Supplementary Materials

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Vote Choices and Valence: Intercepts and Alternate Specifications

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A Intercepts as Valences in Published Work

Numerous works use intercepts of vote choice models to measure valence empirically. These articles and books are broadly published in top journals and publishing houses, widely cited, and enjoy a great impact on current empirical practice. To demonstrate this, below is a list of references and applications; numbers in parentheses give Google Scholar Citations (search results obtained in May 2023).
We do not claim that this list is exhaustive.

32. Vasilopoulou, Sofia and Roi Zur. 2022. Electoral competition, the EU issue and far-right success in Western Europe. ***Political Behavior*** :1-21. [-]

31. Zur, Roi. 2021b. Stuck in the middle: Ideology, valence and the electoral failures of centrist parties. ***British Journal of Political Science*** Volume 51(2):706-723. [**19**]

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29. Zur, Roi. 2017. When valence crushes: Explaining the electoral failure of the German FDP in the 2013 election. ***German Politics*** Volume 26(3):380-397. [**12**]

28. Labzina, Elena, Joan Barcelo and Norman Schofield. 2017. Valence and ideological proximity in the rise of nationalist parties: Spanish general elections, 2008 and 2011. In *States, Institutions and Democracy: Contributions of Political Economy*, edited by Norman Schofield and Gonzalo Caballero. Cham, Germany: **Springer**, 105-142. [**1**]

27. Kurella, Anna-Sophie and Jan Rosset. 2017b. Blind spots in the party system: Spatial voting and issue salience if voters face scarce choices. ***Electoral Studies*** Volume 49:1-16. [**22**]

26. Kurella, Anna-Sophie. 2017. *Issue Voting and Party Competition: The Impact of Cleavage Lines on German Elections between 1980-1994*. Contributions to Political Science. Mannheim, Germany: **Springer International Publishing**. [**6**]

25. Kim, Jeong Hyun and Norman Schofield. 2016. Spatial model of U.S. presidential election in 2012. In *The Political Economy of Social Choices*, edited by Maria Gallego and Norman Schofield. Cham, Germany: **Springer International Publishing**, 233-241. [**6**]

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21. Kurella, Anna-Sophie and Franz U. Pappi. 2015. Combining ideological and policy distances with valence for a model of party competition in Germany 2009. ***Journal of Theoretical Politics*** Volume 27(1):86-107. [**31**]

20. Gallego, Maria, Norman Schofield, Kevin McAlister and Jee Seon Jeon. 2014. The variable choice set logit model applied to the 2004 Canadian election. ***Public Choice*** Volume 158(3): 427-463. [**16**]

19. Schofield, Norman and Betul Demirkaya. 2013. Spatial model of elections in Turkey: Tracing changes in the party system in the 2000s. In *Advances in Political Economy: Institutions, Modelling and Empirical Analysis*, edited by Norman Schofield, Gonzalo Caballero and, Daniel Kselman. Berlin and Heidelberg, Germany: **Springer**, 317-330. [**2**]

18. McAlister, Kevin, Jee Seon Jeon and Norman Schofield. 2013. Modeling elections with varying party bundles: Applications to the 2004 Canadian election. In *Advances in Political Economy: Institutions, Modelling and Empirical Analysis*, edited by Norman Schofield, Gonzalo Caballero and Daniel Kselman. Berlin and Heidelberg, Germany: **Springer**, 289-315. [**1**]

17. Schofield, Norman, Maria Gallego, Jee Seon Jeon and Marina Muskhelishvili. 2012. Modelling elections in the Caucasus. ***Journal of Elections, Public Opinion and Parties*** Volume 22(2): 187-214. [**13**]

16. Schofield, Norman, Christopher Claassen, Ugur Ozdemir and Alexei Zakharov. 2011. Application of a theorem in stochastic models of elections. ***International Journal of Mathematics and Mathematical Sciences*** online publication. doi: 10.1155/2010/562813. [**3**]

