Victorian Voting: The Origins of Party Orientation and Class Alignment

Supporting Information

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SI1   Additional Figures and Tables

We show the location of the constituencies in our data (Ashford, Guildford, and Sandwich) in Figure SI1. The map also shows the location of other constituencies for which we have managed to find 19th-century poll books that contain occupational information. Overall, poll books containing occupational information seem to exist across England. This suggests that constituencies with such poll books are not systematically different from others. However, the additional poll books do not include elections from the time period of our interest, and we do not use them in this study.

Table SI1 illustrates the occupational composition of the working and middle classes by showing ten most common professions within each class in our data. These ten professions always account for at least half of the voters in the respective group and hence provide fairly comprehensive picture of the classification and the occupations in the data. While all possible classifications may have their issues and one may need to compromise for example between income and social criteria, Table SI1 does not reveal any striking misclassifications, at least from a purely subjective and intuitive perspective.

Table SI2 summarizes voting behaviour by class and constituency. In Sandwich and Guildford working class tends to give more split votes but party preferences are similar across classes. In Ashford, the working class gives less split votes and votes more for the Liberals than the middle class. However, this difference between constituencies will turn out to be mainly a result of different election years rather than within election year geographic differences.

We report election results for each election in our poll book sample in Table SI3. Importantly, the number of candidates remains relatively constant throughout the time period we study. There are typically three or four candidates running for two seats. Therefore, it ought to be less likely that our findings would be driven merely by changes in the candidate pool.

Figures SI2 and SI3 plot DID graphics using residuals from regressions where we net out year dummies. The graphs reflect the patterns we saw in corresponding illustrations in the main text.

Finally, Table SI4 shows estimation results using a sample of by-elections in Guildford (1858 and 1866) and Sandwich (1841, 1852, 1859 and 1866). In such elections, the constituents were electing only one candidate to replace a politician whose term was terminated prematurely (for example, due to the politician passing away). Therefore, the voters did not have the possibility to cast split votes and the analysis allows us to verify that the observed change in Liberal voting is also present nevertheless. Table SI4 demonstrates that the voting behaviour of the working class voters changed very similarly after 1865 even in by-elections.

Notes: Constituencies included in our data are marked with a cross. Constituencies marked with a circle are other constituencies for which we have found poll books with occupational information.

Figure SI1. Map of constituencies with poll books.

Table SI1. Ten most common occupations by class and constituency.

	Panel A: Ashford			
	Middle class (N = 237)		Working class (N = 260)	
Rank	Occupation	N	Occupation	N
1	Gentry	29	Farmer	25
2	Grocer	27	Carpenter	21
3	Draper	19	Shoe maker	17
3	Clerk	14	Labourer	16
5	Inn keeper	13	Butcher	14
6	Merchant	11	Baker	13
7	Doctor	10	Tailor	13
8	House proprietor	9	Engineer	11
9	Lawyer	9	Cabinet maker	10
10	Agent	7	Coach builder	10

	Panel B: Guildford			
	Middle class (N = 1253)		Working class (N = 2054)	
Rank	Occupation	N	Occupation	N
1	Gentry	230	Carpenter	174
2	Dealer	149	Shoe maker	157
3	Grocer	133	Baker	123
3	Merchant	73	Tailor	119
5	Doctor	50	Labourer	105
6	Lawyer	48	Butcher	92
7	Inn keeper	46	Blacksmith	72
8	Victualler	43	Brick layer	71
9	Publican	40	Brewer	61
10	Clerk	39	Gardener	56

	Panel C: Sandwich			
	Middle class (N = 2815)		Working class (N = 3726)	
Rank	Occupation	N	Occupation	N
1	Gentry	797	Pilot	356
2	Victualler	291	Mariner	283
3	Grocer	260	Baker	266
3	Army	162	Labourer	244
5	Dealer	114	Shoe maker	219
6	Publican	103	Carpenter	195
7	Merchant	97	Farmer	182
8	Doctor	81	Butcher	168
9	Inn keeper	81	Gardener	160
10	Education	74	Tailor	149

Table SI2. Aggregate level party votes by constituency and class.

	Panel A: Ashford, parliamentary county elections (1852-1865)		
	Middle class ($N = 242$)	Working class ($N = 260$)	Difference
Liberal	0.642	0.537	-0.105
	[0.632]	[0.651]	[0.057]
Conservative	0.181	0.244	0.063
	[0.493]	[0.504]	[0.045]
Split	0.177	0.219	0.042
	[0.422]	[0.425]	[0.038]
	Panel B: Guildford, parliamentary borough elections (1832-1868)		
	Middle class ($N = 1348$)	Working class ($N = 2054$)	Difference
Liberal	0.369	0.395	0.026
	[0.712]	[0.692]	[0.025]
Conservative	0.297	0.348	0.051**
	[0.664]	[0.646]	[0.023]
Split	0.334	0.257	-0.077*
	[0.511]	[0.505]	[0.018]
	Panel C: Sandwich, parliamentary borough elections (1832-1868)		
	Middle class ($N = 2815$)	Working class ($N = 3726$)	Difference
Liberal	0.475	0.528	0.052*
	[0.829]	[0.791]	[0.020]
Conservative	0.398	0.379	-0.019
	[0.800]	[0.765]	[0.019]
Split	0.127	0.093	-0.034*
	[0.367]	[0.360]	[0.009]

Notes: Only those voters who voted in general elections are included. Standard deviations are reported in brackets. Differences in means are tested using a *t*-test adjusted for clustering at the voter level. * and ** denote statistical significance at 5% and 1% levels, respectively.

Table SI3. Candidates in elections.

