

Technical Appendix for Coalition Context,
Voter Heuristics and the Coalition-directed
Vote *

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1 Introduction

This technical appendix describes the three internet surveys that included the coalition reasoning vignettes: The German CCAP; the British CCAP; and the Danish iLEE4 experiments. It also includes Appendix tables referenced in the main text.

2 German CCAP Survey

The vignette experiment run in August 2009 as part of the second wave of the German Cooperative Campaign Analysis Project (De/CCAP). The project is directed by Raymond Duch. De/CCAP is an omnibus experiment (consisting of several independent modules) carried out over the internet with participants drawn from the adult German population in collaboration with YouGov.

De/CCAP conducted a baseline survey in June of 2009. Three subsequent panel waves took place after the first wave (August 2009) before the State elections in Saxony, Saarland, and Thuringia. A third wave was carried a month later (September 2009) before the Federal election of September 27th. And a final post-election wave conducted on October of 2009. A total of 4,301 respondents were interviewed in the 2009 baseline, with an extra 1,904 which entered new in the second wave for a total of 6,205 respondents. Every attempt was made to retain these respondents throughout all the waves of the panel see Table 1 on sample sizes and retention.

Table 1: Panel sample size and retention

Initial wave	Wave 1 N	Wave 2 N	Wave 3 N	Wave 4 N
Wave1	4301 <i>100.00%</i>	2703 <i>62.85%</i>	1659 <i>38.57%</i>	1269 <i>29.50%</i>
Wave2		1904 <i>100.00%</i>	682 <i>35.82%</i>	886 <i>46.53%</i>
Total	4301	4607	2341	2155

2.1 Recruitment of subjects

After a pretest, YouGovPsychonomics AG invited the 4,301 panelists for De/CCAP-2. 2703 responded by completing this second wave, due to the lack of further responses a second group of panelist was invited of which 1904 completed De/CCAP-2 for a final 4607 responses in De/CCAP-2. In total only 1269 respondents from the original group and 886 from the group that started in the second wave completed the four waves for 2155 completes.

The subjects are anonymous to us. YouGovPsychonomics AG assigned unique subject ID numbers to the randomly selected sample invited for DeCCAP. Thus, a particular person has had the same ID number across waves, and we can therefore track an individual's behavior across waves.

2.1.1 Sample representativeness

The sample of DeCCAP participants is less representative of the German population in some dimensions (e.g. age), but is close to being representative in others (e.g. gender).

Figure 1: Distribution of participants in De/CCAP by Age

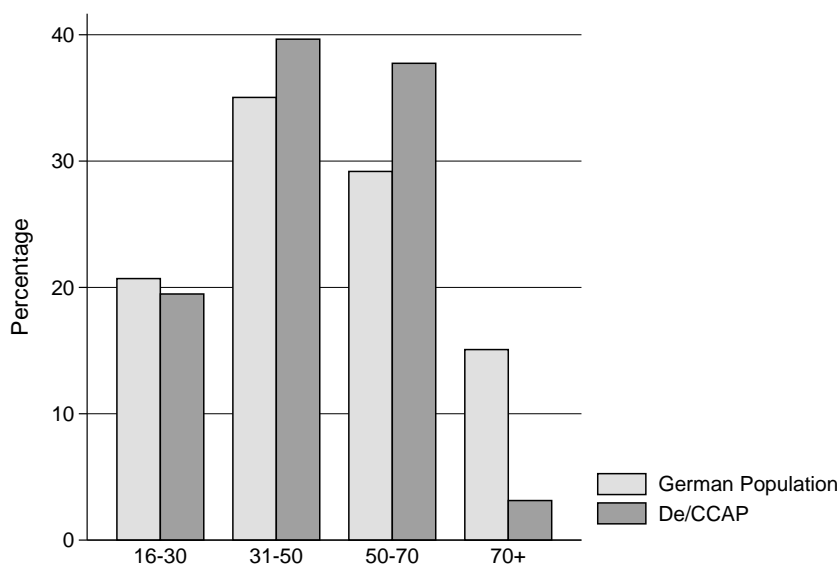


Figure 1 shows the distribution of participants by age, which is significantly different from the distribution in the German population ($\chi^2 = 47.83$, $d.f. = 12$, $p < 0.001$). Broadly speaking, the old (above 70) are highly underrepresented and the middle-aged (31-70) are overrepresented.

