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An empirical model of issue evolution and partisan realignment in a multiparty system

Article

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Online Appendix

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Online Appendix for manuscript "An empirical model of Issue Evolution and Partisan Realignment in a multiparty system"

Data sources and coding

Elite Salience

The analysis of elite salience is based on my coding of Danish Policy Agenda Data[1]; the data were accessed at: http://www.agendasetting.dk/start/page.asp?page=4

The following categories from the Danish Policy Agenda Data of parliamentary activities have been coded as Economic Issues

100, 101, 103 through 108, 110, 199, 1806, 1807, 1808, 2001

The following categories from the Danish Policy Agenda Data of parliamentary activities have been coded as Cultural Issues

200, 201, 202, 204 through 209, 211, 230, 299, 407, 603, 700 through 799, 900, 1200 through 1207, 1209 through 1211, 1227, 1299, 1902, 2101, 2103

Hereafter, I calculated the share of the respective issue dimension for all election terms by dividing parliamentary activities devoted to economic/cultural issues by all parliamentary activities over all election terms *t* since 1968.

$$\%\ Economic\ Issues_t = \frac{Parliamentary\ activities\ devoted\ to\ economic\ issues_t}{All\ parliamentary\ activities_t}$$

$$\%\ Cultural\ Issues_t = \frac{Parliamentary\ activities\ devoted\ to\ cultural\ issues_t}{All\ parliamentary\ activities_t}$$

The differences between the salience of economic and cultural issues over all election terms shown in Figure 1 was calculated as:

$$\Delta\%\ Elite\ Salience_t = \%\ Economic\ Issues_t - \%\ Cultural\ Issues_t$$

[1] "The data in the Danish Policy Agenda Project have been collected by Christoffer Green-Pedersen and Peter Bjerre Mortensen with support from the Danish Social Science Research Council and the Research Foundation at Aarhus University. For further details see www.agendasetting.dk."

Elite Polarization

To obtain the elite polarization as described on pages 10-11 and shown in Figure 2 and 3, I followed Bakker and Hobolt's (2013) coding and used these items from the Comparative Manifesto Project[2].

To capture pro-free market and anti-government intervention emphases, I used the items: per401, per402, per407, per505, per507, per410, per414, per702

To capture pro-state and pro-government intervention emphases, I used the items: per403, per404, per406, per504, per506, per413, per412, per701, per405, per409, per415, per503

For each party, I calculated its position on the economic dimension by subtracting the sum of pro-state and pro-government intervention emphases from the sum of pro-free market and anti-government intervention emphases for all electoral terms under review. Positive values indicate a right-wing position on the economy for a given party. The respective positions are shown in Figure 2.

To capture culturally conservative/authoritarian positions, I used the items: per305, per601, per603, per605, per608, per606

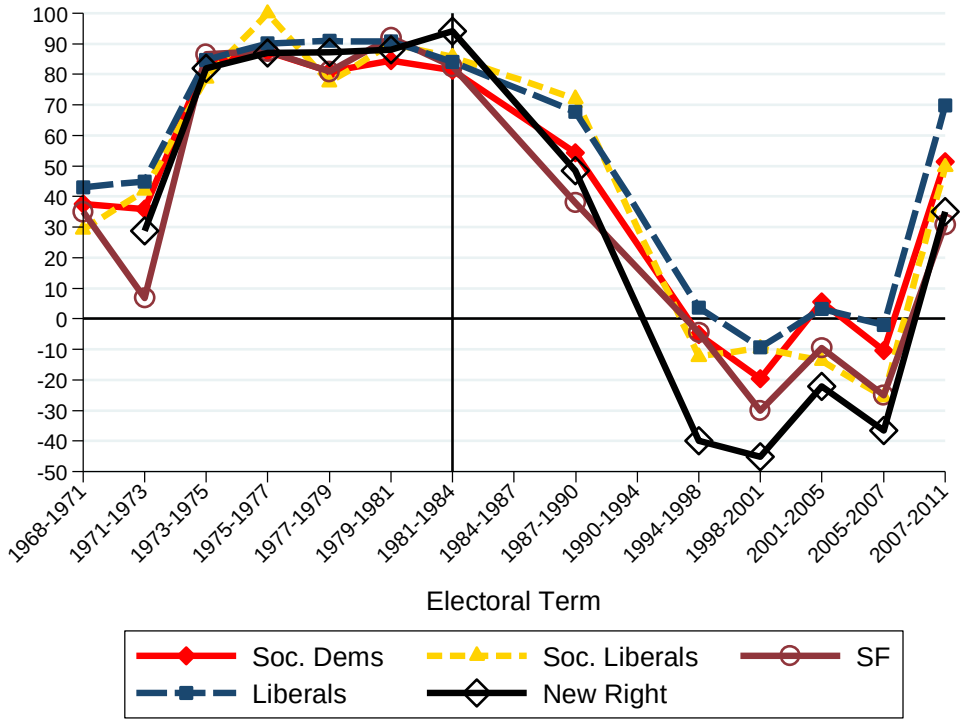
To capture culturally liberal/libertarian positions, I used the items: per501, per602, per604, per502, per607, per416, per705, per706, per201, per202

Similar to the procedure for the economic dimension, I calculated every party's position on the cultural dimension by subtracting the sum of culturally liberal emphases from the sum of culturally conservative emphases for all electoral terms under review. Positive values indicate a culturally conservative position for a given party. The respective party positions are shown in Figure 3.

The positions on the immigration issue shown in Figure A2 was obtained by subtracting the sum of the items 'per107', 'per602', and 'per607' from the sum of the items 'per109', 'per601', and 'per608' for each party over all electoral terms under review. Positive values indicate restrictive positions on immigration/multiculturalism and negative values indicate liberal positions on immigration/multiculturalism.

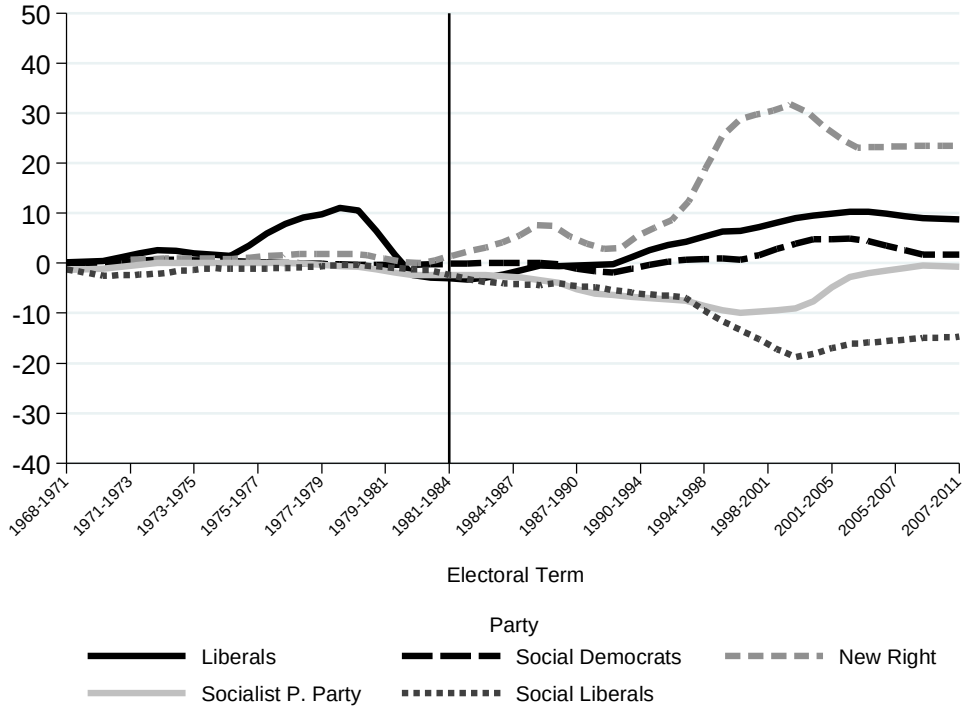
[2] The data were accessed at: https://manifestoproject.wzb.eu/

