relative income from 1-5, 3 being average income. University education vs not university educated. Working class: subjective working class 1, rest 0.

Significance: * $p < 0.05$; ** $p < 0.01$.

Table 6.A3: Agreement with raising the age of New Zealand superannuation

	Coeff	Sign.	r.s.e.
Age	0.002	**	0.000
Māori	-0.203	**	0.069
Age*Māori (interaction)	0.002		0.001
Female	-0.056	**	0.017
Right-left	-0.010	**	0.004
Relative income	0.034	**	0.009

A BARK BUT NO BITE

	Coeff	Sign.	r.s.e.
University degree	0.045	*	0.020
Political knowledge	0.035	**	0.007
Working class	-0.059	**	0.020
Constant	0.320	*	0.048
R-squared	0.093		
N	2,807		

Notes: Ordinary Least Squares Regression on five-point scale indicating strong agreement (1) through to strong disagreement (0): 'Between 2020 and 2033, the age of eligibility for New Zealand Superannuation should be gradually increased to 67'. Age, education, income, left-right as Table 6.A1. The political knowledge scale is based on four questions, scored 1=right and 0=no or don't know. 'Which of these people was minister of finance before the 2011 election?' (Judith Collins, Bill English, Tony Ryall, or Nick Smith); 'What was the unemployment rate in New Zealand when it was recently released last month?' (four options, one correct); 'Which party won the second largest number of seats at the 2014 General election?'; 'Who is the current secretary-general of the United Nations?' (four recent secretaries, one of them the current). An alternative ordinal logit model produces almost identical results, as does an alternative model including all the baseline social structure variables as controls (without interactions).

Significance: * $p < 0.05$; ** $p < 0.01$.

Table 6.A4: Social correlates of support for capital gains tax: Ordinary least squares regression

	Coeff		r.s.e.
Age	0.000		0.001
Left 0 (2)-right 10 (8)	-0.044	**	0.004
Own business or rental	0.037		0.048
Aspirational	-0.018	**	0.007
Union household	0.048	*	0.024
Parental party	-0.018	**	0.006
Age*business (interaction)	-0.002	*	0.001
Constant	0.759	**	0.032
R-squared	0.13		
N	2,807		

Notes: The question asked respondents on a 5-point scale to what extent they agreed or disagreed with the statement 'New Zealand needs a capital gains tax excluding the family home', rescaled to run between 0 and 1, with a higher score referring to supporting the introduction of a capital gains tax. 'Aspirational' relies on the question: 'Over the next 10 years or so, how likely or unlikely is it you will improve your standard of living?' Answering categories ranged between very likely (1) and very unlikely (5), but have been recoded in such a way that a higher value refers to believing that it is very likely that the standard of living will improve. An alternative ordinal logit model produces almost identical results, as does an alternative model including all the baseline social structure variables as controls (without interactions). The slope estimate for left-right is between 2 and 8 of the 0-10 point scale to reduce the apparent effect of extreme values.

Significance: * $p < 0.05$; ** $p < 0.01$.

Table 6.A5: The Treaty of Waitangi as part of the law

	Coeff	Sign.	r.s.e.
Ethnic background (<i>Reference: European</i>)			
Māori	0.346	**	0.076
Pasifika	0.171	**	0.059
Asian	-0.034		0.034
Age	-0.002	**	0.001
Māori*age (interaction)	0.001		0.002
Female	0.058	**	0.016
Left (0)–right (10)	-0.033	**	0.004
Assets	-0.023	**	0.008
Relative income	0.027	**	0.009
Level of education (<i>Reference: middle education</i>)			
Low education	-0.044	*	0.019
University degree	0.084	**	0.021
Public sector	0.037		0.020
Political knowledge	0.016	*	0.008
Constant	0.602	**	0.045
R-squared	0.22		
N	2,807		

Note: An alternative ordinal logit model produces almost identical results, as does an alternative model including all the baseline social structure variables as controls (without interactions).

