

Vote Choice and Consideration Sets in a Multi-party Setting:

Comparing different Measures of Consideration Sets

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1. Introduction

In multi-party systems voters can choose from many alternatives. In some instances, e.g., the German federal election 2013, more than thirty parties compete for votes. On the one hand, a multitude of options offers an opportunity to make a decision that fits nicely with individual preferences. On the other hand, taking into consideration a larger number of options renders the task of electoral decision-making quite complicated, makes persons less satisfied with their decision (e.g., Weiss 1993) and sometimes even deteriorates the quality of decision-making (e.g., Lau et al. 2008). Given the limitations of human beings in processing information (Simon 1985), it is reasonable to assume that voters aim at simplifying electoral decision-making. One way to simplify decision-making is to edit the decision by eliminating one or more alternatives from the original set of possibilities (Redlawsk and Lau 2013: 137).

The literature on decision-making in politics, economics, and business administration has used different terms for these sets of options, among them “choice set” and “consideration set”. For this paper we will mainly use the term “consideration set”, because it represents best what we want to look at: The number of parties individual voters consider for their decision in an election. Given a smaller number of parties under consideration, processing information and decision-making are more manageable. Accordingly, voters are assumed to employ a stepwise strategy. Research on decision-making in consumer behavior (Kardes et al. 1993; Shocker et al. 1991; Wright 1975) suggests that decisions are made in at least two stages. The same is likely true for electoral decisions and hence this approach has been adapted by several researchers (De Vries and Rosema 2009; Oscarsson 2004, 2009; Oscarsson et al. 1997; Oskarson 2014; Paap et al. 2005; Steenbergen and Hangartner 2008; Steenbergen et al. 2011): Voters will first narrow down the number of alternatives under consideration (stage 1) and then choose from this consideration set (stage 2). Because task complexity and overall difficulty increase the utility of simplification strategies, this kind of stepwise strategy of electoral decision-making is likely to be appealing to voters in multi-party settings like Germany.

The notion that voters employ stepwise procedures in which they narrow down the number of alternatives before making a voting decision is not completely new in electoral research. Leaving aside the fact that early works somehow hinted at this possibility already (e.g., Lazarsfeld et al. 1944), there are two main strands of prior research that deal with this idea. Scholars of behavioral decision-making relied on experimental data (dynamic decision boards) to study information-search strategies of voters in mock election campaigns (e.g., Lau

and Redlawsk 2006). The evidence suggests that voters do not pay equal attention to all candidates alike, but focus their attention on a limited number of candidates including the ultimately chosen candidate. While this research has produced a host of results on information search and processing, it is somewhat limited by the mock nature of the elections and the rather low number of alternatives reflecting the nature of electoral competition in the US. By contrast, scholars of voting in multi-party settings relied on survey data collected during real elections to tap the narrowing down of consideration sets before making the final voting decision (De Vries and Rosema 2009; Oscarsson 2004, 2009; Oscarsson et al. 1997; Oskarson 2014; Paap et al. 2005; Steenbergen and Hangartner 2008; Steenbergen et al. 2011). Yet, this research is limited for several reasons. The first limitation is linked to the reliance on cross-sectional data. As respondents are only asked once before or after an election this type of data does not permit to study the dynamics of electoral decision-making at all. In addition, in the case of post-election surveys we have to assume a large deal of ex-post rationalization by voters. The second limitation of this approach is related to the measurement of consideration sets. Usually, papers in this strand of research do not measure considered alternatives directly, but by proxy variables like feeling thermometers for parties, ideological, or issue distances. As a result, despite its theoretical appeal the notion that voters employ stepwise strategies of electoral decision-making has not been studied properly in real-world multi-party election campaigns. And in addition, we do not know yet whether the applied indicators really measure considered alternatives for voting behavior and whole consideration sets or not.