Figure A1 Issue salience among Danish voters: Difference economic – cultural issues, 1971-2011.



Note: Issue salience among Danish voters based on most important issue item (see explanation below). Difference economic – cultural issues, 1971-2011. Positive values indicate that economic issues were more salient among the Danish electorate than cultural issues, negative values vice versa. Calculations are based on Danish National Election Studies 1971-2011.

Fig. A2 Positions of Danish parties on Immigration, 1968-2011



Note: Positive values indicate restrictive positions on immigration/multiculturalism and negative values indicate liberal positions on immigration/multiculturalism for the individual parties. Lines are smoothed. *Source:* Own calculations based on Comparative Manifesto Project.

Data from Danish National Election Studies

The following election studies were used to create the pooled dataset for all elections 1971-2011.

Valgundersøgelsen 1971, DDA-0007
Valgundersøgelsen 1973, DDA-0008
Valgundersøgelsen 1975, DDA-0016
Valgundersøgelsen 1979, DDA-0287
Valgundersøgelsen 1981, DDA-0529
Valgundersøgelsen 1984, DDA-0772
Valgundersøgelsen 1987, DDA-1340
Valgundersøgelsen 1990, DDA-1564
Valgundersøgelsen 1994, DDA-2210
Valgundersøgelsen 1998, DDA-4189
Valgundersøgelsen 2001, DDA-12516
Valgundersøgelsen 2005, DDA-18184
Valgundersøgelsen 2007, DDA-26471
Valgundersøgelsen 2011, DDA-27067

Note: DDA means Danish Data Archive Number, Valgundersøgelsen is the Danish National Election Study in the respective years. The 1988 Study was left out since the election term 1987-1988 lasted only few months (see Note 5 in main text).

[All questions have been translated by the author]

Wording of questions towards economic inequality:

Used in 1971, 1973, 1975, 1977, 1979, 1981, 1984, 1990, 1998, 2001, 2005, 2007, 2011:
"Politics should achieve the same economic conditions for everybody irrespective of education and occupation." (five point scale from 1 "fully agree" to 5 "fully disagree")

Used in 1987, 1994:
A says: "The differences in incomes and living standards are still too large in this country. Therefore should people with lower incomes have a quicker improve in their living standards than people with higher incomes.

B says: "Redistribution of incomes has gone far enough. The differences in incomes found nowadays should by and large be maintained.
(1 Agree with A, 2 Agree with B, 3 neither A nor B)

Wording of questions towards government intervention/free market (item missing in 1977)

Used in 1971, 1973, 1975, 1979, 1981, 1984, 1990, 1998, 2001, 2005, 2007, 2011:
"The state has not enough control over private investments (1 agree completely, 2 agree partly, 3 neither/nor, 4 disagree partly, 5 disagree completely)

Used in 1987, 1994:
A says: "Private businesses and industry should to a larger degree have the right to decide over their own businesses."
B says : "The state should control private businesses. The public control ought under no circumstances be less than in the Denmark of today." (1 Agree with A, 2 Agree with B, 3 neither A nor B)

Wording of questions towards taxes and redistribution

Used in 1971, 1973, 1975, 1977, 1979, 1981, 1984, 1990, 1994, 1998, 2001, 2005, 2007, 2011:
"Higher incomes ought to be taxed more heavily than it is the case today" (1 agree completely, 2 agree partly, 3 neither/nor, 4 disagree partly, 5 disagree completely)

For 1987, I used another item on taxes and redistribution to construct the scale for economic issues
A says: "Social reforms in this country have gone too far and that people should become more independent of social security"

B says: "The social reforms that have been implemented in our country should at least be maintained as they are now"
(1 Agree with A, 2 Agree with B, 3 neither A nor B)

Wording of questions towards immigration (missing in 1973, 1975, 1977, 1984)

Used in 1987, 1990, 1994, 1998, 2001, 2005, 2007, 2011:
We'd like to hear your views on some important political issues. Could you tell me whether you agree or disagree with each of the following proposals? How strongly do you feel?

"Immigration constitutes a serious threat to our national culture" (1 agree completely, 2 agree partly, 3 neither/nor, 4 disagree partly, 5 disagree completely)

Used in 1971:
"Foreign labour must not be allowed to force Danes out of the workplace" (1 agree completely, 2 agree partly, 3 neither/nor, 4 disagree partly, 5 disagree completely) [used in 1971]

Used in 1979:
Hereafter a question on guest workers' way of living and culture:
A says: "If guest workers want to live in this country, they have to adapt to the Danish culture and way of living."
B says: "Guest workers have the same right as other human beings to retain their way of living and culture."
(1 agree with A, 2 agree with B, 3 neither/nor)

Used in 1981:
"Send guest workers to their home countries if there is not enough work for them in this country."
(1 very important to put into practice, 2 Important to put into practice, 3 does not play a major role, 4 Important not to put this into practice, 5 Very important not to put this into practice)

Wording of question towards crime/law enforcement (missing in 1971, 1973, 1975, 1977, 1981, 1984)

Used in 1979, 1987, 1990, 1994, 1998, 2001, 2005, 2007, 2011:
We'd like to hear your views on some important political issues. Could you tell me whether you agree or disagree with each of the following proposals? How strongly do you feel?

"Violent felony should be punished harder than it is the case today" (1 agree completely, 2 agree partly, 3 neither/nor, 4 disagree partly, 5 disagree completely)

Wording of question towards environment (missing in 1971, 1973, 1975, 1977, 1979)

Used in 1981, 1984, 1987, 1990, 1994, 1998, 2001, 2005, 2007, 2011:
We'd like to hear your views on some important political issues. Could you tell me whether you agree or disagree with each of the following proposals? How strongly do you feel?