Significance: * $p < 0.01$; ** $p < 0.05$.

Table 6.A6: Demographic and attitudinal correlates of opposition to inequality

	Coeff	Sign	r.s.e.
Age	0.001	**	0.000
University degree	0.029	*	0.015
Left (0)–right (10)	-0.041	**	0.003
Relative income	-0.031	**	0.007
Assets	-0.013	*	0.006
Political knowledge	0.014	**	0.005
Church attendance	0.055	**	0.021
Working class	0.052	**	0.016
Easy to find job	-0.019	**	0.005
Better in 10 years	-0.014	*	0.006
Constant	0.897	**	0.036
R-squared	0.209		
N	2,672		

Significance: * $p < 0.05$; ** $p < 0.01$.

Table 6.A7a: The Labour vote or not, 2014 by positional and valence variables

	Model 1		Model 2		Model 3		Model 4	
	Coeff	r.s.e.	Coeff	r.s.e.	Coeff	r.s.e.	Coeff	r.s.e.
Age	0.009 *	0.004	0.016 **	0.004	-0.002	0.005	0.005	0.005
Māori	-0.415	0.238	-0.673 **	0.251	-0.763 **	0.293	-0.897 **	0.308
Manual or service	0.588 **	0.153	0.503 **	0.167	0.564 **	0.180	0.481 *	0.191
Union	0.483 **	0.175	0.460 *	0.195	0.378	0.207	0.407	0.212
Parental party	-0.313 **	0.059	-0.256 **	0.069	-0.213 **	0.070	-0.189 *	0.075
Dislike/like Key			-0.220 **	0.026			-0.167 **	0.030
Dislike/like Cunliffe			0.329 **	0.036			0.283 **	0.040
Left-right	-0.298 **	0.044	-0.179 **	0.046	-0.177 **	0.045	-0.102 *	0.052
Authoritarian	0.096 *	0.039	0.103 *	0.041	0.073	0.043	0.083	0.044
Against inequality	1.400 **	0.364	0.606	0.399	1.216 **	0.440	0.648	0.463
Capital gains tax (exp)	0.520 **	0.135	0.347 *	0.152	0.500 **	0.149	0.378 *	0.157
Women MPs	0.250	0.181	0.195	0.195	0.251	0.205	0.245	0.221
Treaty	0.577 *	0.253	0.524 *	0.263	0.692 **	0.262	0.608 *	0.269
Pension age	-0.519 *	0.223	-0.485 *	0.238	-0.480 *	0.237	-0.362	0.246
Universal services	0.256	0.567	0.138	0.603	0.192	0.671	0.094	0.692
Targeted benefits	1.056 **	0.382	0.084	0.399	0.776	0.442	-0.055	0.454
2011 Labour vote					2.355 **	0.172	2.034 **	0.181
Constant	-3.996 **	0.646	-3.856 **	0.703	-4.549 **	0.734	-4.542 **	0.828
R-squared	0.213		0.325		0.360		0.422	
N	2,572		2,572		2,572		2,572	

Notes: Women's representation: A scale between -1 and 1 based on two questions: 'Should there be more efforts to increase the number of women MPs. If so, what means would you prefer?'; and 'Looking at the types of people who are MPs, do you think there should be more, fewer, or about the same number as there are now: women'. Capital gains tax opinion is estimated by an exponential form of the variable.
Significance: * p < 0.05; ** p < 0.01.