15. Schofield, Norman, Christopher Claassen, Maria Gallego and Ugur Ozdemir. 2011. Empirical and formal models of the United States presidential elections in 2000 and 2004. In *Political Economy of Institutions, Democracy and Voting*, edited by Norman Schofield and Gonzalo Caballero. Berlin and Heidelberg, Germany: **Springer**, 217-258. [**31**]

14. Schofield, Norman, Maria Gallego, Ugur Ozdemir and Alexei Zakharov. 2011. Competition for popular support: A valence model of elections in Turkey. ***Social Choice and Welfare*** Volume 36(3):451-482. [**33**]

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12. Schofield, Norman. 2008. *The Spatial Model of Politics.* Abingdon, England: **Routledge**. [**139**]

11. Schofield, Norman and Alexei, Zakharov. 2010. A stochastic model of the 2007 Russian Duma election. ***Public Choice*** Volume 142(1):177-194. [**48**]

10. Schofield, Norman and Gary Miller. 2007. Elections and activist coalitions in the United States. ***American Journal of Political Science*** Volume 51(3):518-531. [**81**]

9. Schofield, Norman. 2006. Equilibria in the spatial stochastic model of voting with party activists. ***Review of Economic Design*** Volume 10(3):183-203. [**82**]

8. Schofield, Norman and Itai Sened. 2006. *Multiparty Democracy. Elections and Legislative Politics.* New York, NY: **Cambridge University Press**. [**418**]

7. Schofield, Norman. 2005. A valence model of political competition in Britain: 1992-1997. ***Electoral Studies*** Volume 24(3):347-370. [**67**]

6. Schofield, Norman and Itai Sened. 2005. Multiparty competition in Israel, 1988-96. ***British Journal of Political Science*** Volume 35(4):635-663. [**94**]

5. Schofield, Norman and Itai Sened. 2005. Modeling the interaction of parties, activists and voters: Why is the political center so empty? ***European Journal of Political Research*** Volume 44(3):355-390. [**154**]

4. Schofield, Norman. 2004. Equilibrium in the spatial 'valence' model of politics. ***Journal of Theoretical Politics*** Volume 16(4):447-481. [**176**]

3. Schofield, Norman, Gary Miller and Andrew D. Martin. 2003. Critical elections and political realignments in the USA: 1860-2000. ***Political Studies*** Volume 51(2):217-240. [**110**]

2. Schofield, Norman. 2003. Valence competition in the spatial stochastic model. ***Journal of Theoretical Politics*** Volume 15(4):371-383. [**218**]

1. Schofield, Norman, Andrew D. Martin, Kevin M. Quinn and Andrew B. Whitford. 1998. Multiparty electoral competition in the Netherlands and Germany: A model based on multinomial probit. In *Empirical Studies in Comparative Politics*, edited by Melvin J. Hinich and Michael C. Munger. Philadelphia, NY: **Springer US**, 39-75. [**190**]

B Application: 1998 German Parliamentary Election

B.1 Data Set

The data is the same as in Mauerer (2019). It is a subset of the 1998 German national election study (Falter, Gabriel, and Rattinger 2012) that contains vote choices for the five major parties in the 1998 German parliamentary election: Christian Democrats (CDU), Social Democratic Party (SPD), Liberal Party (FDP), Greens, PDS (Left). The choice-specific variables $\boldsymbol{z}_{ij}$ represent the policy considerations: spatial proximities on the issues of immigration, nuclear energy, European integration, and the Left-Right dimension (11-point scales). Spatial proximity is defined as the absolute negative distance between voter-specific self-placements voter-specific party placement perceptions.

The chooser-specific variables $\boldsymbol{x}_i$ are age (centered around the sample mean) and

- Worker or working class (1: worker, 2: otherwise)
- Union membership (1: union member, 2: otherwise)
- Religious denomination (1: catholic, 2: otherwise)
- Gender (1: female, 2: male)
- Region (1: former West Germany, 2: former East Germany)

We added the chooser-specific variables in effect coding to the data set. Table A1 gives the coding. The variable names in italics are the ones that appear in the replication files. See also Supplementary Materials in Mauerer (2019).