"Economic growth must be maintained by further development of the industry even if this comes at the expense of environmental interests" (1 agree completely, 2 agree partly, 3 neither/nor, 4 disagree partly, 5 disagree completely)

Wording of question on most important issue (used for Figure A1 above and robustness check below, Figures A3, A6)

Used in all elections 1971-2011 except 1994:

"We just had a parliamentary election and therefore we want to ask you what is the most important problem politicians should take care of today?" (17 categories, recoded into four categories 'Economy', 'Culture', 'Health/welfare', and 'All other')

Coding of demographic controls and frequency distributions

Class	Frequencies
1 Unskilled Worker	9.9 %
2 Skilled Worker	13.4 %
3 Lower Salariat	21.1 %
4 Higher Salariat	13.2 %
5 Self-employed/Employer	7.6 %
9 Non-labour force	34.8 %
Education [Danish educational equivalents in brackets]	
0 Minimum [only some years of Folkeskole and not completed Folkeskole]	25.3 %
1 Lower secondary and basic vocational [Folkeskole, erhvervsuddannelse]	20.0 %
2 Higher secondary and advanced vocational [Realskole, kort videregående uddannelse]	29.7 %
3 High school [Gymnasium, mellemlang & langvideregående uddannelse]	19.0 %
4 University degree [BA, MA, licentiat, PhD]	6.0 %
Age (used as ordinal scale in analysis)	
1 0-19	2.0 %
2 20-29	15.6 %
3 30-39	19.0 %
4 40-49	18.2 %
5 50-69	32.2 %
6 70 and older	13.0 %
Sex	
0 Man	51.6 %
1 Woman	48.3 %
Union	
0 non-member	25.4 %
1 member	48.8 %
2 missing information (used for election studies in early 1970s) where item was missing, not reported in analysis and Tables A2-A9 below)	25.8 %
Issue Salience at micro-level (most important problem), used for robustness checks in Figures A3, A6 below	
Economy	48.9 %
Culture	16.0 %
Health/welfare	23.9 %
All other	11.2 %

Note: due to a low number of observations for minimum education in the election studies after 1977, this category was merged with lower secondary in the statistical analysis reported in the main text and online appendix below.

Frequency distribution for dependent variable party choice and bloc affiliation

Party (Danish name)	Average vote share	Bloc
Social Democrats (Socialdemokraterne)	29.3 %	Left
Social Liberals (Radikale Venstre)	6.2 %	Left (except 1971, 1981-1990)
Conservatives (Det Konservative Folkeparti)	10.7 %	Right
Socialist People's Party (Socialistisk Folkeparti, SF)	9.2 %	Left
Liberals (Venstre)	21.6 %	Right
New Right (Fremskridtsparti until 1995, afterwards Dansk Folkeparti)	7.7 %	Right
Center Parties (KrF, CD, LA, RF)	6.1 %	Mostly right
Extreme Left (DKP, VS, FK, Enhedslisten)	3.9 %	Left
Independent candidates/other parties [not used in analysis]	0.0 %	Unclassified
Non-voters [not used in analysis]	5.1 %	Excluded

Table A1: Descriptive statistics for independent variables (all interval-scaled)

Variable	Observations	Mean	Std. Dev.	Min	Max
Scale economic liberalism	21,103	2.842	1.097	1	5
Scale cultural conservatism	20,033	3.258	1.069	1	5
Taxes and redistribution	24,075	2.867	1.473	1	5
Immigration	20,015	2.991	1.518	1	5
Distance Liberals-Social Democrats on economy	26,437	29.906	15.493	10.834	63.519
Distance Liberals-Social Democrats on culture	26,437	9.427	10.649	-7.7	30.3
Distance New Right-SF on economy	25,133	45.724	19.185	28.425	87.900
Distance New Right-SF on culture	25,133	27.528	18.596	-3.9	66.555
Elite salience economic dimension	26,436	13.022	5.408	5.046	22.727
Elite salience cultural dimension	26,436	15.343	4.782	7.674	23.043

Full documentation of results and supplementary analysis

Full documentation of logistic regression models

The following tables report the coefficients from the multilevel logit models that were used to calculate the marginal effects shown in Figure 4 and 5 of the manuscript. Annotation for the models used:

Figure 4:
Social Democrats vs. Liberals is calculated from M1a (economic issues) and M1b (cultural issues) in Table A2
Social Democrats vs. New Right is calculated from M2a (economic issues) and M2b (cultural issues) in Table A3
Liberals vs. Socialist People's Party is calculated from M3a (economic issues) and M3b (cultural issues) in Table A4
Socialist People's Party vs. New Right is calculated from M4a (economic issues) and M4b (cultural issues) in Table A5

Figure 5:
All marginal effects are calculated based on the interactions from M5 in Table A6

Figure 6:
All marginal effects are calculated based on the interactions from M6 in Table A7

Table A2: Political attitudes, issue salience and vote choice for Social Democrats vs. Liberals

	M1a: Economic liberalism	M1b: Cultural conservatism
Class (ref: upper salariat)		
Unskilled Worker	-0.394**	-0.384**
	(0.121)	(0.122)
Skilled Worker	-0.234*	-0.243*
	(0.095)	(0.095)
Lower Salariat	0.082	0.089
	(0.083)	(0.084)
Higher Salariat	0.215*	0.215*
	(0.100)	(0.101)
Self-employed/Employer	1.438***	1.444***
	(0.143)	(0.143)
Education (ref: lower secondary/minimum)		
Higher Secondary and advanced vocational	0.353***	0.347***
	(0.070)	(0.071)
High School	0.477***	0.504***
	(0.092)	(0.092)
University degree	0.257	0.371*
	(0.145)	(0.148)
Age (intervals)	-0.008	-0.002
	(0.026)	(0.026)
Sex: Female	-0.159**	-0.145*
	(0.058)	(0.059)
Union: member	-0.386***	-0.379***
	(0.074)	(0.075)
Party positions and political attitudes		
Distance Liberals-Social Democrats on economy	0.019*	0.016
	(0.008)	(0.008)
Distance Liberals-Social Democrats on culture	0.003	0.011
	(0.011)	(0.011)
Distance New Right-SF on economy	-0.000	0.001
	(0.009)	(0.009)
Distance New Right-SF on culture	-0.010	-0.008
	(0.009)	(0.009)
Elite salience of economic issues	0.104	0.076
	(0.076)	(0.071)
Elite salience of cultural issues	0.216**	-0.079
	(0.078)	(0.085)
Economic liberalism scale	1.191***	1.187***
	(0.095)	(0.036)
Salience of economic issues*Economic liberalism scale	-0.001	
	(0.008)	
Cultural conservatism scale	0.856***	-0.507***
	(0.036)	(0.153)
Salience of cultural issues*Cultural conservatism scale		0.079***
		(0.009)
Constant	-11.596***	-6.356**
	(2.347)	(2.402)
Random intercept variance	0.310*	0.312*
	(0.077)	(0.078)
N	7,694	7,694
-2loglikelihood	-3,907.88	-3,867.25
Chi-square test of ρ=0	52.63***	50.20***

Source: Danish Election Studies 1971-2011. *Notes*: Multilevel logit models; SF=Socialist People's Party; Social Democrats are reference category;* $p<0.05$; ** $p<0.01$; *** $p<0.001$.