Gender distribution: 50.36% (= 2830/5619) of respondents are male, 49.23% (= 2766/5619) are female. The gender distribution is weakly significantly different from the distribution in the population ($\chi^2 = 3.60$, $d.f. = 1$, $p \cong 0.058$).

Figure 2: Distribution of participants in De/CCAP by Education

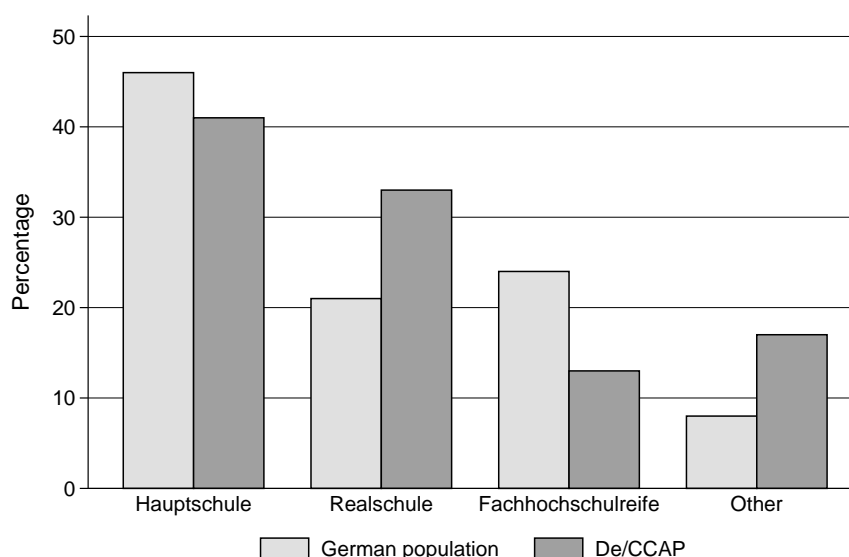


Figure 2 shows the distribution of participants by the highest educational degree they obtained, which is slightly different from the distribution in the German population ($\chi^2 = 47.83$, $d.f. = 12$, $p < 0.001$). Broadly speaking, those with Realschule are slightly overrepresented while those with Fachhochschulreife are underrepresented, those that are still in education or with other degrees are also overrepresented.

3 British CCAP Survey

The vignette experiment run in September 2009 as part of the third wave of the British Cooperative Campaign Analysis Project (B/CCAP). The project is directed by Raymond Duch. B/CCAP is an omnibus experiment (consisting of several independent modules) carried out over the internet with participants drawn from the adult British population in collaboration with YouGov.

B/CCAP conducted a baseline survey in December of 2008. Subsequent panel waves took place every six months until the Prime Minister called the election for May 6, 2010. A pre-campaign wave went into the field 2 weeks before the election. A final post-election wave was conducted on June 2010. A total of 9,731 respondents were interviewed in the 2008 baseline. These respondents were assigned to one or more research teams and answered only the common questionnaire and the specific team's questionnaire. Every attempt was made to retain these respondents throughout all the waves of the panel where their participation was required see Table 2 on panel dates, samples, and retention. Only in waves 1, 5 and 6 did all teams participate.

Table 2: Panel sample size and retention

	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6
Date	December'08	April'09	September'09	January'10	April'10	June'10
N	9731	2793	2742	2748	5847	4976
	<i>100.00%</i>				<i>60.08%</i>	<i>51.13%</i>

3.1 Recruitment of subjects

After a pretest, YouGov invited the 3,861 panelists for B/CCAP-3 (which correspond to the teams with questions in the third wave). 2,742 responded by completing this third wave.

The subjects are anonymous to us. YouGov assigned unique subject ID numbers to

the randomly selected sample invited for BCCAP. Thus, a particular person has had the same ID number across waves, and we can therefore track an individual’s behavior across waves.

3.1.1 Sample representativeness

The sample of BCCAP participants is less representative of the British population in some dimensions (e.g. age), but is close to being representative in others (e.g. gender).