Following Oscarsson's advice that "new types of data collection such as intense campaign panel studies need (again!) to be designed and carried out" in order "to closely monitor and model the decision processes of individual voters" (Oscarsson 2009, 15) the present paper will use data from the short-term campaign panel of the German Longitudinal Election Study (GLES) 2013. Our analyses are an attempt to overcome the lack of evidence on the dynamics of electoral decision-making. By employing some kind of process-tracing technique we study how voters' consideration sets evolve in the course of a campaign. This paper is the first contribution on consideration sets in Germany and will be the first part in a series of papers on this topic. The main goal of this first cut is to find out whether the measurement of consideration sets applied by the GLES short-term campaign panel is valid and hence provides any additional value compared to previously used operationalizations of the concept. We will describe opinion-formation processes among voters in the 2013 German federal election and will be able to show that asking participants about parties they consider for their voting decision makes sense in a multi-wave panel survey as it provides a more accurate

measurement of consideration sets than (proxy) instruments applied previously. Research on consideration sets is highly relevant because it will provide more knowledge about decision-making processes of voters, decision-making and information-processing during electoral campaigns, campaign effects and the role of the campaign for decision-making processes. We will also be able to learn more about the (limited) rationality of voters and hopefully derive a more adequate and realistic model of voting behavior.

The structure of the paper will be as follows: In the second section we will discuss the concept of consideration sets in more detail against the background of research on voting behavior. We will also focus on the different operationalizations of the concepts used in previous publications and papers on the topic. The third section will describe the data and present the measurement and operationalization of all relevant variables. The fourth section will test the validity of our consideration set measure against measures based on feeling thermometers towards parties and vote intentions over the course of the campaign while the fifth section will summarize and discuss our findings. In particular it will focus on additional avenues for future research on consideration sets.

2. Theoretical discussion on voting behavior, consideration and choice sets

Elections provide voters with an opportunity to choose a party or candidate from an extensive number of alternatives. At the same time, voters face a quite complex task when making up their minds upon whom to vote for. Even in pure two-party settings, there is a multitude of criteria to employ to pick one party. Moreover, campaigns provide voters with lots of information about competing parties and candidates that they might process when making an electoral decision. Switching from two- to multi-party settings increases the complexity of decision-making additionally. Given the cognitive limitations of human beings, choosing a party in a multi-party setting implies serious cognitive challenges for voters. The history of elections suggests, however, that there are some means for voters to cope with this kind of task complexity. Relying on an information processing perspective (e.g., Lau and Redlawsk 2006), voters do not collect information on all alternatives to process it and make a decision over all alternatives at a single point in time. Rather, information processing and making decisions extend over a longer period of time. By implication, the task of electoral decision-making can be divided into manageable steps which are taken subsequently, rather than simultaneously.

In a sequence of decisions, voters might narrow down the number of alternatives to a manageable set from which they then choose. Put differently, they are assumed to form a consideration set from which they finally pick the party to vote for. By eliminating alternatives, voters make the decision problem more manageable because they have to deal with information on a limited number of alternatives. Utilizing a sequential strategy might permit voters also to employ different criteria at different stages of the decision-making process. Having chosen considerable parties by rather crude criteria, voters might switch to more demanding strategies and fine-grained criteria when choosing from the parties included in the consideration set (e.g., Redlawsk and Lau 2013). Irrespective of the criteria employed, this notion suggests a (gradual) narrowing-down of the number of alternatives and a final choice.¹

This description is ideal-typical, rather than realistic, however, when it comes to electoral decision-making in real-world settings. To begin with, up to this point, we implicitly assumed that voters pick their consideration set from all parties competing for votes. Aiming at a realistic account, it appears to be reasonable to distinguish the (objective) choice set comprising all parties running for parliament from the awareness set that includes all parties a voter is aware of (see, e.g., Alba and Chattopadhyay 1985 also for further distinctions). The latter is relevant for individual-level decision-making and serves – at least implicitly – as criterion when talking about the narrowing down of consideration sets. Subjective awareness sets are usually smaller than the number of parties running for office and variable during a campaign. Accordingly, during a campaign, voters might learn about parties they previously did not know. As a result, the number of parties in their consideration set might increase while the consideration set/awareness set ratio stays the same or even decreases.