Table A3: Political attitudes, issue salience and vote choice for Social Democrats vs. New Right

	M2a: Economic liberalism	M2b: Cultural conservatism
Class (ref: upper salariat)		
Unskilled Worker	-0.046	-0.063
	(0.144)	(0.145)
Skilled Worker	-0.095	-0.129
	(0.121)	(0.123)
Lower Salariat	-0.274*	-0.280*
	(0.123)	(0.124)
Higher Salariat	-0.156	-0.184
	(0.161)	(0.164)
Self-employed/Employer	1.073***	1.074***
	(0.198)	(0.197)
Education (ref: lower secondary/minimum)		
Higher Secondary and advanced vocational	0.157	0.170
	(0.094)	(0.095)
High School	-0.231	-0.200
	(0.144)	(0.147)
University degree	-0.311	-0.244
	(0.256)	(0.268)
Age (intervals)	-0.145***	-0.145***
	(0.036)	(0.036)
Sex: Female	-0.385***	-0.378***
	(0.081)	(0.082)
Union: member	-0.198*	-0.158
	(0.099)	(0.100)
Party positions and political attitudes		
Distance Liberals-Social Democrats on economy	-0.005	-0.005
	(0.008)	(0.008)
Distance Liberals-Social Democrats on culture	-0.004	0.001
	(0.011)	(0.011)
Distance New Right-SF on economy	0.002	0.004
	(0.009)	(0.009)
Distance New Right-SF on culture	0.006	0.008
	(0.008)	(0.008)
Elite salience of economic issues	-0.071	0.019
	(0.075)	(0.066)
Elite salience of cultural issues	0.120	-0.347***
	(0.074)	(0.088)
Economic liberalism scale	0.308**	0.745***
	(0.117)	(0.046)
Salience of economic issues*Economic liberalism scale	0.039***	
	(0.010)	
Cultural conservatism scale	1.395***	-0.664**
	(0.055)	(0.215)
Salience of cultural issues*Cultural conservatism scale		0.118***
		(0.012)
Constant	-8.840***	-1.892
	(2.233)	(2.310)
Random intercept variance	0.272*	0.265*
	(0.081)	(0.079)
N	5,408	5,408
-2loglikelihood	-2,140.05	-2,105.69
Chi-square test of ρ=0	18.72***	17.94***

Source: Danish Election Studies 1971-2011. *Notes*: Multilevel logit models; SF=Socialist People's Party; Social Democrats are reference category;* $p<0.05$; ** $p<0.01$; *** $p<0.001$.

Table A4: Political attitudes, issue salience and vote choice for Liberals vs. Socialist People's Party

	M3a: Economic liberalism	M3b: Cultural conservatism
Class (ref: upper salariat)		
Unskilled Worker	0.213	0.229
	(0.191)	(0.194)
Skilled Worker	0.302*	0.343*
	(0.151)	(0.153)
Lower Salariat	0.042	0.040
	(0.127)	(0.129)
Higher Salariat	-0.050	-0.006
	(0.152)	(0.154)
Self-employed/Employer	-1.072***	-1.118***
	(0.235)	(0.241)
Education (ref: lower secondary/minimum)		
Higher Secondary and advanced vocational	0.048	0.068
	(0.118)	(0.119)
High School	0.438**	0.444**
	(0.136)	(0.138)
University degree	0.749***	0.653**
	(0.205)	(0.210)
Age (intervals)	-0.236***	-0.243***
	(0.038)	(0.039)
Sex: Female	0.351***	0.347***
	(0.091)	(0.093)
Union: member	0.205	0.174
	(0.116)	(0.118)
Party positions and political attitudes		
Distance Liberals-Social Democrats on economy	-0.044***	-0.039***
	(0.005)	(0.010)
Distance Liberals-Social Democrats on culture	-0.014*	-0.035*
	(0.007)	(0.014)
Distance New Right-SF on economy	-0.027***	-0.028*
	(0.006)	(0.011)
Distance New Right-SF on culture	-0.005	-0.006
	(0.004)	(0.010)
Elite salience of economic issues	-0.169***	-0.140
	(0.050)	(0.085)
Elite salience of cultural issues	-0.305***	0.023
	(0.035)	(0.105)
Economic liberalism scale	-1.738***	-1.697***
	(0.146)	(0.062)
Salience of economic issues*Economic liberalism scale	0.009	
	(0.013)	
Cultural conservatism scale	-1.454***	0.394
	(0.058)	(0.249)
Salience of cultural issues*Cultural conservatism scale		-0.106***
		(0.014)
Constant	18.461***	12.808***
	(1.183)	(2.917)
Random intercept variance	0.000	0.355*
	(0.079)	(0.106)
N	5,103	5,103
-2loglikelihood	-1,675.34	-1,649.89
Chi-squre test of ρ=0	0.00	13.00

Source: Danish Election Studies 1971-2011. *Notes*: Multilevel logit models; SF=Socialist People's Party; Liberals are reference category;* $p<0.05$; ** $p<0.01$; *** $p<0.001$.

Table A5: Political attitudes, issue salience and vote choice for Socialist People's Party vs. New Right

	M4a: Economic liberalism	M4b: Cultural conservatism
Class (ref: upper salariat)		
Unskilled Worker	0.148	0.166
	(0.227)	(0.227)
Skilled Worker	-0.028	-0.044
	(0.187)	(0.188)
Lower Salariat	-0.435*	-0.415*
	(0.180)	(0.181)
Higher Salariat	-0.407	-0.480*
	(0.230)	(0.237)
Self-employed/Employer	0.968**	1.136***
	(0.331)	(0.343)
Education (ref: lower secondary/minimum)		
Higher Secondary and advanced vocational	-0.175	-0.172
	(0.147)	(0.148)
High School	-0.998***	-0.993***
	(0.192)	(0.197)
University degree	-1.223***	-1.199**
	(0.344)	(0.369)
Age (intervals)	0.070	0.089
	(0.051)	(0.052)
Sex: Female	-0.489***	-0.491***
	(0.124)	(0.126)
Union: member	-0.052	-0.042
	(0.154)	(0.156)
Party positions and political attitudes		
Distance Liberals-Social Democrats on economy	0.021**	0.024***
	(0.007)	(0.007)
Distance Liberals-Social Democrats on culture	0.012	0.021*
	(0.009)	(0.009)
Distance New Right-SF on economy	0.036***	0.040***
	(0.008)	(0.008)
Distance New Right-SF on culture	0.027***	0.031***
	(0.006)	(0.006)
Elite salience of economic issues	-0.043	0.117**
	(0.064)	(0.043)
Elite salience of cultural issues	0.237***	-0.232**
	(0.047)	(0.080)
Economic liberalism scale	0.482**	1.084***
	(0.183)	(0.075)
Salience of economic issues*Economic liberalism scale	0.057***	
	(0.016)	
Cultural conservatism scale	1.906***	-0.473
	(0.083)	(0.303)
Salience of cultural issues*Cultural conservatism scale		0.139***
		(0.018)
Constant	-15.746***	-10.002***
	(1.548)	(1.767)
Random intercept variance	0.000	0.000
	(0.064)	(0.074)
N	2,817	2,817
-2loglikelihood	-914.46	-893.31
Chi_square test of ρ=0	ns	ns

Source: Danish Election Studies 1971-2011. *Notes*: Multilevel logit models; Socialist People's Party (SF) is reference category;* $p<0.05$; ** $p<0.01$; *** $p<0.001$.