Figure 3: Distribution of participants in B/CCAP by Age

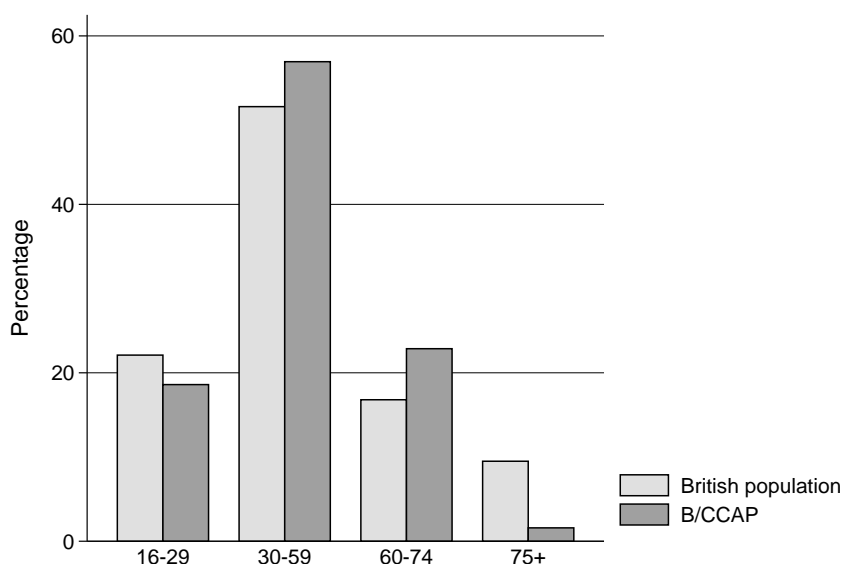


Figure 1 shows the distribution of participants by age, which is slightly different from the distribution in the British population ($\chi^2 = 47.83$, $d.f. = 12$, $p < 0.001$). Broadly speaking, the old (above 75) are highly underrepresented and the young (16-29) are slightly underrepresented, while the middle-aged (30-74) are overrepresented.

Gender distribution is right on target compared with the British population: 48.85% (= 4754/9731) of respondents are male, 51.15% (= 4977/9731) are female. The gender distribution is not significantly different from the distribution in the population ($\chi^2 = 3.60$, $d.f. = 1$, $p \cong 0.058$).

Figure 4: Distribution of participants in B/CCAP by Education

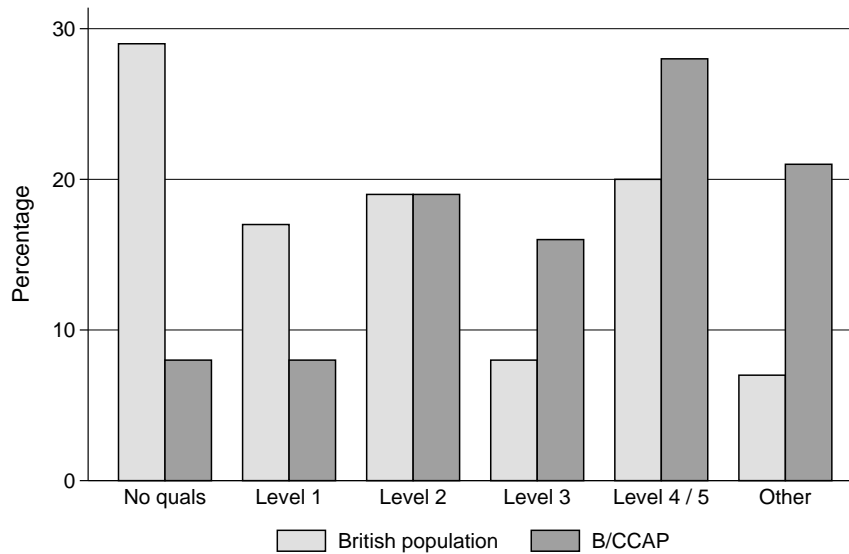


Figure 4 shows the distribution of participants by the highest educational degree they obtained, which is slightly different from the distribution in the British population ($\chi^2 = 47.83$, $d.f. = 12$, $p < 0.001$). Broadly speaking, those with less than Level 2 qualifications are slightly underrepresented while those with more than Level 3 qualifications are overrepresented (the other category includes respondents with post-graduate education MA's PhD's).