(0-1) Coding			Effect Coding		
work	1	worker	*workec*	1	worker
	0	otherwise		-1	otherwise
work2	1	otherwise	*work2ec*	1	otherwise
	0	worker		-1	worker
union	1	union member	*unionec*	1	union member
	0	otherwise		-1	otherwise
union2	1	otherwise	*union2ec*	1	otherwise
	0	union member		-1	union member
relig	1	catholic	*religec*	1	catholic
	0	otherwise		-1	otherwise
relig2	1	otherwise	*relig2ec*	1	otherwise
	0	catholic		-1	catholic
gender	1	female	*genderec*	1	female
	0	male		-1	male
gender2	1	male	*gender2ec*	1	male
	0	female		-1	female
west	1	West Ger.	*westec*	1	West Ger.
	0	East Ger.		-1	East Ger.
west2	1	East Ger.	*west2ec*	1	East Ger.
	0	West Ger.		-1	West Ger.

Table A1: Coding of Categorical Chooser-Specific Covariates

B.2 Estimation Tables

B.2.1 (0-1) Coding

	coef.	s.e.	t-val.	exp(coef.)
Intercept SPD	-0.06	0.28	-0.21	0.94
Intercept FDP	-1.73	0.57	-3.03	0.18
Intercept Greens	-2.44	0.58	-4.18	0.09
Intercept Left	-0.37	0.38	-0.98	0.69
Proximity on Immigration	0.09	0.05	1.90	1.09
Proximity on European Integration	0.20	0.06	3.65	1.22
Proximity on Nuclear Energy	0.31	0.04	7.17	1.36
Proximity on Left-Right	0.39	0.03	11.21	1.47
Union Member SPD	0.91	0.38	2.36	2.48
Union Member FDP	0.55	0.64	0.86	1.74
Union Member Greens	1.13	0.51	2.21	3.10
Union Member Left	1.47	0.54	2.69	4.33
Worker SPD	0.21	0.24	0.87	1.24
Worker FDP	-1.45	0.65	-2.23	0.24
Worker Greens	-0.98	0.47	-2.07	0.38
Worker Left	-0.53	0.42	-1.26	0.59
Catholic SPD	-0.64	0.25	-2.57	0.53
Catholic FDP	-0.98	0.48	-2.02	0.38
Catholic Greens	-0.61	0.38	-1.62	0.54
Catholic Left	-0.85	0.63	-1.35	0.43
Age SPD	-0.02	0.01	-3.05	0.98
Age FDP	-0.02	0.01	-1.34	0.98
Age Greens	-0.09	0.01	-6.29	0.92
Age Left	-0.02	0.01	-1.86	0.98
Female SPD	-0.19	0.22	-0.84	0.83
Female FDP	-1.53	0.49	-3.11	0.22
Female Greens	-0.50	0.34	-1.45	0.61
Female Left	0.07	0.38	0.19	1.08
West Ger. SPD	0.18	0.28	0.65	1.20
West Ger. FDP	0.67	0.60	1.11	1.95
West Ger. Greens	1.16	0.56	2.06	3.18
West Ger. Left	-2.19	0.45	-4.86	0.11

Note: CDU is reference alternative. Age is centered around the sample mean.
Source: 1998 German election study (Falter, Gabriel, and Rattinger 2012).

Table A2: Vote Choice Model with (0-1) Coding for Categorical Voter Attributes, Model 1 in Table 4