Kent, Eastern (Ashford)					Guildford					Sandwich				
Election	Electors	Candidate	Party	Votes	Election	Electors	Candidate	Party	Votes	Election	Electors	Candidate	Party	Votes
1852	7119	Sir E. C. Dering, Bt.	L	3063	1832	342	J. Mangles	L	299	1832	916	J. Marryat	L	495
		W. Deedes	C	2879			C. B. Wall	C	180			Sir. E. T. Troubridge, B.t.	L	485
		Sir B. W. Bridges, Bt.	C	2356			Hon. C. F. Norton	L	138			S. G. Price	C	361
1857	8000	Sir B. W. Bridges, Bt.	C	2379	1835	537	J. Mangles	L	299			Sir. E. W. C. R. Owen	C	265
		Sir E. C. Dering, Bt.	L	2358			C. B. Wall	C	214	1835	934	S. G. Price	C	551
		W. Deedes	C	2216			H. A. C. Austen	L	131			Sir E. T. Troubridge, Bt.	L	405
		E. A. Acheson	L	127	1837	425	C. B. Wall	C	252			Sir E. W. C. R. Owen	C	389
1865	8250	Sir B. W. Bridges, Bt.	C	3208			Hon. J. Y. Scarlett	C	188	1837	911	Sir E. T. Troubridge, Bt.	L	416
		Sir E. C. Dering, Bt.	L	3195			J. Mangles	L	159			Sir J. R. Carnac, Bt.	L	401
		Sir N. J. Knatchbull, Bt.	C	2919	1841	486	R. D. Mangles	L	242			S. G. Price	C	370
1868	13107	E. L. Pemberton	C	5231			C. B. Wall	L	221			Sir B. W. Bridges, Bt.	C	330
		Hon. G. W. Milles	C	5104			Hon. J. Y. Scarlett	C	177	1847	943	Lord Clarence Paget	L	459
		H. J. Tufton	L	4685			H. Currie	C	161			C. W. Grenfell	L	437
		Sir J. Croft, Bt.	L	4579	1847	585	H. Currie	C	336			Lord Charles Clinton	C	392
							R. D. Mangles	L	242	1857	1008	E. H. K Hugessen	L	547
							T. L. Thurlow	C	184			Lord Clarence Paget	L	503
					1852	648	R. D. Mangles	L	370			J. McGregor	C	322
							J. Bell	L	251			J. Lang	L	24
							T. L. Thurlow	C	184	1859	1030	E. H. K Hugessen	L	497
					1857	666	R. D. Mangles	L	349			Lord Clarence Paget	L	458
							W. Bovill	C	338			Sir J. Fergusson, Bt.	C	404
							J. Bell	L	167			W. D. Lewis	C	328
					1865	667	G. J. H. M. E. Onslow	L	333	1865	1054	E. H. K Hugessen	L	494
							W. Bovill	C	318			Lord Clarence Paget	L	477
							W. W. Pocock	L	228			C. Capper	C	413
										1868	1906	E. H. K Hugessen	L	933
												H. A. Brassey	L	923
												H. Worms	C	710

Notes: C = Conservative, L = Liberal, Hon. = honourable, Bt. = baronet. Source: Craig (1977).
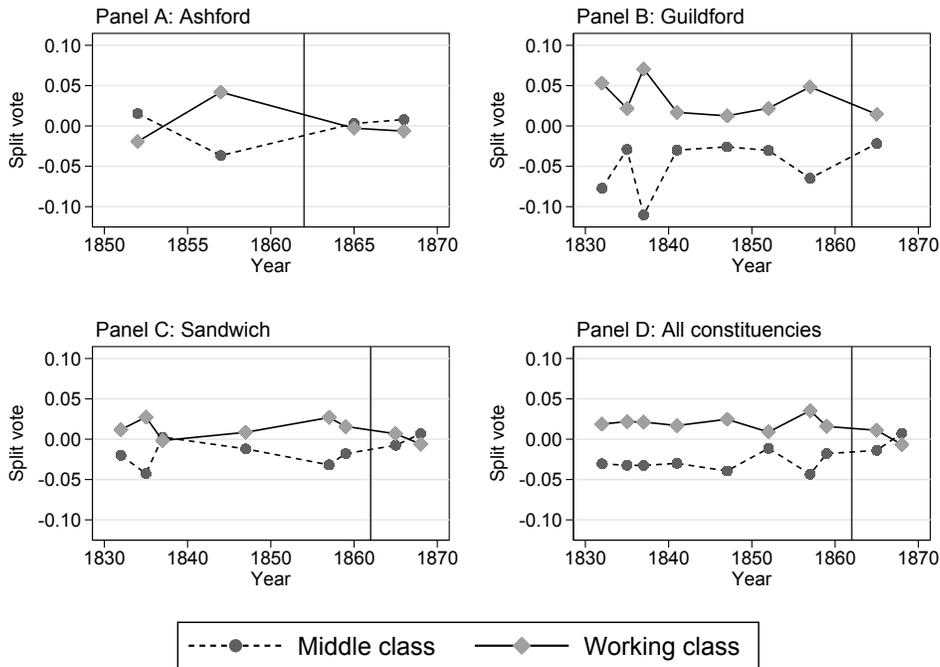
Figure SI2. Graphical representation of the DID analysis on split voting residuals.
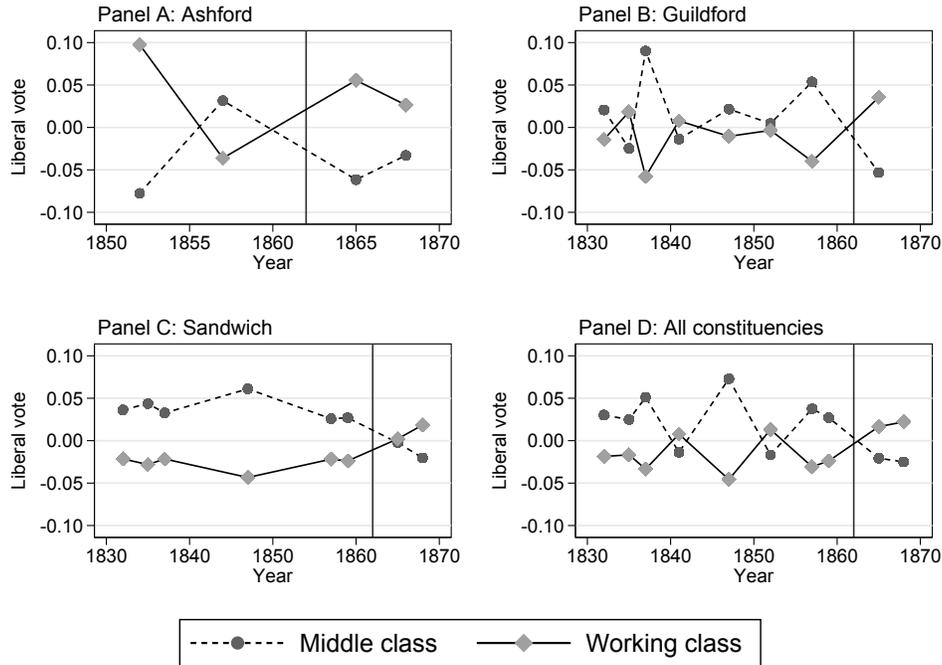
Figure SI3. Graphical representation of the DID analysis on voting for Liberals residuals.