Table 6.A7b: The Labour vote or not, 2014 by positional and valence variables

	Model 5			Model 6		
	Coeff		r.s.e.	Coeff		r.s.e.
Age	-0.003		0.005	0.003		0.005
Māori	-0.678	*	0.267	-0.826	**	0.287
Manual or service	0.526	**	0.184	0.454	*	0.196
Union	0.358		0.201	0.400		0.210
Parental party	-0.194	**	0.072	-0.180	*	0.078
Dislike/like Key				-0.160	**	0.031
Dislike/like Cunliffe				0.286	**	0.040
Left-right	-0.162	**	0.045	-0.094		0.051
Authoritarian	0.069		0.042	0.079		0.044
Against inequality	1.620	*	0.715	0.766		0.699
Capital gains tax (exp)	0.445	*	0.218	0.311		0.221
Women MPs	0.207		0.209	0.206		0.224
Treaty	1.462	**	0.350	1.272	**	0.347
Pension age	-0.686	*	0.331	-0.725	*	0.342
Universal services	0.274		0.669	0.185		0.702
Targeted benefits	0.839		0.447	0.007		0.460
2011 Labour vote	3.594	**	0.819	2.540	**	0.870
Interactions:						
2011 Labour vote interacted with						
Against inequality	-0.923		0.932	-0.393		0.953
Capital gains tax (exp)	0.049		0.302	0.105		0.312
Treaty	-1.444	**	0.459	-1.258	**	0.481
Pension age	0.480		0.466	0.722		0.496
Constant	-5.173	**	0.916	-4.810	**	0.967
R-squared	0.368			0.427		
N	2,572			2,572		

Chapter 7

Table 7.A1: Likelihood of voting Green or not, logistic regression

	Coeff		Std. Err.	Coeff		Std. Err.
Female				0.16		0.18
Age				-0.03	**	0.01
Ethnicity (<i>Ref.</i> =European or other)						
Māori				-0.60	*	0.26
Asian				-1.15	*	0.45
Pacific				-1.34	*	0.64
Education (<i>Ref.</i> =post-school)						
School only				-0.05		0.24
University degree				0.65	*	0.23
Relative income				-0.11		0.10
Sector of employment (<i>Ref.</i> =private sector)						
Public sector				-0.23		0.22
Self-employed				0.45		0.27
Occupation (<i>Ref.</i> =non-manual)						
Manual				-0.35		0.25
Farmer				-0.95		0.55
No occupation				-0.37		0.54
Union household				0.29		0.22
Wealth/assets				0.01		0.08
On benefit				0.02		0.23
Left-right	-0.71	**	0.10	-0.66	**	0.10
Authoritarian	-0.37	**	0.09	-0.27	**	0.09
Left-right*authoritarian (interaction)	0.04	*	0.02	0.03		0.02
Constant	1.88	**	0.48	2.89	**	0.73
Pseudo R-squared	0.17			0.22		

Table 7.A2: Split voting, 2014 election (total percentages)

Party vote	Electorate vote											Party vote only	Party vote	
	ACT	Conservative	Green	Internet-MANA	Labour	Māori	National	NZ First	United Future	Others	Independents & non-list parties			Candidate informals
ACT	0.18	0.03	0.02	0.00	0.09	0.00	0.32	0.01	0.00	0.00	0.00	0.02	0.01	0.69
Conservative	0.03	1.59	0.06	0.01	0.40	0.01	1.66	0.07	0.02	0.03	0.01	0.03	0.04	3.96
Green Party	0.03	0.09	3.69	0.18	5.05	0.15	0.91	0.13	0.02	0.08	0.03	0.08	0.21	10.65
Internet-MANA	0.01	0.02	0.16	0.60	0.39	0.05	0.05	0.02	0.00	0.03	0.01	0.01	0.07	1.41
Labour Party	0.04	0.20	1.31	0.40	20.58	0.32	0.79	0.36	0.04	0.10	0.03	0.22	0.64	25.02
Māori Party	0.00	0.01	0.06	0.09	0.26	0.66	0.14	0.02	0.00	0.01	0.00	0.02	0.05	1.32
National Party	0.80	1.04	0.89	0.06	2.79	0.28	39.00	0.47	0.47	0.18	0.05	0.33	0.49	46.83
NZ First	0.05	0.34	0.53	0.16	3.23	0.23	1.60	1.91	0.02	0.15	0.05	0.20	0.15	8.62
United Future	0.00	0.01	0.02	0.00	0.05	0.00	0.10	0.01	0.02	0.00	0.00	0.00	0.00	0.22
Others	0.01	0.03	0.12	0.03	0.21	0.03	0.15	0.04	0.00	0.15	0.01	0.02	0.03	0.84
Party Informals	0.00	0.01	0.01	0.01	0.12	0.01	0.05	0.01	0.00	0.00	0.00	0.21	0.01	0.45
Electorate vote	1.15	3.36	6.86	1.54	33.16	1.74	44.77	3.04	0.61	0.72	0.20	1.15	1.70	100.00