Increases in the number of parties in awareness and consideration sets are not unlikely to occur in real-world campaign settings. To begin with, voters do not disregard information about candidates or parties they have to pick from (Lau and Redlawsk 2006: 97). Accordingly, voters might learn about parties they did not know or consider before and include some of them in the awareness and/or consideration set. The 2013 German federal election is an interesting case in this respect. The Euro-skeptic party “Alternative für Deutschland” (AfD, “Alternative for Germany”) won 4.7 percent of the votes in this election, although it was founded just 7 months before and ran for the first time in a nation-wide

¹ Given the focus of this paper, we do not discuss implications of the consideration set perspective for party choice [criteria might vary depending on the composition of the consideration set as well as on the criteria employed on the previous stage].

election. Due to the novelty of this political party we can assume that many Germans eventually learned about it during the campaign with possible consequences for their awareness set and/or their consideration set: Instead of narrowing down the number of alternatives, consideration set (and awareness set) size might even increase during the campaign.

In addition, campaign strategies, including priming and framing, aim at shaping the criteria voters rely on when making decisions (e.g., Iyengar and Kinder 1987). Provided these strategies are successful, selection criteria might change and thus the composition of the consideration set. In summary, it cannot be taken for granted that voters monotonically narrow down the number of alternatives under consideration before finally picking a party. Rather, we might observe a back-and-forth process before voters arrive at their voting decision. Accordingly, we will have a look at the development of consideration sets over the campaign panel in the empirical analysis.

These possibilities imply that the consideration set perspective might provide interesting insights. A necessary condition for gleaning this kind of evidence, however, is a valid strategy to measure consideration sets. Following prior research, subjective measures appear to be some kind of natural candidates. Accordingly, voters are asked which parties they take into consideration (Oscarsson 2009; Oscarsson et al. 1997; Oskarson et al. 2014; Paap et al. 2005)². This strategy has the advantage of being simple. However, measurement error, e.g., stemming from social desirability effects, might lead to distorted results. A less obtrusive strategy implies inferring consideration sets from information about party evaluations (like/dislike feeling thermometers) (Oscarsson 2004, 2009; Oscarsson et al. 1997). This measure does not require citizens to give an impression of their decision-making process. At the same time, it implies that scholars determine certain thresholds of partisan evaluations to qualify a party for inclusion in the consideration set. Accordingly, additional assumptions have to be made that might result in decisions by researchers that seem to be arbitrary. In a similar vein, distances on, e.g., policy dimensions or ideological placement have been used as indicators for the inclusion in consideration sets (Steenbergen and Hangartner 2008; Steenbergen et al. 2011). Another possible option when using panel data with several waves is to employ vote intentions provided over the course of the survey. All parties mentioned can be regarded as part of the consideration set of a voter. The literature on consideration sets has

² The survey used by De Vries and Rosema (2009) just asked undecided voters for parties they consider to vote for.

used several other indicators, among them the propensity to (ever) vote for different parties (Dutch Election Studies; European Election Studies; Oscarsson 2009), second and further preferences for the electoral decision (Oscarsson 2009), or voting behavior or intentions to vote at other electoral levels like state, European, or local elections (Oscarsson 2009). Resembling research on information search in experimental settings (Lau and Redlawsk 2006), information processing could serve as indicator for the composition of consideration sets. This strategy has the advantage of being not very obtrusive but it is plagued with considerable assumptions and, as of today, it is hardly feasible in real-world campaign settings.³

Examining the validity of measures of consideration sets requires some criteria. To derive criteria, we rely on the above discussion of the concept. First and foremost, to be useful for the analysis of electoral decision-making the finally chosen party must be comprised by the consideration sets before the election. Otherwise, the concept ‘consideration set’ would be worthless. Second, relying on the notion of a process of decision-making, the likelihood of the chosen party to be included in the consideration set should increase in the course of the campaign.⁴ Third and finally, at any point in time during a campaign, voters who have made up their mind yet ought to exhibit smaller consideration sets than those who are unsure whom to vote for.⁵

In this paper we will concentrate on a limited set of criteria for consideration sets by examining the validity of seven different measures⁶: The campaign panel survey included questions concerning consideration sets, employing a four-point scale. We will use the original four-point item and will additionally create three dichotomous variables from it: A narrow, medium, and wide indicator. The second group of indicators will be based on party evaluations (eleven-point like/dislike feeling thermometers towards the most relevant German parties). We will use both an absolute and a relative measure. And finally we will look at

³ To complete our review of previously used measures for consideration sets, we have to mention Wilson’s contribution on consideration sets in Mexican elections. She uses regional strength of parties measured via campaign efforts and intensity to model consideration sets of voters (Wilson 2008).