Table SI4. Regression results using data from by-elections.

	(1)	(2)	(3)	(4)
1[Working class]	-0.063**	-0.050*	-0.050*	-0.050*
	[0.023]	[0.022]	[0.022]	[0.022]
1[Year≥1865]	-0.105**			
	[0.022]			
1[Working class] ×1[Year≥1865]	0.149**	0.134**	0.135**	0.135**
	[0.029]	[0.029]	[0.029]	[0.029]
Constant	0.548**			
	[0.018]			
N	5167	5167	5167	5167
R^2	0.01	0.04	0.04	0.04

Notes: Only by-elections in Guildford (1858 and 1866) and Sandwich (1841, 1852, 1859 and 1866) are included. Outcome is a dummy for casting a liberal vote. Estimates are conditional on voting. Robust standard errors clustered by voter are reported in brackets. ***, ** and * denote statistical significance at 1%, 5% and 10%, respectively.

SI2   Additional Sensitivity Checks

We provide additional robustness analysis in this Appendix. We begin by exploring sensitivity of our main results to alternative social class divisions by reclassifying the voters mimicking Eriksson and Goldthorpe's (1992) five-class scheme as closely as possible (see also Ganzeboom and Treiman 1996). As a minor deviation, we include a sixth class, the landed gentry. First, we show in Table SI5 that the decline in split votes comes mainly from non-skilled and skilled workers. Second, we verify in Table SI6 that the alignment with the Liberals happens among the non-skilled and skilled workers. Tables SI7 and SI8 demonstrate how our middle and working classes and different occupations map into the Eriksson-Goldthorpe classification.

In Table SI9, we study whether the results are robust to excluding those voters from the sample who voted for the first time in 1868 elections in Ashford or Sandwich. While the fact that original poll book data for Sandwich excluded voters enfranchised in 1867 implies that results concerning Sandwich should not be attributed to the reform, there are some voters who were eligible to vote before but did not exercise their right to do so. The results remain the same after excluding these voters from the estimation sample.

We observe some of the voters multiple times and some of them move between social classes. Thus, it is possible to include voter fixed effects in our estimations.[1] We study the robustness of our results to including these fixed effects in Table SI10. The results concerning split voting are very similar even after the voter fixed effects are included. However, the coefficient of the interaction term is slightly toned down in the case of Liberal voting once the fixed effects are introduced.

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[1]We include only voters who are observed at least twice in this analysis. This changes our estimation sample slightly.

Table SI5. Split voting using Eriksson-Goldthorpe classification.

	(1)	(2)	(3)	(4)
1[Non-skilled worker]	0.076**	0.068**	0.057**	0.059**
	[0.019]	[0.019]	[0.017]	[0.017]
1[Skilled worker]	0.100**	0.095**	0.068**	0.065**
	[0.016]	[0.016]	[0.014]	[0.014]
1[Farm worker]	0.087**	0.086**	0.087**	0.081**
	[0.029]	[0.029]	[0.026]	[0.025]
1[Petty bourgeoisie]	0.036*	0.033*	0.011	0.006
	[0.017]	[0.017]	[0.016]	[0.016]
1[White-collar worker]	0.077**	0.067**	0.037*	0.033
	[0.020]	[0.020]	[0.018]	[0.018]
1[Year≥1865]	-0.086**			
	[0.018]			
1[Non-skilled worker] ×1[Year≥1865]	-0.057*	-0.048	-0.075**	-0.040
	[0.028]	[0.028]	[0.028]	[0.027]
1[Skilled worker] ×1[Year≥1865]	-0.080**	-0.076**	-0.094**	-0.050*
	[0.022]	[0.022]	[0.021]	[0.021]
1[Farm worker] ×1[Year≥1865]	-0.035	-0.032	-0.048	-0.025
	[0.040]	[0.040]	[0.039]	[0.037]
1[Petty bourgeoisie] ×1[Year≥1865]	-0.023	-0.020	-0.034	0.006
	[0.023]	[0.023]	[0.023]	[0.023]
1[White-collar worker] ×1[Year≥1865]	-0.055*	-0.044	-0.063*	-0.009
	[0.028]	[0.028]	[0.028]	[0.026]
Constant	0.141**			
	[0.013]			
N	10445	10445	10445	10445
R^2	0.03	0.06	0.12	0.16
Year FE		✓	✓	✓
Constituency FE			✓	
Year-Constituency FE				✓

Notes: Only general elections are included. Outcome is a dummy for casting a split vote. Estimates are conditional on voting. Data from all three constituencies are pooled together. Robust standard errors clustered by voter are reported in brackets. * and ** denote statistical significance at 5% and 1% levels, respectively.

Table SI6. Liberal voting using Eriksson-Goldthorpe classification.