	coef.	s.e.	t-val.	exp(coef.)
Intercept SPD	-0.25	0.28	-0.90	0.78
Intercept FDP	-3.26	0.67	-4.88	0.04
Intercept Greens	-2.94	0.58	-5.06	0.05
Intercept Left	-0.30	0.35	-0.85	0.74
Proximity on Immigration	0.09	0.05	1.90	1.09
Proximity on European Integration	0.20	0.06	3.65	1.22
Proximity on Nuclear Energy	0.31	0.04	7.17	1.36
Proximity on Left-Right	0.39	0.03	11.21	1.47
Union Member SPD	0.91	0.38	2.36	2.48
Union Member FDP	0.55	0.64	0.86	1.74
Union Member Greens	1.13	0.51	2.21	3.10
Union Member Left	1.47	0.54	2.69	4.33
Worker SPD	0.21	0.24	0.87	1.24
Worker FDP	-1.45	0.65	-2.23	0.24
Worker Greens	-0.98	0.47	-2.07	0.38
Worker Left	-0.53	0.42	-1.26	0.59
Catholic SPD	-0.64	0.25	-2.57	0.53
Catholic FDP	-0.98	0.48	-2.02	0.38
Catholic Greens	-0.61	0.38	-1.62	0.54
Catholic Left	-0.85	0.63	-1.35	0.43
Age SPD	-0.02	0.01	-3.05	0.98
Age FDP	-0.02	0.01	-1.34	0.98
Age Greens	-0.09	0.01	-6.29	0.92
Age Left	-0.02	0.01	-1.86	0.98
Male SPD	0.19	0.22	0.84	1.21
Male FDP	1.53	0.49	3.11	4.62
Male Greens	0.50	0.34	1.45	1.64
Male Left	-0.07	0.38	-0.19	0.93
West Ger. SPD	0.18	0.28	0.65	1.20
West Ger. FDP	0.67	0.60	1.11	1.95
West Ger. Greens	1.16	0.56	2.06	3.18
West Ger. Left	-2.19	0.45	-4.86	0.11

Note: CDU is reference alternative. Age is centered around the sample mean.
Source: 1998 German election study (Falter, Gabriel, and Rattinger 2012).

Table A3: Vote Choice Model with (0-1) Coding for Categorical Voter Attributes (Gender reversed), Model 2 in Table 4

	coef.	s.e.	t-val.	exp(coef.)
Intercept SPD	0.05	0.20	0.25	1.05
Intercept FDP	-1.21	0.29	-4.22	0.30
Intercept Greens	-1.46	0.32	-4.52	0.23
Intercept Left	-1.22	0.31	-3.97	0.29
Proximity on Immigration	0.08	0.05	1.68	1.08
Proximity on European Integration	0.20	0.05	3.89	1.23
Proximity on Nuclear Energy	0.32	0.04	7.42	1.37
Proximity on Left-Right	0.40	0.03	11.73	1.49
Union Member SPD	0.95	0.38	2.49	2.58
Union Member FDP	0.60	0.65	0.93	1.83
Union Member Greens	1.29	0.50	2.56	3.64
Union Member Left	1.02	0.51	2.01	2.78
Worker SPD	0.19	0.24	0.78	1.21
Worker FDP	-1.51	0.65	-2.34	0.22
Worker Greens	-1.21	0.47	-2.59	0.30
Worker Left	-0.17	0.40	-0.42	0.85
Catholic SPD	-0.58	0.24	-2.45	0.56
Catholic FDP	-0.83	0.47	-1.77	0.44
Catholic Greens	-0.48	0.37	-1.31	0.62
Catholic Left	-1.77	0.56	-3.13	0.17
Age SPD	-0.02	0.01	-3.08	0.98
Age FDP	-0.02	0.01	-1.33	0.98
Age Greens	-0.09	0.01	-6.43	0.92
Age Left	-0.02	0.01	-1.94	0.98
Female SPD	-0.20	0.23	-0.89	0.82
Female FDP	-1.53	0.49	-3.12	0.22
Female Greens	-0.54	0.34	-1.60	0.58
Female Left	0.09	0.35	0.27	1.10

Note: CDU is reference alternative. Age is centered around the sample mean.
Source: 1998 German election study (Falter, Gabriel, and Rattinger 2012).