Note: Others are ACT New Zealand, Aotearoa Legalise Cannabis Party, Ban1080, Democrats for Social Credit, Focus New Zealand, NZ Independent Coalition, The Civilian Party.

Source: Electoral Commission 2017 (Recalculated from original source).

Chapter 8

Table 8.A1: Social groups and authoritarian-libertarianism: Ordinary least squares regression

	Coeff		r.s.e.
Female	-0.10	*	0.05
Age	0.00		0.00
(European)			
Māori	0.61	**	0.07
Pasifika	0.44	*	0.19
Asian	0.69	**	0.11
(Post-school qualification)			
School only	0.14	**	0.06
University	-0.38	**	0.07
Relative income	-0.07	*	0.03
(Private sector wage/salary)			
Public	-0.07		0.06
Self-employed	0.03		0.07
(Non-manual household)			
Manual	0.09		0.06
Farmer	-0.07		0.13
No occupation	-0.20		0.17
Union household	-0.17	*	0.07
Assets scale	-0.05	*	0.02
On benefit	-0.12		0.07
Church attendance	0.17	*	0.07
Urban	-0.12	*	0.05
Constant	0.35	*	0.15
R-squared	0.14		

Table 8.A2: Social groups and attitudes to immigration: Ordinary least squares regression

	Coeff		r.s.e.	Coeff		r.s.e.
Female	-0.080		0.052	-0.08		0.05
Age	0.004	*	0.002	0.00		0.00
(European)						
Māori	-0.335	**	0.094	-0.10		0.10
Pasifika	0.472	**	0.111	0.29		0.16
Asian	0.206		0.141	0.47	**	0.12

	Coeff		r.s.e.	Coeff		r.s.e.
(Post-school qualification)						
School only	-0.123	*	0.061	-0.07		0.06
University	0.179	*	0.071	0.09		0.07
Relative income	0.182	**	0.027	0.14	**	0.03
(Private sector wage/salary)						
Public	0.084		0.067	0.06		0.06
Self-employed	0.053		0.066	0.04		0.07
(Non-manual household)						
Manual	-0.025		0.064	0.00		0.06
Farmer	0.005		0.127	0.03		0.13
No occupation	0.131		0.140	0.14		0.15
Union household	-0.104		0.068	-0.11		0.07
Assets scale	0.014		0.025	0.00		0.02
On benefit	0.113		0.066	0.11		0.06
Married	-0.111		0.057	-0.10		0.06
Church attendance	0.160	*	0.071	0.19	*	0.07
New Zealand born				-0.27	**	0.07
Better in 10 years				-0.05	*	0.02
Can find job				0.07	**	0.02
Fear of income loss				0.00		0.02
Economy last year				0.16	**	0.03
Inequality				-0.03		0.11
Left-right				-0.08	**	0.01
Authoritarian-libertarian				-0.04	**	0.01
Constant	1.824	**	0.143	2.88	**	0.21
R-squared	0.10			0.16		
N	2,727			2,727		

Note: Those most in favour 5, those most against 1.