	(1)	(2)	(3)	(4)
1[Non-skilled worker]	-0.070*	-0.066*	-0.056	-0.047
	[0.031]	[0.031]	[0.031]	[0.030]
1[Skilled worker]	-0.037	-0.040	-0.019	-0.013
	[0.026]	[0.026]	[0.026]	[0.026]
1[Farm worker]	-0.051	-0.056	-0.058	-0.047
	[0.042]	[0.041]	[0.041]	[0.040]
1[Petty bourgeoisie]	0.050	0.042	0.059*	0.063*
	[0.030]	[0.030]	[0.029]	[0.029]
1[White-collar worker]	-0.017	-0.025	-0.002	0.006
	[0.032]	[0.032]	[0.032]	[0.032]
1[Year$\geq$1865]	0.045			
	[0.037]			
1[Non-skilled worker] ×1[Year$\geq$1865]	0.111*	0.105*	0.106*	0.071
	[0.052]	[0.052]	[0.052]	[0.052]
1[Skilled worker] ×1[Year$\geq$1865]	0.121**	0.126**	0.123**	0.088*
	[0.042]	[0.042]	[0.042]	[0.042]
1[Farm worker] ×1[Year$\geq$1865]	0.071	0.073	0.076	0.048
	[0.064]	[0.064]	[0.063]	[0.062]
1[Petty bourgeoisie] ×1[Year$\geq$1865]	0.004	0.010	0.005	-0.028
	[0.046]	[0.046]	[0.046]	[0.046]
1[White-collar worker] ×1[Year$\geq$1865]	0.034	0.039	0.027	-0.021
	[0.052]	[0.052]	[0.051]	[0.052]
Constant	0.455**			
	[0.023]			
N	10445	10445	10445	10445
R^2	0.02	0.04	0.05	0.08
Year FE		✓	✓	✓
Constituency FE			✓	
Year-Constituency FE				✓

Notes: Only general elections are included. Outcome is a dummy for casting a Liberal vote. Estimates are conditional on voting. Data from all three constituencies are pooled together. Robust standard errors clustered by voter are reported in brackets. * and ** denote statistical significance at 5% and 1% levels, respectively.

Table SI7. Common occupations in different classes.

Eriksson-Goldthorpe class	Middle class	Working class
White-collar workers	Doctor, army, education, clerk, lawyer, religion	
Petty bourgeoisie	Grocer, victualler, dealer, merchant, publican	
Farm workers		Farmer, gardener, yeoman, ostler, grazier
Skilled workers		Baker, shoe maker, carpenter, pilot, tailor
Non-skilled workers		Labourer, mariner, brick layer, currier, carrier

Table SI8. Mapping between Eriksson-Goldthorpe and two-class classification.

	Middle class	Working class
Farm workers	0	546
Non-skilled workers	0	1291
Skilled workers	0	4203
Petty bourgeoisie	1969	0
White-collar workers	1250	0
Landed gentry	1186	0

Table SI9. Regression results excluding the first-time voters in 1868.

	Split vote				Liberal vote			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1[Working class]	0.056**	0.054**	0.052**	0.053**	-0.062**	-0.058**	-0.056**	-0.053**
	[0.011]	[0.010]	[0.010]	[0.010]	[0.016]	[0.016]	[0.016]	[0.016]
1[Year$\geq$1865]	-0.112**				0.055**			
	[0.011]				[0.020]			
1[Working class] ×1[Year$\geq$1865]	-0.039**	-0.039**	-0.044**	-0.041**	0.087**	0.086**	0.090**	0.087**
	[0.015]	[0.015]	[0.015]	[0.014]	[0.026]	[0.026]	[0.026]	[0.026]
Constant	0.179**				0.472**			
	[0.008]				[0.013]			
N	10255	10255	10255	10255	10255	10255	10255	10255
R^2	0.03	0.06	0.12	0.15	0.01	0.03	0.05	0.07
Year FE		✓	✓	✓		✓	✓	✓
Constituency FE			✓				✓	
Year-Constituency FE				✓				✓

Notes: Only general elections are included. Voters who vote for the first time after the Reform Act of 1867 are omitted. Estimates are conditional on voting. Data from all three constituencies are pooled together. Robust standard errors clustered by voter are reported in brackets. * and ** denote statistical significance at 5% and 1% levels, respectively.

Table SI10. Regression results including voter fixed effects.

	Split vote			Liberal vote		
	(1)	(2)	(3)	(4)	(5)	(6)
1[Working class]	0.069**	0.034	0.034	-0.087**	-0.057*	-0.057*
	[0.023]	[0.024]	[0.024]	[0.026]	[0.025]	[0.025]
1[Year≥1865]	-0.076**			-0.003		
	[0.016]			[0.017]		
1[Working class] ×1[Year≥1865]	-0.044*	-0.038	-0.038	0.042	0.037	0.037
	[0.022]	[0.022]	[0.022]	[0.023]	[0.023]	[0.023]
N	8923	8923	8923	8923	8923	8923
R^2	0.43	0.47	0.47	0.68	0.71	0.71
Year FE		✓	✓		✓	✓
Year-Constituency FE			✓			✓

Notes: Only general elections are included. Only voters who are observed at least twice are included in the estimation sample. All regressions include voter fixed effects. Estimates are conditional on voting. Data from all three constituencies are pooled together. Robust standard errors clustered by voter are reported in brackets. * and ** denote statistical significance at 5% and 1% levels, respectively.

SI3 Vote Buying Analysis

This Appendix discusses the details of our vote buying analysis. To identify occupational groups that were more susceptible to vote buying, we define a procedure that builds upon arguments made in previous research that radical inconsistencies or volatility in voting behaviour across different elections can be treated as an indication of vote buying (see Andrews 1998).[2]

First, we define a dummy for changing voting behaviour from the previous election for each voter. This dummy gets value one if a voter switches from Conservative (Liberal) to Liberal (Conservative) or split vote or from split vote to Conservative or Liberal vote. Then, we compute the average of this measure for all occupations using data from the period before 1865, i.e. our pre-treatment period. The measure serves as a proxy for the

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[2]Andrews (1998) writes that radical changes in voting behaviour is not itself an indication of vote buying. However, he also notes that certain occupational groups were more likely to switch their electoral behaviour across elections and speculates that these voters were a group of people who "might be very glad of the additional income that a well-placed bribe, however neatly colored, might provide".

propensity to be affected by vote buying. Finally, we define a dummy for belonging to a group likely affected by vote buying by splitting the sample by different thresholds (50th and 75th percentile) in the average volatility measure.