Table A4: Vote Choice Model with (0-1) Coding for Categorical Voter Attributes (Region omitted), Model 3 in Table 4

B.2.2 Effect Coding

	coef.	s.e.	t-val.	exp(coef.)
Intercept SPD	0.18	0.23	0.77	1.19
Intercept FDP	-3.10	0.51	-6.02	0.05
Intercept Greens	-2.34	0.40	-5.81	0.10
Intercept Left	-1.39	0.39	-3.60	0.25
Proximity on Immigration	0.09	0.05	1.90	1.09
Proximity on European Integration	0.20	0.06	3.65	1.22
Proximity on Nuclear Energy	0.31	0.04	7.17	1.36
Proximity on Left-Right	0.39	0.03	11.21	1.47
Union Member SPD	0.45	0.19	2.36	1.57
Union Member FDP	0.28	0.32	0.86	1.32
Union Member Greens	0.57	0.26	2.21	1.76
Union Member Left	0.73	0.27	2.69	2.08
Worker SPD	0.11	0.12	0.87	1.11
Worker FDP	-0.72	0.32	-2.23	0.49
Worker Greens	-0.49	0.24	-2.07	0.61
Worker Left	-0.27	0.21	-1.26	0.77
Catholic SPD	-0.32	0.12	-2.57	0.73
Catholic FDP	-0.49	0.24	-2.02	0.61
Catholic Greens	-0.31	0.19	-1.62	0.74
Catholic Left	-0.43	0.31	-1.35	0.65
Age SPD	-0.02	0.01	-3.05	0.98
Age FDP	-0.02	0.01	-1.34	0.98
Age Greens	-0.09	0.01	-6.29	0.92
Age Left	-0.02	0.01	-1.86	0.98
Female SPD	-0.09	0.11	-0.84	0.91
Female FDP	-0.77	0.25	-3.11	0.47
Female Greens	-0.25	0.17	-1.45	0.78
Female Left	0.04	0.19	0.19	1.04
West Ger. SPD	0.09	0.14	0.65	1.10
West Ger. FDP	0.33	0.30	1.11	1.40
West Ger. Greens	0.58	0.28	2.06	1.78
West Ger. Left	-1.09	0.22	-4.86	0.33

Note: CDU is reference alternative. Age is centered around the sample mean.
Source: 1998 German election study (Falter, Gabriel, and Rattinger 2012).

Table A5: Vote Choice Model with Effect Coding for Categorical Voter Attributes, Model 1 in Table 4

	coef.	s.e.	t-val.	exp(coef.)
Intercept SPD	0.18	0.23	0.77	1.19
Intercept FDP	-3.10	0.51	-6.02	0.05
Intercept Greens	-2.34	0.40	-5.81	0.10
Intercept Left	-1.39	0.39	-3.60	0.25
Proximity on Immigration	0.09	0.05	1.90	1.09
Proximity on European Integration	0.20	0.06	3.65	1.22
Proximity on Nuclear Energy	0.31	0.04	7.17	1.36
Proximity on Left-Right	0.39	0.03	11.21	1.47
Union Member SPD	0.45	0.19	2.36	1.57
Union Member FDP	0.28	0.32	0.86	1.32
Union Member Greens	0.57	0.26	2.21	1.76
Union Member Left	0.73	0.27	2.69	2.08
Worker SPD	0.11	0.12	0.87	1.11
Worker FDP	-0.72	0.32	-2.23	0.49
Worker Greens	-0.49	0.24	-2.07	0.61
Worker Left	-0.27	0.21	-1.26	0.77
Catholic SPD	-0.32	0.12	-2.57	0.73
Catholic FDP	-0.49	0.24	-2.02	0.61
Catholic Greens	-0.31	0.19	-1.62	0.74
Catholic Left	-0.43	0.31	-1.35	0.65
Age SPD	-0.02	0.01	-3.05	0.98
Age FDP	-0.02	0.01	-1.34	0.98
Age Greens	-0.09	0.01	-6.29	0.92
Age Left	-0.02	0.01	-1.86	0.98
Male SPD	0.09	0.11	0.84	1.10
Male FDP	0.77	0.25	3.11	2.15
Male Greens	0.25	0.17	1.45	1.28
Male Left	-0.04	0.19	-0.19	0.96
West Ger. SPD	0.09	0.14	0.65	1.10
West Ger. FDP	0.33	0.30	1.11	1.40
West Ger. Greens	0.58	0.28	2.06	1.78
West Ger. Left	-1.09	0.22	-4.86	0.33

Note: CDU is reference alternative. Age is centered around the sample mean.
Source: 1998 German election study (Falter, Gabriel, and Rattinger 2012).