Table 8.A3: Social groups and attitudes to abortion: Ordinary least squares regression

	Coeff		r.s.e.	Coeff		r.s.e.
Female	-0.15	*	0.07	-0.13	*	0.06
Age	0.00	*	0.00	0.00	*	0.00
(European)						
Māori	0.50	**	0.13	0.39	**	0.12
Asian	0.66	**	0.16	0.56	**	0.16
Pasifika	0.58	*	0.25	0.52	*	0.25

A BARK BUT NO BITE

	Coeff		r.s.e.	Coeff		r.s.e.
(Post-school qualification)						
School only	0.14		0.08	0.11		0.08
University	-0.26	**	0.08	-0.18	**	0.08
Relative income	-0.06		0.04	-0.06		0.04
(Private sector wage/salary)						
Public	0.01		0.09	0.03		0.09
Self-employed	0.09		0.10	0.08		0.10
(Non-manual household)						
Manual	0.11		0.08	0.10		0.08
Farmer	-0.06		0.15	-0.07		0.16
No occupation	0.14		0.17	0.15		0.17
Union household	-0.16		0.08	-0.11		0.08
Assets scale	0.01		0.03	0.02		0.03
On benefit	0.27	**	0.09	0.29	**	0.09
Married	0.04		0.07	0.02		0.07
Church attendance	1.98	**	0.10	1.95	**	0.10
Inequality				-0.14		0.13
Left-right				0.02		0.02
Authoritarian-libertarian				0.08	**	0.02
Constant	1.78	**	0.19	1.31	**	0.24
R-squared	0.29			0.30		

Table 8.A4: New Zealand First vote choice models

	Coeff		r.s.e.
Female	-0.473	*	0.215
Age	0.005		0.008
(European)			
Māori	-0.045		0.389
Asian	0.000		0.691
(Post-school qualification)			
School only	-0.146		0.230
University	0.056		0.308
Relative income	-0.039		0.123
(Private sector wage/salary)			
Public	0.054		0.249
Self-employed	-0.544		0.282
(Non-manual household)			
Manual	-0.141		0.245
Farmer	-0.416		0.599

	Coeff		r.s.e.
No occupation	0.868		0.555
Union household	0.031		0.312
Assets scale	0.174		0.101
On benefit	-0.299		0.314
Married	0.078		0.216
Church attendance	0.458		0.323
National parents	-0.284	**	0.087
Born in New Zealand	0.453		0.280
Better 10 years	-0.185	*	0.085
Could find job	-0.015		0.084
Fear income reduction	0.150	*	0.077
Economy last year	-0.206		0.116
Left-right	-0.034		0.046
Authoritarian-libertarian	0.104		0.055
Treaty not law	0.191	*	0.087
Targeted social	-0.038		0.715
Universal social	-0.112		0.503
For immigration	-0.295	*	0.116
Against inequality	0.300		0.484
Abortion wrong	0.005		0.072
Constant	-3.890	**	0.955
R-squared	0.121		
N	2,496		

Table 8.A5: Conservative Party vote choice models

	Coeff		r.s.e.	Coeff		r.s.e.
Female	-0.503		0.304	-0.421		0.285
Age	-0.006		0.012	-0.008		0.011
(European)						
Māori	-2.514	*	1.084	-2.106		1.139
Asian	-0.907		0.817	-0.853		0.849
(Post-school qualification)						
School only	0.545		0.373	0.364		0.370
University	0.151		0.373	0.305		0.399
Relative income	-0.403	*	0.163	-0.423	*	0.189
(Private sector wage/salary)						
Public	0.352		0.362	0.278		0.366
Self-employed	0.031		0.343	-0.054		0.357

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	Coeff		r.s.e.	Coeff		r.s.e.
(Non-manual household)						
Manual	-0.383		0.387	-0.286		0.403
Farmer	-0.679		0.577	-0.527		0.555
No occupation	-1.715		1.109	-1.925		1.228
Union household	-0.243		0.435	-0.195		0.469
Assets scale	0.287		0.180	0.189		0.188
On benefit	-0.493		0.487	-0.551		0.473
Married	1.169	**	0.429	1.034	*	0.429
Church attendance	2.024	**	0.314	1.527	**	0.392
National parents	0.181		0.097	0.132		0.096
Born in New Zealand	0.140		0.370	0.189		0.386
Left-right				0.124		0.066
Authoritarian-libertarian				-0.133		0.079
Treaty not law				0.276		0.151
Targeted social				-1.744		1.321
Universal social				-0.419		0.810
For immigration				-0.172		0.175
Against inequality				-0.090		0.690
Abortion wrong				0.349	**	0.120
Constant	-4.068	**	0.855	-3.557	**	1.370
R-squared	0.143			0.19		
N	2,551			2,551		