The group of volatile voters includes both working and middle class. A slight majority, roughly three out of five, of these volatile voters belong to the former. Voters classified as volatile often work as, for instance, small entrepreneurs such as shoe makers, dealers, innkeepers and tailors and labourers. Indeed, these occupations overlap partially with those groups that Andrews (1998) suspects were more likely affected by vote buying in Sandwich.

We employ the pooled data set consisting of all three constituencies and estimate equations of form

$$y_{it} = \lambda + \theta_1 1[Working\ class]_{it} + \theta_2 1[Volatile\ voter]_{it} + \theta_3 1[Year \geq 1865]_t +$$
$$\theta_4 1[Working\ class]_{it} \times 1[Year \geq 1865]_t + \theta_5 1[Year \geq 1865]_t \times 1[Volatile\ voter]_{it} + \eta_{it}.$$
$$(1)$$

Contrary to our previous estimations, we redefine the working class dummy so that the class includes only consistent voters (who are less likely to be affected by vote buying). We can then interpret the coefficients for the group dummies and their year interactions as effects relative to those amongst middle class voters who were consistent in their voting behaviour.

The estimation results are shown in Tables SI11 (split voting) and SI12 (Liberal votes). The first conclusions that we can draw from these tables are in line with the results discussed in the main text. First, we find that being a consistent working class voter is a strong and robust predictor of split and Liberal voting prior to the 1865 elections (the coefficient related to the Working class variable), the coefficients being statistically significant and positive and negative, respectively. Second, split voting goes down for all voters (the coefficient related to $1[Year \geq 1865]_t$) in elections during and subsequent to

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1865. Third, both consistent and volatile working class voters become more likely to cast Liberal votes in and after the year 1865.

Here, however, our question of interest is what happens to working class and volatile voters' behaviour in 1865 and after, i.e. the coefficients related to the interaction terms. First, it appears that being a consistent working class voter is only weakly associated with split voting after 1865. The estimated coefficients are rather small, around $2-3\%$. On the contrary, most of the decrease in split voting comes from volatile voters who change their voting behaviour. The estimates are much larger in absolute terms and statistically highly significant. This is perhaps what one would expect to see, if we have indeed classified those groups affected by vote buying properly and vote buying became less common during our post-treatment period. In Tables SI13 and SI14, we re-estimate equation (1) but split the group of volatile voters into volatile working class voters and volatile middle class voters, and contrast their and consistent working class voters' outcomes to those of consistently voting members of the middle class. These tables show that the effects for the volatile voters mainly come from the volatile working class voters changing their behaviour.

Table SI11. Role of vote buying, split votes I.

	50th percentile				75th percentile			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1[Working class]	0.035*	0.033*	0.037**	0.041**	0.048**	0.045**	0.046**	0.049**
	[0.014]	[0.014]	[0.013]	[0.013]	[0.012]	[0.012]	[0.011]	[0.011]
1[Year≥1865]	-0.098**				-0.106**			
	[0.014]				[0.011]			
1[Working class] ×1[Year≥1865]	-0.014	-0.011	-0.009	-0.020	-0.020	-0.018	-0.018	-0.023
	[0.019]	[0.019]	[0.019]	[0.018]	[0.017]	[0.017]	[0.017]	[0.016]
1[Volatile voter]	0.098**	0.090**	0.078**	0.080**	0.107**	0.100**	0.080**	0.080**
	[0.013]	[0.012]	[0.012]	[0.011]	[0.014]	[0.014]	[0.013]	[0.013]
1[Volatile voter] ×1[Year≥1865]	-0.071**	-0.065**	-0.068**	-0.058**	-0.094**	-0.086**	-0.084**	-0.068**
	[0.017]	[0.017]	[0.017]	[0.016]	[0.019]	[0.019]	[0.019]	[0.018]
Constant	0.154**				0.166**			
	[0.010]				[0.008]			
N	10445	10445	10445	10445	10445	10445	10445	10445
R^2	0.03	0.07	0.12	0.16	0.03	0.07	0.12	0.16
Year FE		✓	✓	✓		✓	✓	✓
Constituency FE			✓				✓	
Year-Constituency FE				✓				✓

Notes: Only general elections are included. The outcome is dummy for casting a split vote. Estimates are conditional on voting. Data from all three constituencies are pooled together. Robust standard errors clustered by voter are reported in brackets. * and ** denote statistical significance at 5% and 1% levels, respectively.

Table SI12. Role of vote buying, Liberal votes I.

	50th percentile				75th percentile			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1[Working class]	-0.053*	-0.050*	-0.052*	-0.051*	-0.076**	-0.071**	-0.071**	-0.069**
	[0.023]	[0.023]	[0.023]	[0.023]	[0.018]	[0.018]	[0.018]	[0.018]
1[Year≥1865]	0.068**				0.050*			
	[0.025]				[0.021]			
1[Working class] ×1[Year≥1865]	0.067	0.064	0.065	0.070*	0.087**	0.084**	0.086**	0.087**
	[0.036]	[0.036]	[0.035]	[0.035]	[0.029]	[0.029]	[0.029]	[0.029]
1[Volatile voter]	-0.043*	-0.040*	-0.029	-0.026	-0.039*	-0.039*	-0.024	-0.019
	[0.020]	[0.020]	[0.020]	[0.020]	[0.019]	[0.019]	[0.019]	[0.019]
1[Volatile voter] ×1[Year≥1865]	0.059	0.059	0.056	0.047	0.110**	0.108**	0.099**	0.083**
	[0.031]	[0.031]	[0.031]	[0.030]	[0.031]	[0.031]	[0.031]	[0.031]
Constant	0.471**				0.476**			
	[0.017]				[0.014]			
N	10445	10445	10445	10445	10445	10445	10445	10445
R^2	0.01	0.03	0.05	0.07	0.01	0.03	0.05	0.08
Year FE		✓	✓	✓		✓	✓	✓
Constituency FE			✓				✓	
Year-Constituency FE				✓				✓

Notes: Only general elections are included. The outcome is dummy for casting a Liberal vote. Estimates are conditional on voting. Data from all three constituencies are pooled together. Robust standard errors clustered by voter are reported in brackets. * and ** denote statistical significance at 5% and 1% levels, respectively.

Table SI13. Role of vote buying, split votes II.