Table A6: Vote Choice Model with Effect Coding for Categorical Voter Attributes (Gender reversed), Model 2 in Table 4

	coef.	s.e.	t-val.	exp(coef.)
Intercept SPD	0.23	0.21	1.12	1.26
Intercept FDP	-2.85	0.45	-6.28	0.06
Intercept Greens	-1.93	0.33	-5.77	0.15
Intercept Left	-1.63	0.35	-4.60	0.20
Proximity on Immigration	0.08	0.05	1.68	1.08
Proximity on European Integration	0.20	0.05	3.89	1.23
Proximity on Nuclear Energy	0.32	0.04	7.42	1.37
Proximity on Left-Right	0.40	0.03	11.73	1.49
Union Member SPD	0.47	0.19	2.49	1.61
Union Member FDP	0.30	0.32	0.93	1.35
Union Member Greens	0.65	0.25	2.56	1.91
Union Member Left	0.51	0.25	2.01	1.67
Worker SPD	0.09	0.12	0.78	1.10
Worker FDP	-0.76	0.32	-2.34	0.47
Worker Greens	-0.61	0.23	-2.59	0.55
Worker Left	-0.08	0.20	-0.42	0.92
Catholic SPD	-0.29	0.12	-2.45	0.75
Catholic FDP	-0.42	0.24	-1.77	0.66
Catholic Greens	-0.24	0.18	-1.31	0.79
Catholic Left	-0.88	0.28	-3.13	0.41
Age SPD	-0.02	0.01	-3.08	0.98
Age FDP	-0.02	0.01	-1.33	0.98
Age Greens	-0.09	0.01	-6.43	0.92
Age Left	-0.02	0.01	-1.94	0.98
Female SPD	-0.10	0.11	-0.89	0.90
Female FDP	-0.77	0.25	-3.12	0.46
Female Greens	-0.27	0.17	-1.60	0.76
Female Left	0.05	0.18	0.27	1.05

Note: CDU is reference alternative. Age is centered around the sample mean.
Source: 1998 German election study (Falter, Gabriel, and Rattinger 2012).

Table A7: Vote Choice Model with Effect Coding for Categorical Voter Attributes (Region omitted), Model 3 in Table 4

C Application: 2016 US Presidential Election

C.1 Data Set

The data comes from the American National Election Study (ANES) and contains vote choices between the Democratic and Republican candidates in the 2016 US presidential election. The operationalization of the candidates' valence qualities relies on voters' assessments of six personality traits (strong leadership, really cares, knowledgeable, honest, speaks mind, and even-tempered), measured on five-point scales from "not well at all" to "extremely well". For each candidate, we generated an overall assessment of character traits by adding all trait evaluations and dividing it by the number of traits. The policy component of the vote choice model includes spatial proximities between respondents and candidates (defined as the absolute negative distance between respondent-specific candidate placement perceptions and self-placements) on the traditional liberal-conservative scale and the issues of Spending and Services, Defense Spending, and Health Insurance. The issue scales have the following endpoints:

- Public spending and services: (1) "Government should provide many more services", (7) "Government should provide many fewer services".
- Budget spent on defense: (1) "Government should decrease defense spending", (7) "Government should increase defense spending".
- Public versus private medical support: (1) "Government insurance plan", (7) "Private insurance plan".
- Liberal-conservative scale: (1) "extremely liberal", (7) "extremely conservative".

The chooser-specific variables are age (centered about the sample mean), gender (1 female, 2 male), and self-identifications as Black (1 self-reported as Black, 2 otherwise) or Latino (1 self-reported as Latino, 2 otherwise). The data set contains the dichotomous voter attributes in (0-1) and effect coding.