Table A6: Political attitudes, polarization and realignment with New Right

	M5: Stayed with New Right	M5: Realigned with New Right
Class (ref: upper salariat)		
Unskilled Worker	0.339*	-0.191
	(0.143)	(0.201)
Skilled Worker	0.068	0.099
	(0.127)	(0.151)
Lower Salariat	-0.109	-0.317*
	(0.127)	(0.153)
Higher Salariat	-0.255	-0.670**
	(0.157)	(0.206)
Self-employed/Employer	0.089	-0.361
	(0.153)	(0.215)
Education (ref: lower secondary/minimum)		
Higher Secondary and advanced vocational	-0.161	0.010
	(0.090)	(0.114)
High School	-0.833***	-0.417*
	(0.150)	(0.167)
University degree	-0.958***	-0.606*
	(0.255)	(0.297)
Age (intervals)	0.081**	-0.232***
	(0.032)	(0.038)
Sex: Female	-0.350***	-0.189
	(0.084)	(0.105)
Union: member	-0.039	0.129
	(0.093)	(0.133)
Party positions and political attitudes		
Distance Liberals-Social Democrats on economy	-0.023***	0.007
	(0.005)	(0.005)
Distance Liberals-Social Democrats on culture	-0.077***	-0.000
	(0.021)	(0.025)
Distance New Right-SF on economy	0.025***	-0.012
	(0.007)	(0.006)
Distance New Right-SF on culture	-0.043**	-0.020
	(0.014)	(0.015)
Elite salience of economic issues	-0.162***	0.073*
	(0.033)	(0.034)
Elite salience of cultural issues	-0.053	0.100**
	(0.029)	(0.036)
Economic liberalism scale	0.134***	0.213***
	(0.040)	(0.052)
Cultural conservatism scale	0.418**	0.566**
	(0.136)	(0.188)
Distance Liberals-Social Democrats on culture*Cultural conservatism scale	0.017***	0.006
	(0.005)	(0.006)
Distance New Right-SF on culture*Cultural conservatism scale	0.016***	0.010**
	(0.003)	(0.004)
Constant	-3.126**	-7.901***
	(1.094)	(1.293)
N	16,116	
-2loglikelihood	-4,410.53	
Nagelkerke R-squared	0.196	

Source: Danish Election Studies 1971-2011. *Notes*: multinomial logit model with robust standard errors; Did not vote New Right in both elections is reference category;* $p<0.05$; ** $p<0.01$; *** $p<0.001$.

Table A7: Political attitudes, polarization and realignment with blocs in Denmark, 1971-2011

	M6: Stayed within Right Bloc	M6: Realigned with Left Bloc	M6: Realigned with Right Bloc
Class (ref: upper salariat)			
Unskilled Worker	-0.143	0.198	-0.103
	(0.096)	(0.172)	(0.187)
Skilled Worker	-0.270***	-0.163	0.056
	(0.075)	(0.152)	(0.140)
Lower Salariat	0.039	-0.033	0.073
	(0.063)	(0.126)	(0.124)
Higher Salariat	0.216**	0.037	0.288*
	(0.070)	(0.145)	(0.141)
Self-employed/Employer	1.124***	0.198	0.443*
	(0.105)	(0.172)	(0.217)
Education (ref: lower secondary/minimum)			
Higher Secondary and advanced vocational	0.354***	0.410***	0.504***
	(0.056)	(0.117)	(0.106)
High School	0.271***	0.462***	0.362*
	(0.068)	(0.137)	(0.142)
University degree	0.086	0.515**	0.507**
	(0.093)	(0.177)	(0.183)
Age (intervals)	0.057**	-0.049	0.051
	(0.018)	(0.034)	(0.036)
Sex: Female	-0.200***	0.007	-0.173
	(0.045)	(0.089)	(0.089)
Union: member	-0.355***	0.167	-0.147
	(0.055)	(0.124)	(0.108)
	Party positions and political attitudes		
Distance Liberals-Social Democrats on economy	0.013***	-0.003	0.041***
	(0.002)	(0.005)	(0.005)
Distance Liberals-Social Democrats on culture	-0.053***	-0.016	-0.022
	(0.008)	(0.016)	(0.017)
Distance New Right-SF on economy	-0.008**	0.021**	-0.018***
	(0.003)	(0.008)	(0.005)
Distance New Right-SF on culture	-0.088***	-0.005	-0.102***
	(0.005)	(0.010)	(0.009)
Elite salience of economic issues	-0.032*	-0.026	0.181***
	(0.015)	(0.029)	(0.033)
Elite salience of cultural issues	0.003	0.076*	0.167***
	(0.017)	(0.030)	(0.033)
Economic liberalism scale	1.210***	0.611***	0.772***
	(0.026)	(0.050)	(0.048)
Cultural conservatism scale	0.290***	0.234	-0.135
	(0.055)	(0.123)	(0.096)
Distance Liberals-Social Democrats on culture*Cultural conservatism scale	0.014***	0.005	0.007
	(0.003)	(0.005)	(0.005)
Distance New Right-SF on culture*Cultural conservatism scale	0.022***	0.006*	0.026***
	(0.001)	(0.003)	(0.002)
Constant	-3.617***	-7.531***	-8.863***
	(0.539)	(1.058)	(1.096)
N		14,699	
-2loglikelihood		-11,412.99	
Nagelkerke R-squared		0.401	

Source: Danish Election Studies 1971-2011. *Notes*: multinomial logit model with robust standard errors; Stayed within left bloc is reference category;* $p<0.05$; ** $p<0.01$; *** $p<0.001$.