	50th percentile				75th percentile			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1[Working class]	0.035*	0.033*	0.037**	0.041**	0.048**	0.073**	0.046**	0.049**
	[0.014]	[0.014]	[0.013]	[0.013]	[0.012]	[0.011]	[0.011]	[0.011]
1[Year≥1865]	-0.098**				-0.106**			
	[0.014]				[0.011]			
1[Working class] ×1[Year≥1865]	-0.014	-0.012	-0.009	-0.020	-0.020	-0.126**	-0.018	-0.023
	[0.019]	[0.019]	[0.019]	[0.018]	[0.017]	[0.012]	[0.017]	[0.016]
1[Volatile working class]	0.059**	0.052**	0.043**	0.046**	0.087**	0.113**	0.050*	0.056**
	[0.016]	[0.015]	[0.014]	[0.014]	[0.021]	[0.021]	[0.020]	[0.020]
1[Volatile middle class]	0.118**	0.111**	0.097**	0.099**	0.114**	0.139**	0.089**	0.088**
	[0.014]	[0.014]	[0.013]	[0.013]	[0.015]	[0.014]	[0.014]	[0.014]
1[Volatile middle class] ×1[Year≥1865]	-0.032	-0.025	-0.018	-0.020	-0.055*	-0.162**	-0.017	-0.019
	[0.021]	[0.021]	[0.021]	[0.020]	[0.028]	[0.026]	[0.028]	[0.027]
1[Volatile working class] ×1[Year≥1865]	-0.092**	-0.088**	-0.097**	-0.080**	-0.111**	-0.217**	-0.113**	-0.089**
	[0.020]	[0.020]	[0.020]	[0.019]	[0.021]	[0.017]	[0.021]	[0.020]
Constant	0.154**				0.166**	0.141**		
	[0.010]				[0.008]	[0.007]		
N	10445	10445	10445	10445	10445	10445	10445	10445
R^2	0.03	0.07	0.12	0.16	0.03	0.03	0.12	0.16
Year FE		✓	✓	✓		✓	✓	✓
Constituency FE			✓				✓	
Year-Constituency FE				✓				✓

Notes: Only general elections are included. The outcome is dummy for casting a split vote. Estimates are conditional on voting. Data from all three constituencies are pooled together. Robust standard errors clustered by voter are reported in brackets. * and ** denote statistical significance at 5% and 1% levels, respectively.

Table SI14. Role of vote buying, Liberal votes II.

	50th percentile				75th percentile			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1[Working class]	-0.053*	-0.050*	-0.052*	-0.051*	-0.076**	-0.071**	-0.071**	-0.069**
	[0.023]	[0.023]	[0.023]	[0.023]	[0.018]	[0.018]	[0.018]	[0.018]
1[Year≥1865]	0.068**				0.050*			
	[0.025]				[0.021]			
1[Working class] ×1[Year≥1865]	0.067	0.064	0.065	0.070*	0.087**	0.084**	0.086**	0.087**
	[0.036]	[0.036]	[0.035]	[0.035]	[0.029]	[0.029]	[0.029]	[0.029]
1[Volatile working class]	0.003	0.002	0.011	0.010	-0.023	-0.030	-0.012	-0.011
	[0.024]	[0.024]	[0.024]	[0.024]	[0.029]	[0.029]	[0.029]	[0.029]
1[Volatile middle class]	-0.068**	-0.063**	-0.050**	-0.046*	-0.044*	-0.043*	-0.028	-0.022
	[0.021]	[0.021]	[0.021]	[0.021]	[0.021]	[0.021]	[0.021]	[0.021]
1[Volatile middle class] ×1[Year≥1865]	-0.024	-0.023	-0.030	-0.030	0.041	0.040	0.021	0.016
	[0.038]	[0.038]	[0.037]	[0.037]	[0.046]	[0.046]	[0.046]	[0.046]
1[Volatile working class] ×1[Year≥1865]	0.109**	0.108**	0.109**	0.094**	0.143**	0.142**	0.138**	0.117**
	[0.034]	[0.034]	[0.034]	[0.033]	[0.035]	[0.035]	[0.035]	[0.035]
Constant	0.471**				0.476**			
	[0.017]				[0.014]			
N	10445	10445	10445	10445	10445	10445	10445	10445
R^2	0.01	0.03	0.05	0.08	0.01	0.04	0.05	0.08
Year FE		✓	✓	✓		✓	✓	✓
Constituency FE			✓				✓	
Year-Constituency FE				✓				✓

Notes: Only general elections are included. The outcome is dummy for casting a Liberal vote. Estimates are conditional on voting. Data from all three constituencies are pooled together. Robust standard errors clustered by voter are reported in brackets. * and ** denote statistical significance at 5% and 1% levels, respectively.

SI4 External Validity

This appendix reports additional analyses on external validity of our results. First, we explore the aggregate patterns further by grouping the working class into low skilled occupations (labourers and workers in agriculture, mining, and domestic service), and high skilled occupations (building, manufacturing, and transportation workers). The latter group will contain a larger share of eligible voters. Figure SI4 attempts to graphically mimic our difference-in-difference analysis at the aggregate level. We report how the Liberal vote share evolves in municipalities in two groups with above or below median share of low (or high) skilled working class. Liberal voting does not increase around 1865 in constituencies with a large share of high skilled working class (Panel A), unlike it does in constituencies with more low skilled working class (Panel B). Given this, the main results of this paper concerning the alignment of the working class with the left seems more likely to generalize to the behaviour of low skilled working class.

Comparing across constituencies using aggregate data one might find that working

class share is negatively correlated with Liberal vote share, even though, at the individual level, working class voters are more likely to vote Liberal. This is due to the possibility that, because of franchise restrictions, as the share of working class in a constituency goes up then the share of middle class voters goes up. We construct a proxy of voter eligibility share as the total votes in constituency divided by the number of adult males who gain wages in year 1861. Since women and men who received no wages were disenfranchised the numerator is never larger than the denominator. Figure SI5 illustrates a negative correlation between working class population and enfranchised population. In Figure SI6, we show that the share of low-skilled working class is indeed negatively correlated with eligibility, whereas the share of high-skilled is positively correlated. For the sake of clarity, the figures show binned averages within twenty bins with equal number of observations and linear fits.