D Application: 2010 British General Election

D.1 Data Set

The data comes from the 2010 British Election Study (Whiteley and Sanders 2014) and includes vote choices for the three major parties in the 2010 British General Election: Labour Party (Lab), Conservative Party (Cons), and Liberal Democrats (LD). The operationalization of valence qualities relies on party leader images (or ratings) for Gordan Brown (Lab), David Cameron (Cons), and Nick Clegg (LD). Survey question: "Using a scale that runs from 0 to 10, where 0 means strongly dislike and 10 means strongly like, how do you feel about [name of party leader]?". The policy component of the vote choice models contains voter-party proximities (defined as the absolute negative distance between respondent-specific party placement perceptions and self-placements) on the issues of crime and taxes. The issue scales have the following endpoints:

- Crime: (1) "Protect rights of accused people, regardless of whether they have been convicted of committing a crime, is more important than reducing crime", (11) "Reduce crime is more important than protecting the rights of people accused of committing crimes".

- Taxes vs Spending: (1) "Cut taxes and spend much less on health and social services, (11) "Put up taxes and spend much more on health and social services".

The socioeconomic voter attributes are union member (1 union member, 2 otherwise), worker (1 blue collar or working class, 2 otherwise), gender (1 female, 2 male), income (standardized annual household income), homeowner (1 homeowner, 2 otherwise) and age (centered around the sample mean). Dichotomous variables are in effect coding.

D.2 Estimation Tables

D.2.1 Valence as Chooser Attributes

	β	s.e.	t-val.	e^{β}
Intercept Cons	-0.95	0.58	-1.62	0.39
Intercept LD	-0.65	0.48	-1.36	0.52
Proximity on Crime	0.28	0.05	5.91	1.32
Proximity on Taxes	0.19	0.05	4.19	1.21
Union Member Cons	-0.36	0.13	-2.75	0.70
Union Member LD	-0.15	0.11	-1.39	0.86
Worker Cons	-0.38	0.13	-3.03	0.68
Worker LD	-0.32	0.11	-2.90	0.73
Age Cons	0.01	0.01	1.41	1.01
Age LD	0.00	0.01	0.69	1.00
Female Cons	0.12	0.11	1.08	1.13
Female LD	0.06	0.10	0.57	1.06
Income Cons	0.27	0.13	2.12	1.31
Income LD	0.11	0.11	0.95	1.12
Homeowner Cons	-0.02	0.15	-0.13	0.98
Homeowner LD	0.03	0.13	0.25	1.03
Lab Leader Image: Cons	-0.72	0.06	-12.40	0.49
Lab Leader Image: LD	-0.49	0.05	-9.66	0.61
Cons Leader Image: Cons	0.90	0.09	10.59	2.46
Cons Leader Image: LD	-0.23	0.06	-4.20	0.79
LD Leader Image: Cons	-0.21	0.08	-2.67	0.81
LD Leader Image: LD	0.73	0.07	10.86	2.07

Note: Categorical voter attributes in effect coding, age is centered around the sample mean.
Source: 2010 British Election Study (BES). N=1262.

Table A8: Vote Choice Model with Party Leader Images as Chooser Attribute (Labour Ref.), Table 6a

	β	s.e.	t-val.	e^{β}
Intercept Lab	0.95	0.58	1.62	2.57
Intercept LD	0.30	0.57	0.53	1.35
Proximity on Crime	0.28	0.05	5.91	1.32
Proximity on Taxes	0.19	0.05	4.19	1.21
Union Member Lab	0.36	0.13	2.75	1.43
Union Member LD	0.20	0.12	1.71	1.23
Worker Lab	0.38	0.13	3.03	1.47
Worker LD	0.07	0.12	0.54	1.07
Age Lab	-0.01	0.01	-1.41	0.99
Age LD	-0.01	0.01	-0.88	0.99
Female Lab	-0.12	0.11	-1.08	0.89
Female LD	-0.07	0.10	-0.64	0.94
Income Lab	-0.27	0.13	-2.12	0.76
Income LD	-0.16	0.12	-1.42	0.85
Homeowner Lab	0.02	0.15	0.13	1.02
Homeowner LD	0.05	0.15	0.35	1.05
Lab Leader Image: Lab	0.72	0.06	12.40	2.05
Lab Leader Image: LD	0.22	0.05	4.58	1.25
Cons Leader Image: Lab	-0.90	0.09	-10.59	0.41
Cons Leader Image: LD	-1.13	0.09	-13.30	0.32
LD Leader Image: Lab	0.21	0.08	2.67	1.24
LD Leader Image: LD	0.94	0.08	11.61	2.56