Table 8.A6: Liking or disliking the ACT Party

	Coeff		r.s.e.	Coeff		r.s.e.
Female	0.28	*	0.12	0.43	**	0.11
Age	-0.01	*	0.00	-0.01		0.00
(European)						
Māori	0.32		0.19	0.35		0.19
Pasifika	1.03	**	0.34	0.74	*	0.31
Asian	1.34	**	0.36	0.96	**	0.32
(Post-school qualification)						
School only	0.10		0.14	0.01		0.13
University	-0.51	**	0.16	-0.24		0.15
Relative income	0.18	**	0.06	-0.01		0.06
(Private sector wage/salary)						
Public	-0.30	*	0.15	-0.25		0.13
Self-employed	-0.29		0.18	-0.33	*	0.17
(Non-manual household)						
Manual	-0.03		0.14	0.06		0.14

	Coeff		r.s.e.	Coeff		r.s.e.
Farmer	0.11		0.29	0.07		0.30
No occupation	0.47		0.43	0.39		0.35
Union household	-0.61	**	0.16	-0.32	*	0.15
Assets scale	0.17	**	0.06	0.10	*	0.05
On benefit	0.00		0.15	0.00		0.14
Married	-0.23		0.13	-0.33	**	0.12
Church attendance	0.41	**	0.15	0.17		0.17
National parents	0.20	**	0.04	0.07		0.04
NZ born	-0.24		0.14	-0.07		0.14
Urban-not urban	-0.08		0.12	0.02		0.11
Better 10 years				0.19	**	0.05
Could find job				0.00		0.05
Fears income loss				0.03		0.05
Economy last year				0.00		0.07
Left-right				0.17	**	0.03
Authoritarian-libertarian				0.05		0.03
Treaty				0.11	*	0.05
Universal social				-1.25	**	0.43
Targeted social				-0.30		0.34
Immigration				0.22	**	0.06
Inequality				-1.50	**	0.24
Abortion				0.14	**	0.05
Constant	3.11	**	0.39	2.91		0.62
R-squared	0.089			0.206		
N	2,672			2,672		

Chapter 10

The Māori Electorate NZES data

The 2014 NZES oversampled the Māori electorates, and within that young voters as well. The response rate for those freshly sampled (N=284) was 19.2 per cent. Another 263 Māori electorate respondents came from the 2011 panel that, overall, had a 61.7 per cent response rate from those responding in 2011. The full Māori electorate sample has an N of 547. Despite the low response rate, within expected margins of error it contained a good representation of the various groups of voters, although non-voters were under-represented. Findings are based on weighting to more accurately reflect the vote/non-vote distributions for the party and electorate votes.

Table 10.A1: Comparing candidate effects on the Labour vote: Māori electorate and the general electorate vote

	Coeff		r.s.e.
Age	-0.012	**	0.003
Female	-0.110		0.111
Parents Labour	0.396	**	0.071
Favours Labour candidate	2.930	**	0.151
Favours Māori Party candidate	-0.686	*	0.306
Labour MP incumbent	0.209		0.216
Favours MANA candidate	-0.785		0.433
Labour Party most favoured	2.303	**	0.191
Māori electorate	0.162		0.222
Labour candidate*Māori electorate (interaction)	-1.482	**	0.351
Constant	-1.754	**	0.222
/lnsig2u	-2.213		0.633
sigma_u	0.331		0.105
rho	0.032		0.020
N (Clusters)	2,805 (71)		

Note: This is a multilevel model with random effects, taking account of the clustering of the electorate-level data. The dependent variable is an electorate vote for Labour versus the rest. To make sure that the effects we identify are not due to deeper party preferences or to the advantages of incumbency, we control for the following: whether there is an incumbent Labour MP; whether or not people report that Labour is the party they most like; and preferences for other candidates. We also control for parental party preferences for Labour. By interacting a preference for the Labour candidate or not with Māori or general electorate, we therefore estimate the relative effects of candidate preferences in the two classes of electorate.