Finally, to further explore how the voters in our data compare with constituents in other constituencies, we report the distribution of different social classes in our data and six other constituencies for which we were able to acquire poll books with occupational information (see Table SI15). These are Sheffield (two elections in 1852 and 1857; White and Arthur 2001), Barnstaple (three elections in 1847-1857), Beverley (elections in 1857 and 1859), Cambridge (three elections in 1847-1857), Gloucester (two elections in 1857 and 1859), and Maldon (two elections in 1847 and 1852). The social class composition of the voters in our poll book data does not drastically differ from that in the six other constituencies for which we were able to obtain some poll book information.
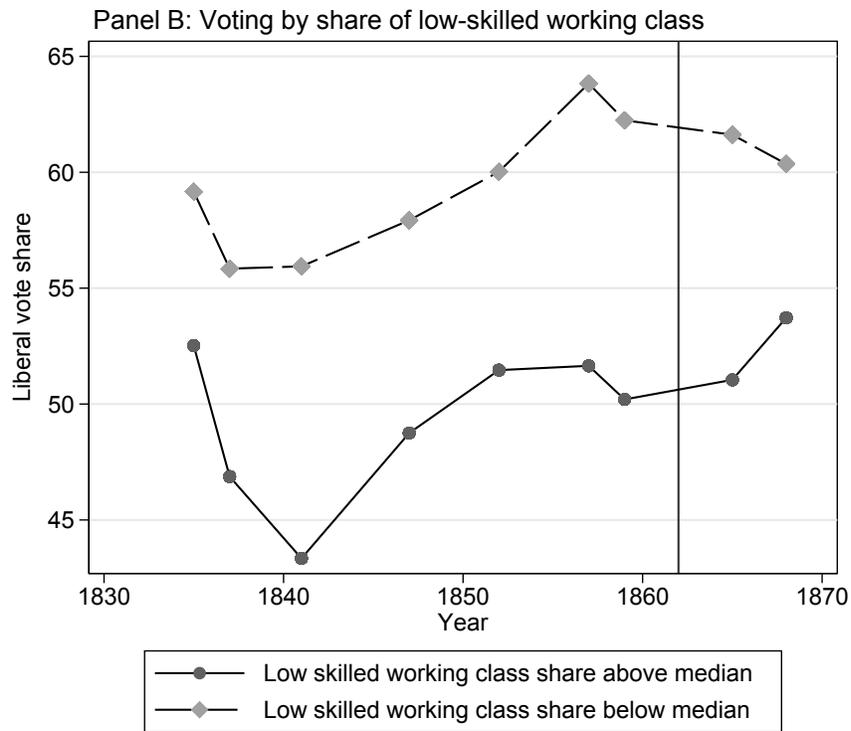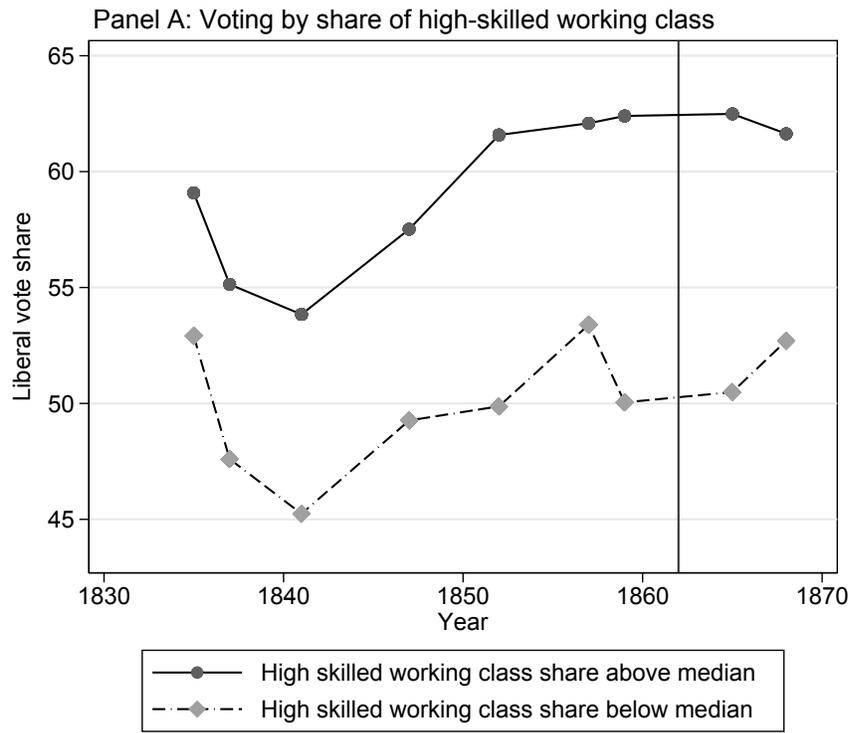
Figure SI4. Evolution of Liberal voting by the share of working class population.
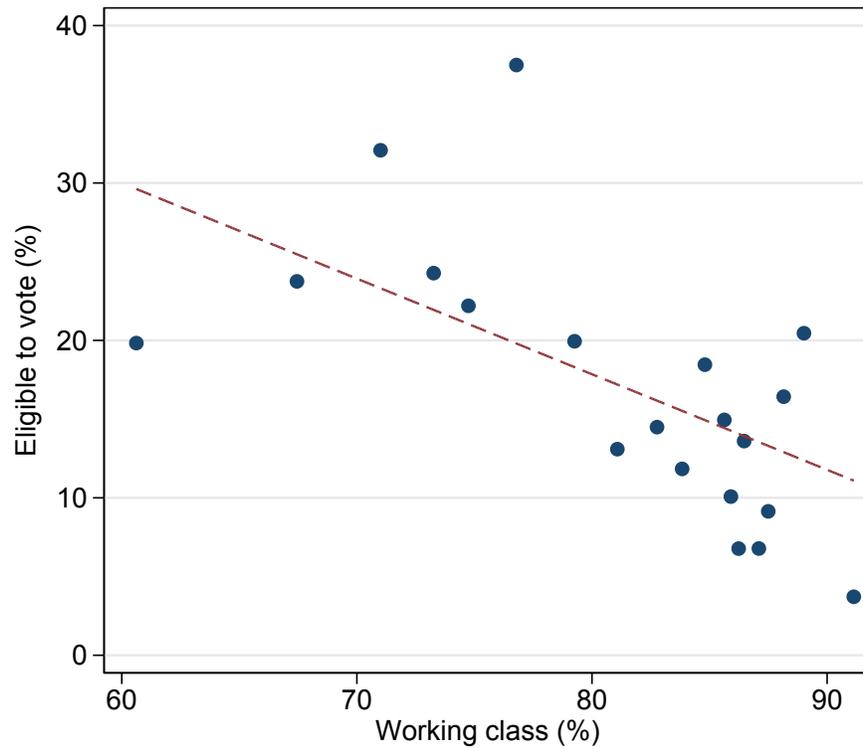
Figure SI5. Working class share and eligibility to vote.