Note: Categorical voter attributes in effect coding, age is centered around the sample mean.
Source: 2010 British Election Study (BES). N=1262.

Table A9: Vote Choice Model with Party Leader Images as Chooser Attribute (Conservatives Ref.), Table 6a

	β	s.e.	t-val.	e^{β}
Intercept Lab	0.65	0.48	1.36	1.91
Intercept Cons	-0.30	0.57	-0.53	0.74
Proximity on Crime	0.28	0.05	5.91	1.32
Proximity on Taxes	0.19	0.05	4.19	1.21
Union Member Lab	0.15	0.11	1.39	1.16
Union Member Cons	-0.20	0.12	-1.71	0.82
Worker Lab	0.32	0.11	2.90	1.37
Worker Cons	-0.07	0.12	-0.54	0.94
Age Lab	-0.00	0.01	-0.69	1.00
Age Cons	0.01	0.01	0.88	1.01
Female Lab	-0.06	0.10	-0.57	0.95
Female Cons	0.07	0.10	0.64	1.07
Income Lab	-0.11	0.11	-0.95	0.90
Income Cons	0.16	0.12	1.42	1.18
Homeowner Lab	-0.03	0.13	-0.25	0.97
Homeowner Cons	-0.05	0.15	-0.35	0.95
Lab Leader Image: Lab	0.49	0.05	9.66	1.64
Lab Leader Image: Cons	-0.22	0.05	-4.58	0.80
Cons Leader Image: Lab	0.23	0.06	4.20	1.26
Cons Leader Image: Cons	1.13	0.09	13.30	3.11
LD Leader Image: Lab	-0.73	0.07	-10.86	0.48
LD Leader Image: Cons	-0.94	0.08	-11.61	0.39

Note: Categorical voter attributes in effect coding, age is centered around the sample mean.
Source: 2010 British Election Study (BES). N=1262.

Table A10: Vote Choice Model with Party Leader Images as Chooser Attribute (Liberal Democrats Ref.), Table 6a

D.2.2 Valence as Choice Attribute

	coef	s.e.	t-val.	e(coef)
Intercept Cons	-2.85	0.53	-5.36	0.06
Intercept LD	-1.27	0.44	-2.87	0.28
Proximity on Crime	0.26	0.05	5.62	1.30
Proximity on Taxes	0.19	0.04	4.25	1.21
Union Member Cons	-0.35	0.13	-2.71	0.71
Union Member LD	-0.13	0.11	-1.17	0.87
Worker Cons	-0.36	0.12	-2.92	0.70
Worker LD	-0.29	0.11	-2.55	0.75
Age Cons	0.01	0.01	1.65	1.01
Age LD	0.00	0.01	0.35	1.00
Female Cons	0.11	0.11	0.98	1.12
Female LD	0.09	0.10	0.85	1.09
Income Cons	0.22	0.13	1.74	1.25
Income LD	0.09	0.12	0.76	1.10
Homeowner Cons	-0.06	0.15	-0.39	0.94
Homeowner LD	-0.08	0.13	-0.59	0.93
Lab Leader Image	0.58	0.05	11.98	1.79
Cons Leader Image	0.92	0.06	14.81	2.51
LD Leader Image	0.71	0.05	13.65	2.03

Note: Categorical voter attributes in effect coding, age is centered around the sample mean. Labour is reference alternative.
Source: 2010 British Election Study (BES). N=1262.

Table A11: Vote Choice Model with Party Leader Images as Choice Attribute (Labour Ref.), Table 6b

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