⁴ The number of options included in the awareness set should increase or stay the same but not decrease during the campaign period.

⁵ The composition of the consideration set should also be reflected in the reception of campaign information. As noted above, voters are unlikely to focus their information search and reception exclusively on parties included in the consideration set. But it might be reasonable to expect that voters receive more information about parties within the consideration set than about parties outside of it. We will not look at this aspect in this paper, but still want to highlight this additional possibility for examining the validity of the measures.

⁶ The question wording and coding of the respective variables can be found in section 3.

intentions to vote in the pre-election waves of the campaign panel. Parties mentioned for this item can definitely be regarded to be among voters' consideration sets.

3. Data, measurement, and operationalization

We will use the GLES (German Longitudinal Election Study; Rattinger et al. 2014) campaign panel study for the German federal election 2013. Between June 20 and October 4, 5,256 persons have been interviewed up to seven times, six times before the election (which took place on September 22) and one time afterwards. Interviews were conducted online. Participants came from an online access panel run by the market research company Respondi. These persons had been mostly recruited on special webpages; hence they are on average very web-affine and clearly not representative of the general population in Germany. However, since our goal is to study the mechanisms and the development of intra-individual decision-making processes and not to describe the entire population, this should not be a disadvantage for our analysis. Instead of applying random sampling, the selection of campaign panel participants had been consciously designed to obtain a maximally heterogeneous sample. By using quota specifications, groups of people defined by 30 combinations of sex, age and education categories are represented in the dataset with approximately the same relative frequency. Our analyses will focus on those 2,694 respondents who participated in all seven waves of the campaign panel study and who did not cast an absentee ballot before Election Day. We exclude absentee voters because they decided early before the election and hence were not asked subsequently whether they considered to vote for other parties than the one they had already mentioned. In addition, we can assume that the fact of having cast a ballot already before Election Day has an impact on the likelihood to consider possible other parties for the (then hypothetical) decision to vote.

Our main indicator for consideration sets is a direct question whether a respondent considers voting for a specific party or not. All respondents except absentee voters were asked these questions, no matter if they already intended to vote for a party or if they were still undecided about their voting decision. These questions were part of waves 1, 3, 6, and 7 of the survey, and a four-point scale was used providing the options “do consider [party]”, “do rather consider [party]”, “do rather not consider [party]”, and “do not consider at all [party]”.⁷ The

⁷ The exact wording of the question and the response options was, of course, adapted to the timing of the question and whether the question was addressed to a respondent who was decided to vote for a party or not. The exact German wording for respondents who provided an intention to vote was: “Sie haben gesagt, dass Sie

parties for which these questions were asked included CDU/CSU, SPD, FDP, Greens, The Left, AfD, and the Pirate Party and thus all parties which were either represented in the federal parliament before the 2013 election or which had chances to secure more than five percent of the votes and hence could be part of the newly elected parliament. In addition, “other party” was also included as a residual category. However, we have no information which party or parties a respondent might have thought of when he provided an answer on whether he considers voting for this “other party” or not. Previous studies on consideration sets (Oscarsson 2009; Oscarsson et al. 1997; Oskarson et al. 2014; Paap et al. 2005) have used similar items, but only in cross-sectional surveys or panel surveys with a much lower number of waves.

Since our main goal is to test the validity of different consideration set measures, we created four different variables based on these items on considered parties (see Table 1). Aside from the original four-point item for the different parties (rescaled to a range between 0 and 1 to allow for easier comparison) we will use three dichotomous variables. This means that we decide when a party is part of the consideration set of a voter and when it is not by introducing a cut-point. The consequence of creating these dichotomous variables is that we have to regard consideration sets as deterministic constructs in a sense that a party is either part of a consideration set of a voter or not. However, we have to point to the fact that consideration sets and the fact that a party is considered by a voter is rather a probabilistic construct and that probabilities change over the course of the campaign. The narrow item will treat those parties as part of the consideration set for which respondents state that they “do consider” the respective party. The medium item combines the top-two responses “do consider” and “do rather consider”, while the wide item also includes the response option “do rather not consider”. If respondents provided an intention to vote for a party in the pre-election waves or mentioned a party in the post-election question on their electoral behavior, the mentioned party is part of their consideration set and the variable for the respective party thus equals one.