3.2 Coalition Formation Heuristics Vignettes

One of the experimental modules in the CCAP surveys was a set of experimental vignettes designed to recover the coalition reasoning heuristics employed by the average voter. In the two surveys respondents were administered each of eight coalition treatments (Treatments 1A through 4B) – the treatments were randomly ordered for each respondent.

3.3 Description to Participants

UK Participants were given the following set of instructions (the German instructions were similar with one important caveat – Germans were not rewarded for “correct” answers):

We will now like you to play a game. You will be asked to make some choices. Other participants in this survey will be asked to make the same choices. Each time you make a choice that is the same as the choice made by the majority of respondents in this survey you will be awarded bonus YouGov points.

We are going to describe a number of hypothetical political situations to you and for each different situation you will need to make a choice that you think most other participants in this survey will agree on. First, all of the questions are going to use a Left versus Right political scale like the one below. At one end of the scale you find the most Left-wing position (Position 0). At the other end of the scale you find the most Right-wing position (Position 10). And right in the middle you find those with Centrist positions (Position 5).

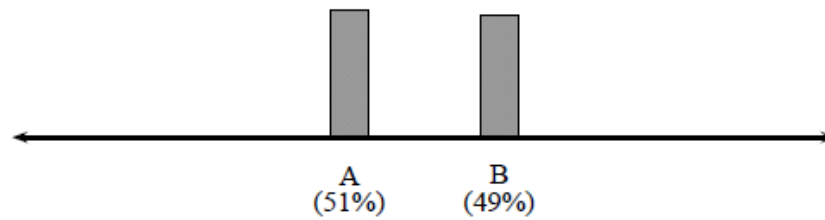
We are going to add two pieces of information to this scale. First we are going to locate political parties on this scale – Party A, Party B, etc. Secondly, we are going to report the results of an election – so we will tell you how many seats in the Parliament each party won as a result of the election. Based on this information you will need to answer some questions. Remember, if your answers are the same as the majority of respondents in this sample you earn additional YouGov points.

3.4 Treatment 1A

Two parties win Parliamentary seats in this election. Which party or parties most likely will form a majority government in Parliament?

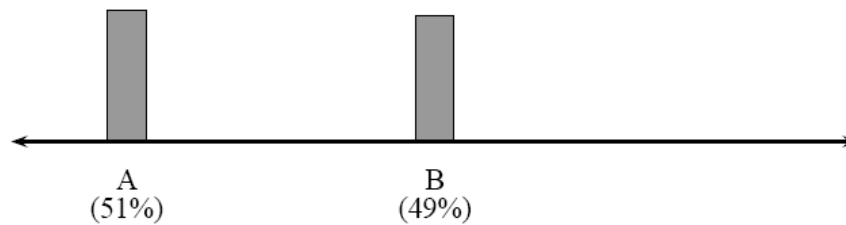
1. Party A is at .40 and Party B is at .60
2. Party A: 51 percent and Party B: 49 percent

Figure 5: Frequency with which Majority Governments Selected



3.5 Treatment 1B

Figure 6: Frequency with which Majority Governments Selected

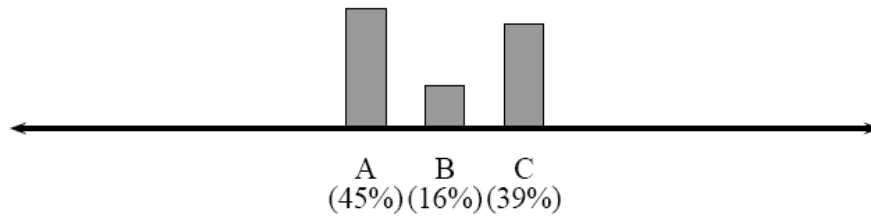


Two parties win Parliamentary seats in this election. Which party or parties most likely will form a majority government in Parliament?