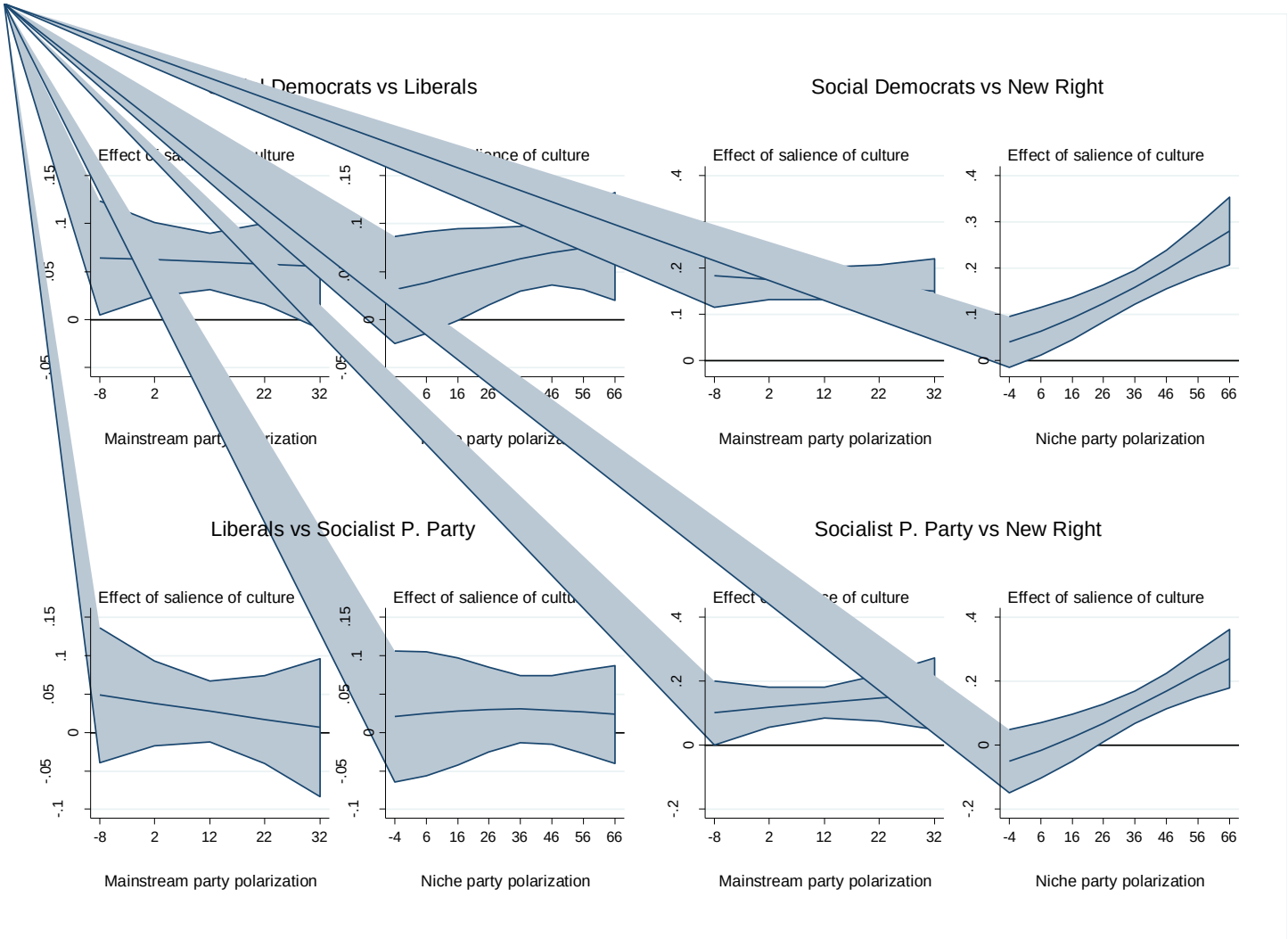
Supplementary analysis and robustness checks

The following Figures A3 and A4 provide robustness checks of the results shown in Figure 4 in the main text. They are mentioned in Note 7 and Note 8 in the manuscript. For Figure A3, I replaced the elite salience variable with a mass salience variable. This variable is based on the most important issue variable from the Danish National Election Studies (described above) and captures whether a respondent in a given election study perceives a cultural issue vis-à-vis an economic issue as most important (0: economic, 1: cultural). Other issues were set a zero in the calculation of the marginal effects. The marginal effects shown in Figure A3 thus indicate the effect of moving from economics to culture as most important issue dimension on the individual level across mainstream and niche party polarization on culture. In line with the findings from the main text and Hypotheses 1 and 3, the marginal effects of issue salience on vote choice are stronger for niche party polarization than for mainstream party polarization. Similarly, the effect is strongest for the niche party contrast Socialist People's Party (lower right quadrant in Figure A3) compared to other three party contrasts, which further buttresses the findings from Figure 4.

Figure A4 further replicates the findings the models used to calculate the marginal effects shown in Figure 4 by using the individual items on redistribution and immigration instead of the scales for economic liberalism and cultural conservatism. The variable for immigration uses the items described above. The variable on redistribution uses the item "Higher incomes ought to be taxed more heavily than it is the case today" for all elections except 1987. In 1987, this item was missing and was replaced by The differences in incomes and living standards are still too large in this country". These two variables have been at the core of the old economic cleavage and new cultural cleavage in Danish politics and should yield similar patterns as the scales used. Moreover, they have also been asked more frequently than any other comparable measure in Danish election studies since 1971 which increases the statistical power of the analysis compared to the analysis using scales. In this respect, the robustness check in Figure A4 confirms the patterns found in Figure 4. The effect of immigration on vote choice increases with the salience of cultural issues. Similar but weaker effects can be observed for redistribution. In line with the findings from Figure 4 and the argument that niche parties have driven the polarization of a new issue dimension, these supplementary tests demonstrate that restrictive attitudes on immigration benefited the two right-wing parties (Liberals and Progress/Danish People' Party) the more the underlying issue dimension was polarized.

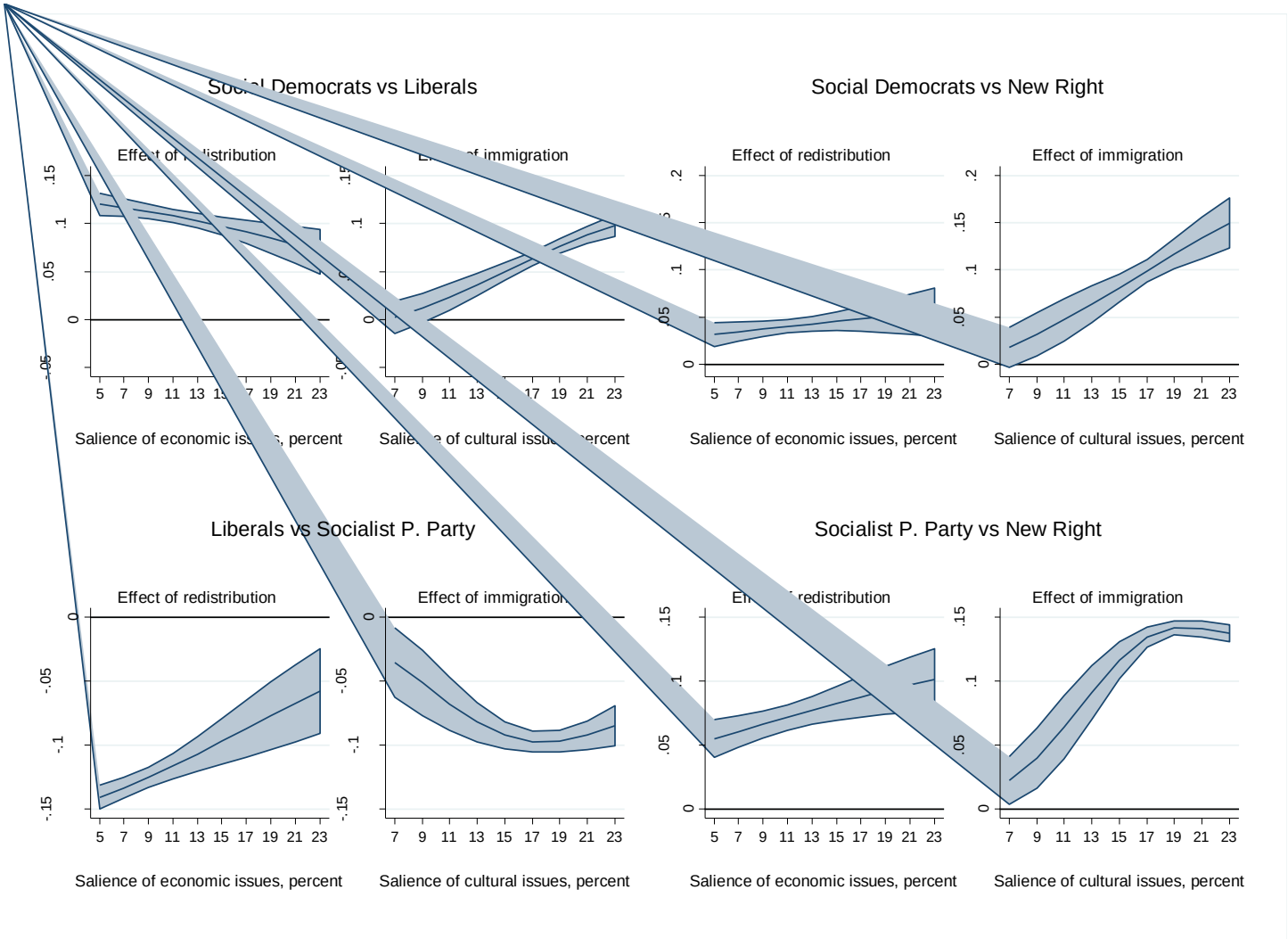
The coefficients for the respective models are available on request and the figures can be replicated with the do-file 'Robustness Checks Issue Evolution'.