Table SI15. Distribution of social classes in poll books of nine constituencies.

	Working classes			Middle classes		
Constituency	Non-skilled workers	Skilled workers	Farm workers	Petty bourgeoisie	White-collar workers	Landed gentry
Ashford	0.09	0.36	0.07	0.24	0.19	0.05
Barnstaple	0.10	0.39	0.06	0.21	0.13	0.11
Beverley	0.17	0.45	0.11	0.12	0.07	0.08
Cambridge	0.11	0.43	0.04	0.19	0.16	0.06
Gloucester	0.13	0.43	0.03	0.19	0.16	0.06
Guildford	0.11	0.46	0.03	0.19	0.14	0.07
Maldon	0.38	0.27	0.12	0.12	0.06	0.05
Sandwich	0.13	0.38	0.06	0.18	0.10	0.14
Sheffield	0.0032	0.47	0.05	0.27	0.13	0.08
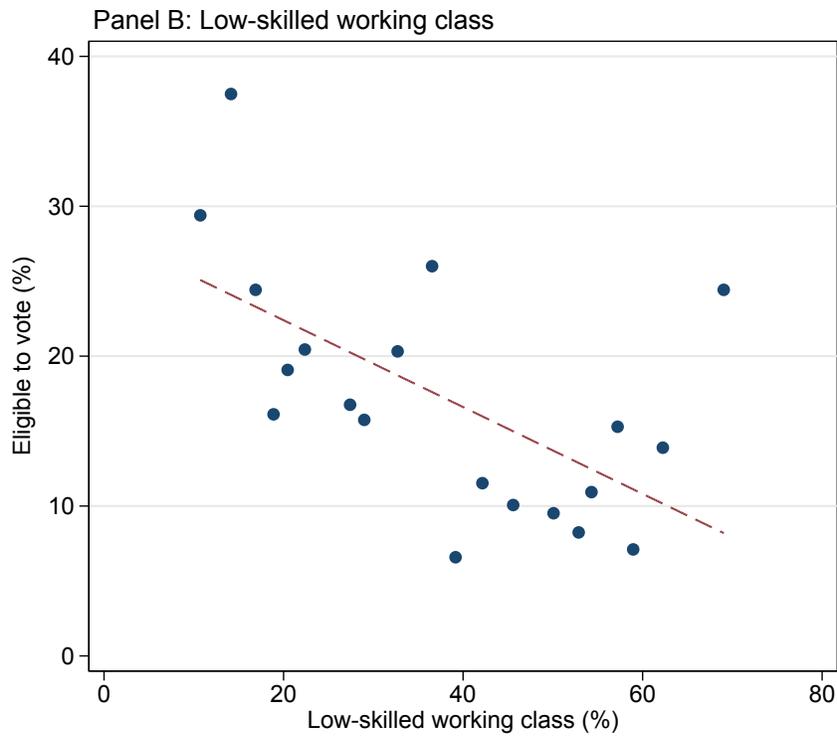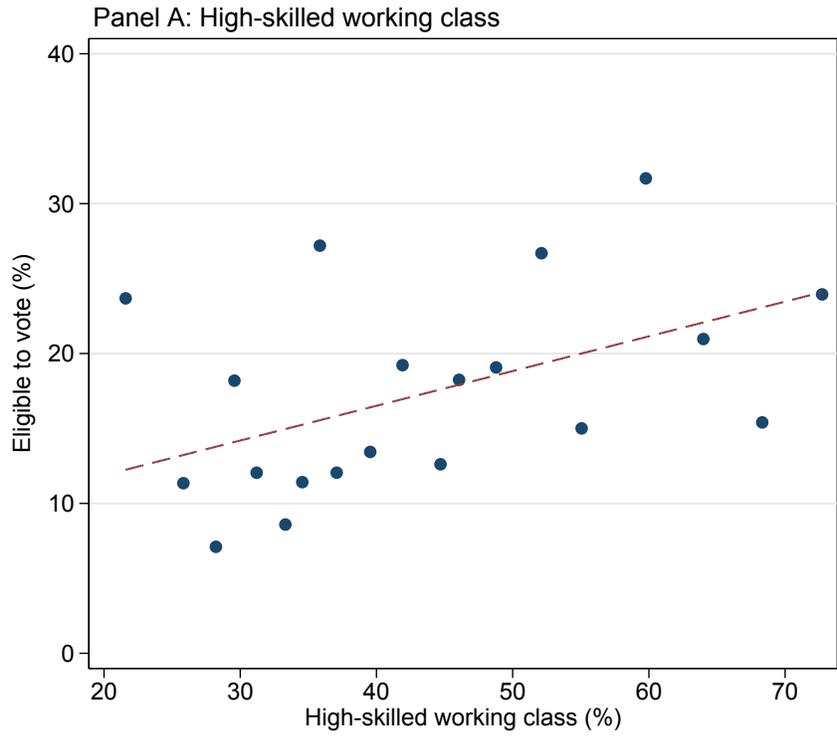
Figure SI6. High- and low-skilled working class and eligibility to vote.

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