Table 1: Overview of measures for consideration sets using the items on considered parties

mit Ihrer Zweitstimme [Partei] wählen wollen. Gibt es für Sie noch weitere Parteien, die für Ihre Zweitstimme in Frage kommen?“ Response options: „(1) [Partei] kommt für mich in Frage, (2) [Partei] kommt für mich eher in Frage, (3) [Partei] kommt für mich eher nicht in Frage, (4) Partei kommt für mich auf keinen Fall in Frage.“

	Vote intention for party	Do consider	Do consider rather	Do consider rather not	Do not consider at all
4-point item	1	1	0.66	0.33	0
Narrow item	1	1	0	0	0
Medium item	1	1	1	0	0
Wide item	1	1	1	1	0

Note: Gray-shaded areas indicate inclusion in consideration set.

We have to highlight the fact that the time interval between the different waves which included items on consideration sets is not identical and that the timing of the panel waves very likely has implications for decision-making and information-processing and hence the consideration sets of voters. At the outset of the campaign, decreasing the number of alternatives is valuable in making the decision easier. Gathering information on a limited set of alternatives and choosing from two or three parties is easier than choosing from six or more parties. In contrast, at the end of the campaign, however, two or three parties are still quite a lot to take into consideration. Our main indicators on considered parties were included in waves 1, 3, 6, and 7 of the survey. Wave 1 was in the field between June 20 and July 7, 2013. Thus, wave 1 caught voters more or less before the campaign for the federal election started. This implies that for some voters we might measure their long-standing consideration sets that they have no matter whether an election is coming up or not. Some other voters might not have been aware of the upcoming election at all and are more or less blank slates with respect to parties they might consider for their electoral decision. Wave 3 asked panel participants between August 1 and August 11, 2013 at a point when the campaign had already started. Absentee voting was also possible at this point, and many voters might have felt urged by then to come to a decision or to form consideration sets at least. Many voters likely had started to gather information, follow the campaign and start thinking about their decision to vote and parties they might consider suitable for this decision. Wave 6 of the campaign panel was surveyed between September 16 and September 21, 2013. This was the last week before the election. In that situation voters might have felt much more pressurized, might have used a host of information, were likely much more familiar with political actors and party platforms, and might have come to their decision by then. The last wave (7) started just two days after Election Day on September 24 and lasted until October 4, 2013. Despite the close timing to wave 6, voters were asked again for their consideration sets. Right after the election voters might have already started to regret their electoral decision or have started to apply some kind of post-election rationalization of their decision in terms of bandwagon effects or the like. In addition, voters might have reacted differently to the question because it is much more

hypothetical to think about parties you consider for your voting decision right after you have just cast your ballot. We will keep these considerations in mind when interpreting our empirical results in the next section.

Additional measures for consideration sets are based on feeling thermometers for political parties. Participants in the survey were asked in every wave how they evaluate CDU, CSU, SPD, FDP, Greens, The Left, AfD, and the Pirate Party on a 11-point scale from totally dislike (-5) to totally like (+5). We will use two different operationalizations based on these variables as benchmark for the direct measurement of consideration sets in the short-term campaign panel. The first measure treats all parties who get positive evaluations by respondents as part of their consideration set and is called “positive thermometer”. Table 2 provides an example using hypothetical ratings of four different parties. The second measure uses a different approach. All parties which get the most positive value in a respective wave are part of the consideration set of respondents. Hence, the indicator is called “maximum thermometer”. However, this means that, on the one hand, a party is part of a voter’s consideration set if it is rated -4 and all other parties are rated -5. On the other hand, parties which get a rating of +4 are not in the consideration set if one party gets rated +5. Table 3 provides a depiction of two hypothetical examples.