Fig. A3 Marginal effect of salience of cultural issues among the voters over polarization of culture, Danish Elections 1971-2011.



This figure reports the marginal effects from multilevel logit models with interaction *most important issue (individual level)*party polarization on culture*. Positive values indicate a higher probability to vote the second-mentioned party for each party contrast. Number of observations varies from 3,364 to 9,350. Data from Danish Election Studies 1971-2011, CMP and Danish Policy Agenda Data.

Fig. A4 Marginal effects of redistribution and immigration on party choice, Danish Elections 1971-2011.

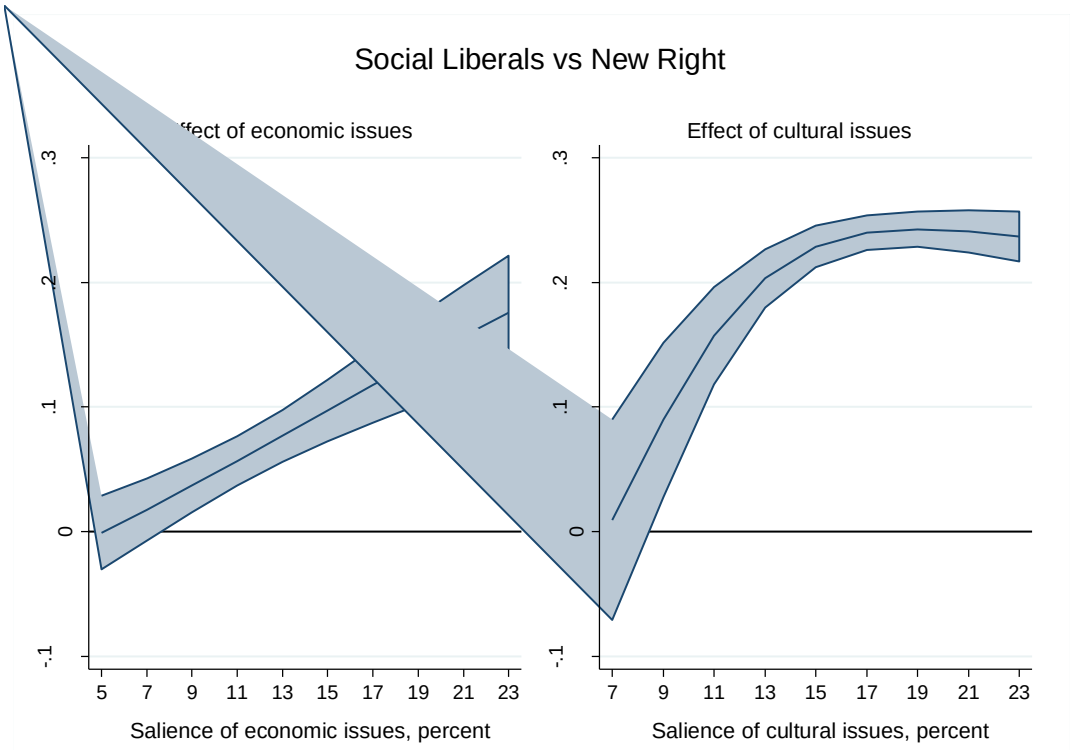


This figure reports the marginal effects of attitudes towards redistribution and immigration on party choice over salience of economic and cultural issues among the elite. Positive values indicate a higher probability to vote the second-mentioned party for each party contrast. Data from Danish Election Studies 1971-2011, CMP and Danish Policy Agenda Data.

The following figures reveal additional analysis for the Social Liberals (Radikale Venstre), a party that was also classified as niche party in the main text, but not shown in Figure 4 in the text for reasons of space. These additional analysis are mentioned on page 9/10. They can be reproduced with the respective commands in the do-file 'Robustness Checks Issue Evolution'. (The replication code for the supplementary analyses will be made available online).

Figure A5 shows that the effect of the two scales on economic liberalism and cultural conservatism across the observed elite issue salience of economic and cultural issues for the additional niche party contrast Social Liberals vs. Progress/Danish People's Party. The patterns are similar to the pattern observed for the contrast Socialist People's Party vs. Progress/Danish People's Party in Figure 4, lower right-hand panel, in the main text. The effect of cultural conservatism on preferring the New Right party family vis-à-vis the Social Liberals increases with the salience of the underlying cultural dimension at the elite level. The effect strengths for economic liberalism and salience of the economy have a similar but weaker pattern which mirrors the respective findings from Figure 4 in the main text. This supplementary analysis thus provides further support to accept Hypotheses 2 and 3, namely that the effects of cultural issues on party choice increases with salience of cultural issues and that these effects are stronger for niche parties than mainstream parties.

Fig. A5 Marginal effect of economic liberalism and cultural conservatism on party choice over elite issue salience, additional party contrast Social Liberals vs. New Right, Danish Elections, 1973-2011.