1. Party A is at .10 and Party B is at .50
2. Party A: 51 percent and Party B: 49 percent

3.6 Treatment 2A

Figure 7: Frequency with which Majority Governments Selected

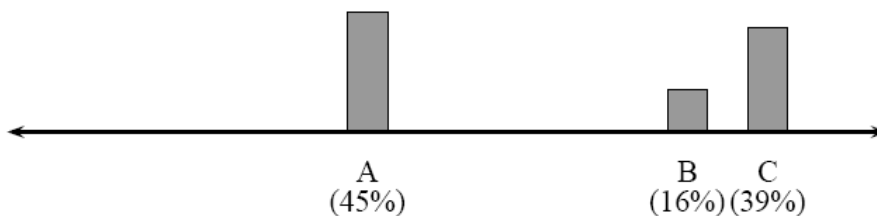


Three parties win Parliamentary seats in this election. Which party or parties most likely will form a majority government in Parliament?

1. Party A is at .40; Party B is at .50; and Party C is at .60
2. Party A: 45 percent; Party B: 16 percent; and Party C: 39 percent

3.7 Treatment 2B

Figure 8: Frequency with which Majority Governments Selected

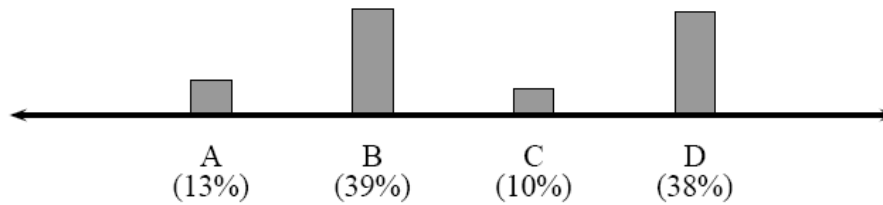


Three parties win Parliamentary seats in this election. Which party or parties most likely will form a majority government in Parliament?

1. Party A is at .40; Party B is at .80; and Party C is at .90
2. Party A: 45 percent; Party B: 16 percent; and Party C: 39 percent

3.8 Treatment 3A

Figure 9: Frequency with which Majority Governments Selected

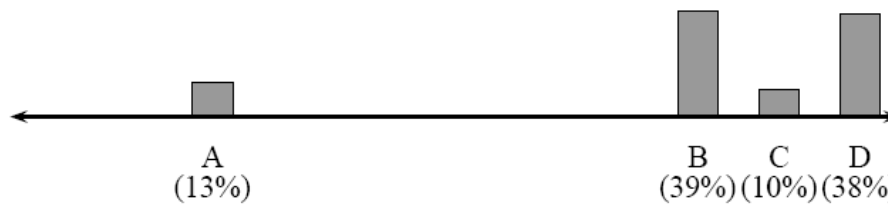


Four parties win Parliamentary seats in this election. Which party or parties most likely will form a majority government in Parliament?

1. Party A is at .20; Party B is at .40; Party C is at .60; Party D is at .80
2. Party A: 13 percent; Party B: 39 percent; Party C: 10 percent; and Party D: 38 percent

3.9 Treatment 3B

Figure 10: Frequency with which Majority Governments Selected

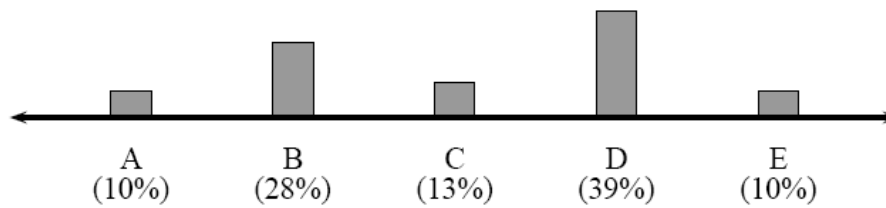


Four parties win Parliamentary seats in this election. Which party or parties most likely will form a majority government in Parliament?