Table 10.A2: Baseline model of voting in the Māori electorates: The electorate vote (multinomial logistic regression)

	Non-vote		Green		Māori Party		MANA		
Age	-0.013	0.013	-0.007	0.021	0.013	**	0.012	0.018	0.014
<i>Iwi</i> connection	-0.770	* 0.444	0.195	0.647	0.260		0.454	0.642	0.589
Speaks <i>te reo</i>	0.239	0.737	-1.044	1.128	1.450	**	0.599	1.016	0.629
Low education	0.093	0.409	-0.421	0.568	-0.266	*	0.394	-0.248	0.418
Urban	-0.298	0.390	1.194	** 0.610	-0.478		0.426	-0.030	0.438
Manual Household	0.560	0.394	-0.295	0.673	0.238		0.411	1.078	** 0.426
Assets scale	0.082	0.167	-0.559	** 0.253	0.285	**	0.128	0.094	0.162
Parents Labour†	0.017	0.213	-0.624	** 0.252	-0.145		0.224	-0.283	0.201
Constant	1.114	* 0.629	-0.731	1.090	-1.487	**	0.636	-2.411	*** 0.697
R-squared	0.085								
N	448								

Notes: Labour vote is the missing or residual category in the multinomial logit model, all other behaviour is thus measured against a Labour vote. Not voting is indistinguishable from Labour voting, at least in terms of statistical significance.

† This variable measures parental partisanship and has a score of 2 when both parents voted Labour, one when one of the parents voted Labour, and zero when there is no knowledge about parental partisanship.

Significance: * $p < 0.05$; ** $p < 0.01$.

Table 10.A3: Baseline model of voting in the Māori electorates: The party vote (multinomial logistic regression)

	Non-vote	National	Green	NZ First	Māori Party	MANA
Age	-0.015	0.013	-0.026 *	0.014	0.019	0.050 *
<i>Iwi</i> connection	-1.049 *	-0.788	0.307	-0.929 *	0.036	-0.098
<i>Speaks te reo</i>	-0.247	-1.551	0.591	-0.091	0.429	1.007
Low education	0.100	0.787	-0.432	0.632	-0.412	-0.782
Urban	0.079	-0.184	0.261	0.368	-0.321	0.761
Manual Household	0.215	-0.828	-0.229	-0.529	0.638	-0.045
Assets scale	0.329 *	0.652 **	0.428 *	0.461 *	0.478 **	0.110
Parents Labour†	0.169	-0.436	0.056	0.110	-0.116	-0.147
Constant	0.816	-2.496 **	-1.007	-2.211 **	-2.654 **	-3.945 **
R-squared	0.100					
N	511					

Notes: Labour vote is the missing or residual category in the multinomial logit model, all other behaviour is thus measured against a Labour vote. Not voting is indistinguishable from Labour voting, at least in terms of statistical significance.

† This variable measures parental partisanship and has a score of 2 when both parents voted Labour, one when one of the parents voted Labour, and zero when there is no knowledge about parental partisanship.

Significance: * p < 0.05; ** p < 0.01.