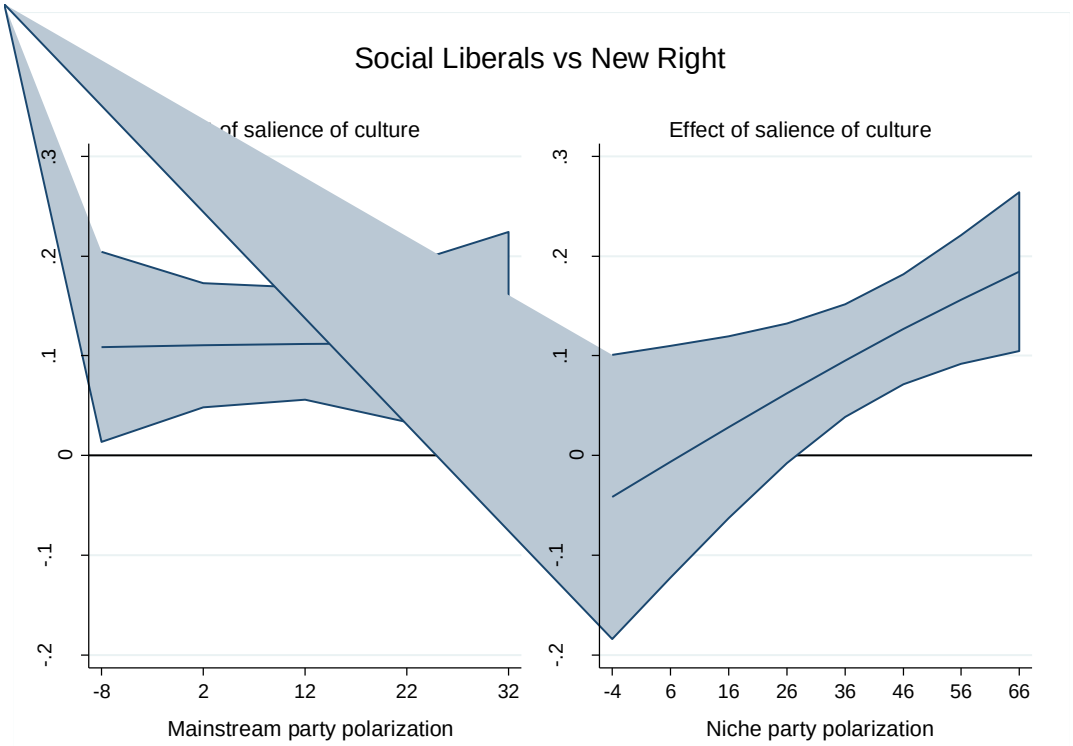


Marginal Effects from multilevel logit model for contrast Social Liberals vs. New Right, models follow similar specification as in Tables A2-A5. *Note*: Social Liberals are reference category. N=2,160. X-axis indicates elite salience of economic and culture issues.

As further test with the additional party contrast Social Liberals vs. Progress/Danish People's Party, I reproduce the findings from the analysis shown in Figure A3 above. To reiterate, the models contain

the interactions individual level issue salience*party polarizations to compare the effect strength of cultural issues for mainstream and niche party polarization. The pattern for the contrast Social Liberals vs. Progress/Danish People's Party in Figure A6 resembles the results for the contrast Socialist People's Party vs. Progress/Danish People's Party found in Figure A3 above. Whereas mainstream party polarization does not increase the effect of cultural issues measured at the individual level, we a significant effect of cultural issues on voting the New Right as niche party polarization on culture exceeds values of 30. This provides additional support to the accept the Hypotheses 1-4 in line with findings from Figure 5 in the main text, and Figure A3.

Fig. A6 Marginal effect of salience of cultural issues among the voters over polarization of culture, additional party contrast Social Liberals vs. New Right, Danish Elections 1973-2011.

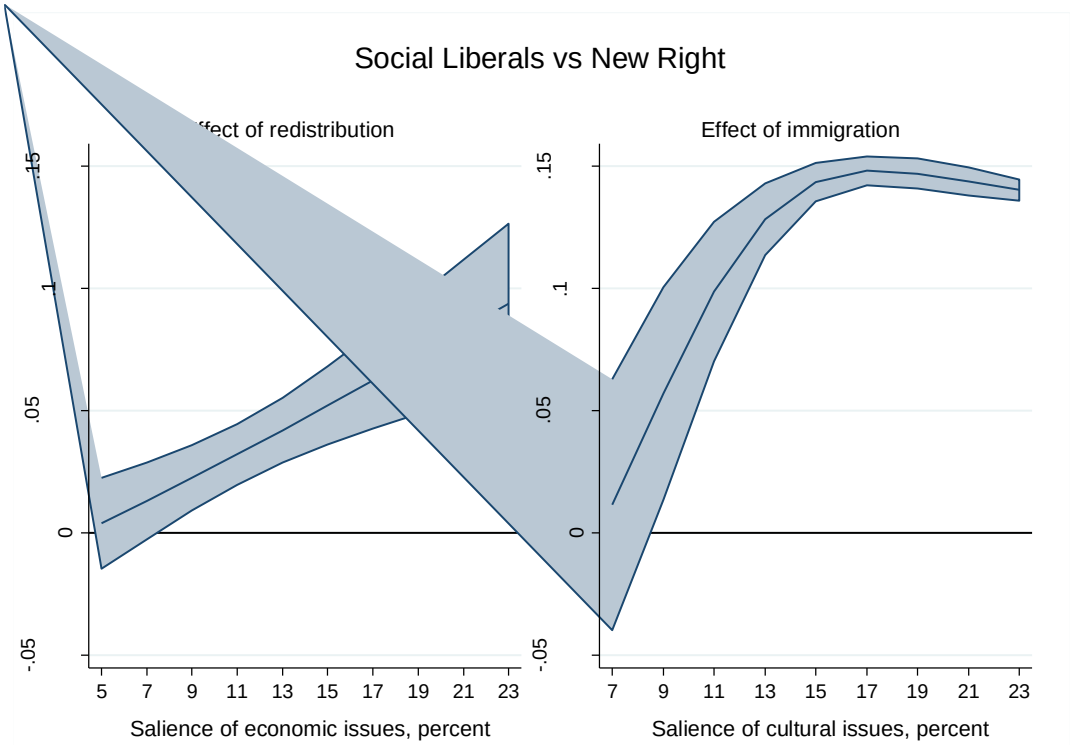


Marginal Effects from multilevel logit model for contrast Social Liberals vs. New Right, models follow similar specification as in Figure A3 above. *Note*: Social Liberals are reference category. N=2,781.

Finally, I ran the robustness check containing the interactions attitudes towards redistribution*elite salience and attitudes towards immigration*elite salience for the additional contrast Social Liberals vs. Progress/Danish People's Party. Figure A7 again confirms that replacing the niche party contrast Socialist People's Party vs. New Right with the contrast Social Liberals vs. New Right yields similar results as the effect strengths from Figure A7 resembles those found in Figure A4 in the lower right-hand panel. The results confirm that the effects of attitudes towards immigration on party choice increase with the increasing elite competition on culture. Moreover, the effect strength is strongest for the two contrasts containing only niche parties compared to the other three contrasts reported in Figure A4 (0.15 for niche parties vs. around 0.10 for all other contrasts). Thus, the additional

analyzing containing the Social Liberal Party provide further evidence for the Hypotheses 2 and 3 and buttress the general expectation that electoral effects of issue evolution in multiparty system is driven by niche parties.

Fig. A7 Marginal effect of redistribution and immigration on party choice, additional party contrast Social Liberals vs. New Right, Danish Elections, 1973-2011.



Marginal effects from multilevel logit models with interactions *attitudes towards redistribution*elite salience* and *attitudes towards immigration*elite salience*. *Note:* Social Liberals are reference category. N=2,452. X-axis indicates elite salience of economic and culture issues.