1. Party A is at .20; Party B is at .80; Party C is at .90; Party D is at 1.0
2. Party A: 13 percent; Party B: 39 percent; Party C: 10 percent; and Party D: 38 percent

3.10 Treatment 4A

Figure 11: Frequency with which Majority Governments Selected

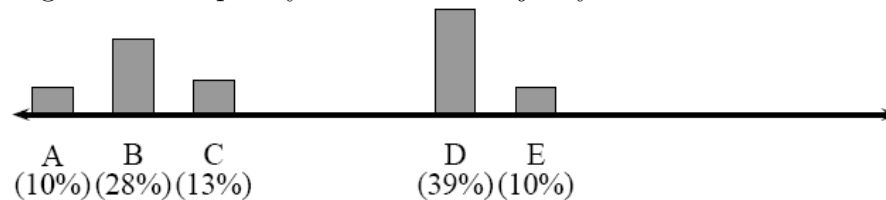


Five parties win Parliamentary seats in this election. Which party or parties most likely will form a majority government in Parliament?

1. Party A is at .10; Party B is at .30; Party C is at .50; Party D is at .70; Party E is at .90
2. Party A: 10 percent; Party B: 28 percent; Party C: 13 percent; Party D: 39 percent; and Party E: 10 percent

3.11 Treatment 4B

Figure 12: Frequency with which Majority Governments Selected



Five parties win Parliamentary seats in this election. Which party or parties most likely will form a majority government in Parliament?

1. Party A is at 0; Party B is at .10; Party C is at .20; Party D is at .50; Party E is at .60
2. Party A: 10 percent; Party B: 28 percent; Party C: 13 percent; Party D: 39 percent; and Party E: 10 percent

4 Danish Internet Laboratory for Experimental Economics (iLEE4) Survey

The vignette experiment was run in Denmark in Summer 2011 as part of iLEE4, the fourth wave of the Internet Laboratory for Experimental Economics project at the University of Copenhagen. The project is directed by Jean-Robert Tyran and funded by the Carlsberg Foundation. iLEE4 is an omnibus experiment (consisting of several independent modules) carried out over the internet with participants drawn from the adult Danish population in collaboration with Denmark Statistics (the national statistics office).

Participants in iLEE4 are paid according to their choices in all modules except for the vignette experiment and the questionnaires. The average participant takes about one hour to complete, and earns approx. 50 Euros. Participants were routed through the modules in a block-randomized order (see online instructions on xx for details).

4.1 Recruitment of subjects

After a pretest, we invited 2,291 panelists for iLEE4. 942 of these logged into our webpage (<http://ilee.econ.ku.dk>) and 689 subjects completed all parts of iLEE4.

The subjects are anonymous to us. Statistics Denmark assigned unique subject ID numbers to the randomly selected sample invited for iLEE1. Statistics Denmark used the same ID number for a given person when sending out hard-copy invitation letters in each wave of iLEE. Thus, a particular person has had the same ID number across waves, and we can therefore track an individual's behavior across waves.

4.1.1 Sample representativeness

The sample of 689 iLEE4 completers is clearly not representative of the Danish population in some dimensions (e.g. age), but is close to being representative in others (e.g. gender).