Table 10.A4: Dimensional model of voting in the Māori electorates: The party vote

	Non-vote	National	Green	NZ First	Māori	MANA
Age	-0.023	0.013	-0.043 **	0.004	0.013	0.016
/w/ connection	-0.738	0.467	0.627	-0.687	0.540	0.606
Speaks te reo	0.125	0.941	0.044	0.257	0.699	0.846
Low education	0.173	0.426	-0.174	0.930	0.498	0.452
Urban	-0.061	0.406	0.445	0.265	0.467	0.455
Manual household	0.283	0.420	-0.203	-0.661	0.499	0.495
Assets scale	0.391 *	0.176	0.541 **	0.526 **	0.200	0.164
Parents Labour	0.150	0.222	-0.045	0.068	0.249	0.211
Likes Labour c.†	-1.799 **	0.488	-1.184 *	-2.124 **	0.550	0.568
Likes MANA c.	-0.292	0.754	1.062	-1.042	0.843	1.219
Likes Māori c.	-0.324	0.616	-0.320	-0.634	0.620	0.476
Incumb MRIMP	-1.401 *	0.560	-0.020	-1.382 *	0.592	0.478
Treaty	-0.579	0.627	-0.487	-0.562	0.730	0.655
Inequality	-1.986 *	0.833	1.599	0.343	0.928	0.895
Constant	4.211 **	0.966	1.174	-0.471	1.178	1.144
R-squared	.20					
N	511					

Significance: * p < 0.05; ** p < 0.01.

† c. = candidate.

Chapter 11

Regression Model, Figure 11.3

Data for the figure is estimated from a logistic regression of vote/not vote against age, female/male, Māori on Māori roll, Māori on general roll (with non-Māori on the general roll as a residual category). Gender and the two variables are also interacted with the age variable, which is continuous, using the mid-point within five-year bands.

Table 11.A1: Vote/not vote by age, gender, Māori and electorate

Voted or not	Coeff		Linear Std. Err
Female	0.530	**	0.079
Age	0.032	**	0.001
Māori electorate	-0.676	**	0.130
Māori on general roll	-0.366	*	0.148
Residual: non-Māori			
<i>Interactions with age</i>			
Female	-0.009	**	0.002
Māori electorate	-0.001		0.003
Māori on general roll	0.003		0.003
Constant	-0.352	**	0.059
Pseudo R-squared = 0.48			
N = 29,989			

Significance: * p< 0.05; ** p< 0.01.

Source: Vowles 2015b.

Table 11.A2: Non-voting and social structure, 2014 election

	Coeff		r.s.e.
Female	0.039		0.187
Age	-0.041	**	0.010
Assets scale	-0.479	*	0.208
Age*assets (interaction)	0.008	*	0.004
(European)			
Māori	0.548	*	0.238
Asian	0.933	*	0.379
Pasifika	0.340		0.449
(Post-school qualification)			
School only	-0.225		0.212
University	-0.859	**	0.294

	Coeff	r.s.e.
Relative income	0.062	0.090
Constant	1.003	0.575
Pseudo R-squared = 0.07		

Significance: * $p < 0.05$; ** $p < 0.01$.

Table 11.A3: How non-voters might have voted

	Social structure	Security	Values	Positional	Competence	Voters
Labour	27	27	29	25	25	26
National	42	37	38	40	37	47
Green	11	12	9	9	12	11
NZ First	8	11	10	10	10	9
Conservative	3	4	4	6	6	4
Maori	3	4	4	3	3	1
Internet-MANA	4	4	3	3	2	1
Other	3	3	4	4	4	1
	100	100	100	100	100	100

Notes: Social structure model: gender, age, ethnicity, education, relative income, employment sector, occupation, union household or not, assets scale, on benefit or not; Security model: adds difficulty of finding a job, economy over last year, aspirations over 10 years, likelihood of loss of income; Values: adds left-right scale and authoritarian-libertarian scale; Positional: adds inequality attitudes, environmental attitudes, universal welfare, targeted welfare, infrastructure and security expenditure scales; Competence: adds government performance and liking/disliking of John Key. The data was additionally weighted by the age structure of non-voting derived from the New Zealand Longitudinal Turnout Study (NZLTS). Figures in Table 11.A3 are the estimated frequencies among the non-voters, except for the column to the right which provides that among the voters.

This text is taken from *A Bark But No Bite: Inequality and the 2014 New Zealand General Election*, by Jack Vowles, Hilde Coffé and Jennifer Curtin, published 2017 by ANU Press, The Australian National University, Canberra, Australia.