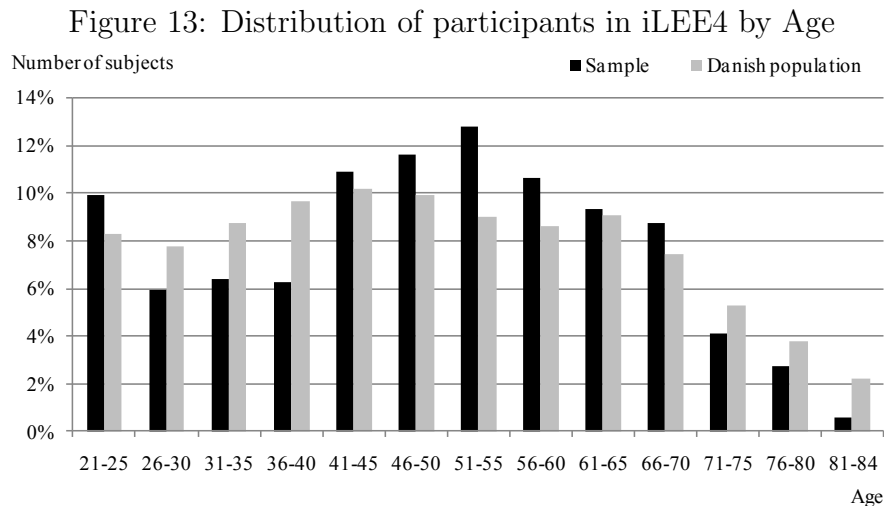


Figure 13 shows the distribution of participants by age, which is significantly different from the distribution in the Danish population ($\chi^2 = 47.83$, $d.f. = 12$, $p < 0.001$). Broadly speaking, the young (ages 25-40) and the old (above 65) tend to be underrepresented and the middle-aged (40-60) tend to be overrepresented.

Gender distribution: 53.1% (= 365/689) of respondents are male, 46.9% (= 322/689) are female. The gender distribution is weakly significantly different from the distribution in the population ($\chi^2 = 3.60$, $d.f. = 1$, $p \cong 0.058$).

4.2 Description of Coalition Formation Heuristics Vignettes

The coalition formation heuristics experimental vignettes were also administered in the 2010 Danish survey. As in the case in the German and UK internet surveys, subjects indicate the most likely coalition of political parties when knowing the parties' position

(on the left-right spectrum) and relative strength (share of seats in the parliament). Parties are symbolized with geometric symbols (Circle, square etc.) rather than letters to avoid confound with party identification of respondents. In fact, some parties in Denmark are referred to by single-letter abbreviation (e.g., A is the symbol of the Social democrats).

Subjects make choices in the same eight scenarios described above for the German and UK surveys. Scenarios with parties clustering in the center are labeled below C, those with parties clustering at one end (either left or right) are labeled E. Half of the subjects see a clustering to the left for a given number of parties, the other half see a clustering to the right. The sequence of scenarios is (in fixed order): (1) 2 parties, C. (2) 2 parties, E. (3) 3 parties, C. (4) 3 parties, E. (5) 4 parties, C. (6) 4 parties, E. (7) 5 parties, C. (8) 5 parties, E.

We have two treatments: (i) **Incumbent cue** (345 subjects) and (ii) **no incumbent cue** (344 subjects). Subjects are allocated to treatments alternating order as they reach the module.

In the incumbent cue treatment, subjects are told that one particular party has been member of a majority coalition before the election. For instance, the Circle Party was a member of the majority coalition (see Figure 14 where the party symbol of the incumbent (Circle) is highlighted). In the no incumbent cue treatment no such information is provided (see Figure 15, no symbol is highlighted).

4.3 Description of screens

All screens in iLEE4 have the same basic layout and structure. The bottom band informs that the Department of Economics at the University of Copenhagen hosts the experiment and features a “logout” button. Participants can log out at their discretion and come back any time while Part 1 is open (approx. one month). They are then routed

Figure 14: Example of task (4): 3 parties, clustering on the left, incumbent cue

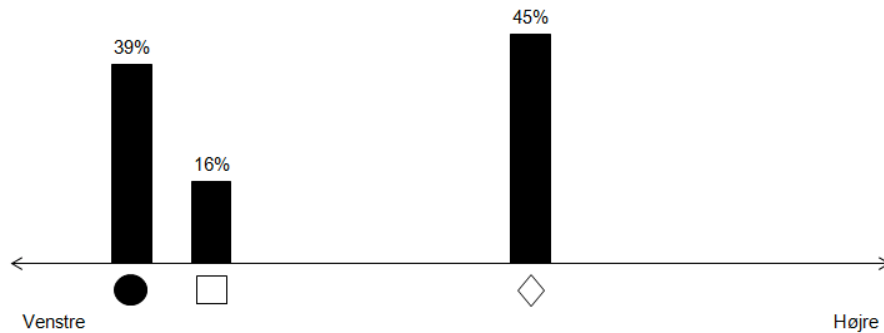
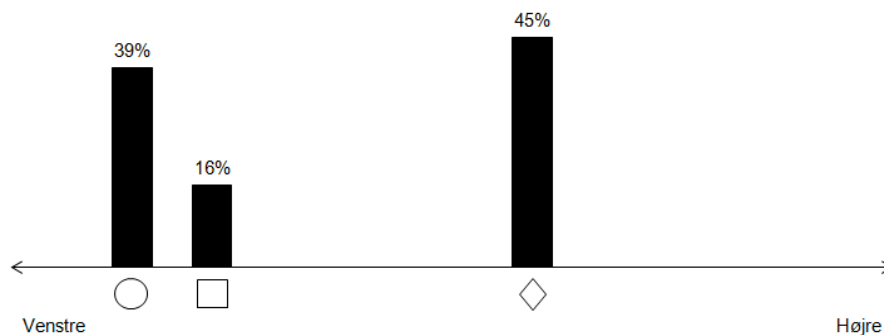


Figure 15: Example of task (4): 3 parties, clustering on the left, no incumbent cue



back to the module they left. The top band features a “help” option informing about the closing date of the wave and our contact details. An “Instructions” option on all decision screens allows subjects to review instructions for the current module. Decision buttons are placed in the lower right corner of the screen. Screenshots for specific screens are available on request.

At the beginning of the experiment (Module 0) subjects are asked to report their age, gender and highest completed level of education.

Subjects learn on the start screen of this module that the module is non-incentivized.

(a) **Instructions 1:** informs that subjects will be presented 8 scenarios and are asked to indicate the most likely majority coalition. Each party is characterized by its location on a left-right scale and its relative strength (percentage of seats in parliament). Figure 15 illustrates how the information is presented. In this example, there are 3 parties: The

Circle Party, the Square Party, and the Diamond Party with 39%, 16%, and 45% of the seats in the parliament, respectively.

(b) **Decision screen:** Shows a figure similar to the figures above in the upper part. The lower part of the screen lists the party symbols vertically as they appear in the illustration (from left to right). Each party on the list has a check box and subjects have to click at least one check box per screen. Eight decision screens in total.

The vignette experiment is followed by a **questionnaire** that included the following items: Political attitudes: Rate your political orientation on a 1-10 scale (1: left-winger, 10: right-winger). Which party would you vote for if there was an election tomorrow? Possible answers are (drop-down menu): Socialdemokraterne, Radikale Venstre, Konservative, Socialistisk Folkeparti, Kristendemokraterne, Dansk Folkeparti, Venstre, Liberal Alliance, Enhedslisten, "I would vote blank", "I do not have the right to vote", or "I would abstain".

Political knowledge: Screen1: Which political parties constitute the current government in Denmark? Parties are listed in the same order as in (d). Tick one or more check buttons. Screen2: What percentage of the ministers are from each of the two government parties. Use a slider to indicate the percentages (the start value is 50%-50%). Which party are some of the most prominent ministers in the Danish government member of? Prime minister is on top, the others are randomized. Possible answers are: Venstre, Konservative, or "I do not know".

General economic conditions: How do you think the general economic situation in Denmark has developed over the past 12 months much better, better, unchanged, worse, much worse, don't know; What are your expectations for the development of the Danish economy in the coming 12 months much better, better, remain unchanged, worse, much worse, don't know; What do you think has been the impact of the government's policy on the economy? much better, better, unchanged, worse, much worse, don't know

Five questions taken from the *World Values Survey 2005-06*¹ : subjective well-being on scale 1-10 (V22), general trust on scale 1-10 (V47) and scale “yes” or “no” (V23), and two on political values on scale 1-10 (V118, V119).

¹http://www.worldvaluessurvey.org/wvs/articles/folder_published/survey_2005/files/WVSQuest_SplitVers_OECD_Aballot.pdf

5 Tables Referenced in Text of Article

Table 3: Correlation amongst coalition heuristics: Denmark and Germany

	Majority	Connected	Formateur	Ideological	Minimal
Germany					
Majority	1				
Connected	0.83	1			
Formateur	0.54	0.65	1		
Ideological	0.31	0.31	0.32	1	
Minimal	0.67	0.83	0.53	0.23	1
Denmark					
Majority	1				
Connected	0.78	1			
Formateur	0.35	0.43	1		
Ideological	0.36	0.34	0.54	1	
Minimal	0.27	0.33	-0.26	-0.04	1