Table 2: Example for the “positive thermometer” measure for consideration sets

Party	-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
A				X							
B							X				
C											X
D	X										

Note: Gray-shaded areas indicate inclusion in consideration set.

Table 3: Two examples for the “maximum thermometer” measure for consideration sets

Party	-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
A				X							
B							X				

Table 4 presents information on the first step. It shows the number of parties in the consideration set of voters for six of our seven indicators in the four relevant waves of the campaign panel. Vote intentions are not included because there can, by definition, only be one intention for one party per wave. It does not come as a big surprise that the highest number of parties always originates from the wide consideration set measure. In waves 1 and 3 more than four parties are taken into consideration on average, while this number drops to 3.84 (in wave 6) and 3.65 (in wave 7), respectively. It is also not surprising that the narrow consideration set item delivers the lowest number of parties (1.25-1.46). Interestingly, however, this is the only indicator for which we can see an increase of the average number of considered parties over the course of the campaign. This is likely related to the fact that voters become more certain about their decision to vote, or at least become more certain about their different parties under consideration, and hence move to the “do consider” category for at least one of the parties. The medium consideration set measure delivers values close to the four-point consideration set item and thus seems to capture the richness of information from this original measure best. This item goes a little up in wave 3 (2.49 to 2.51) and drops to 2.38 or 2.37 parties, respectively. The measures based on feeling thermometers for political parties seem to deliver rather low estimates of consideration set size. This finding is at odds with results reported by Oscarsson (2009) who could show that consideration set size is highest when using eleven-point like-dislike scales for parties. However, these results are based on cross-sectional data and on a different political and party system and cannot be used as a benchmark or indicator for the consideration set operationalizations used here. Our item based on positive evaluations of parties results in consideration set sizes between 2.02 and 2.15, and the measure based on maximum party ratings always stays in a range between 1.74 and 1.90 parties and thus is even smaller. This means that there is a substantial share of citizens who rate at least two parties identically over the campaign when using feeling thermometers. Looking at general trends over the campaign and the different indicators there is – with the exception of the narrow CS-item – evidence for ups and downs during the campaign. Voters seem to become a little bit more aware of their options once the campaign has started (increase from wave 1 to wave 3) and then start narrowing down their consideration sets until after Election Day.

Table 4: Size of consideration sets over the course of the 2013 German federal election campaign with different measures

	Wave 1	Wave 3	Wave 6	Wave 7
4-point CS item	2.61	2.63	2.52	2.49
Narrow CS item	1.25	1.29	1.33	1.46
Medium CS item	2.49	2.51	2.38	2.37
Wide CS item	4.08	4.08	3.84	3.65
Positive thermometer	2.13	2.15	2.02	2.09
Maximum thermometer	1.84	1.90	1.82	1.74
Vote intentions	-	-	-	-

Source: ZA 5704, V 1.0.

The number of parties in a consideration set cannot be used as a criterion to estimate the validity of a measure of consideration sets. Thus, we will move one step further and have a look at this aspect, applying the different criteria mentioned above. The benchmark for our first analysis is whether the party the respondent finally voted for (as reported in wave 7 of the survey) was mentioned by him as part of his consideration set in the pre-election waves. Only if this is the case a measure can be expected to gauge consideration sets appropriately. Table 5 shows the share of voters who did provide the party they finally voted for in waves 1, 3, and 6 of the campaign panel. The four-point item is not included since this analysis requires a cut-point above which a party is definitely in the consideration set and below which a party is not. The closer the percentage to 100 percent, the better does the measure work. In terms of developments over the campaign we see an increase for all indicators between wave 1 and wave 6 in Table 5. Surprisingly, vote intentions deliver the worst result among all six indicators. Even in the week before the federal election 2013 only 69.7 percent of campaign panel respondents mentioned to intend to vote for the party they finally elected some days later. The measures based on feeling thermometers work better than consideration set measures based on vote intentions and deliver acceptable results with shares between 73.9 and 87.6 percentage points. However, even with these items we would predict a wrong party choice for one out of eight respondents if we used information from pre-election waves. The medium and the wide measure based on the four-point item deliver much better results. Even if we only could rely on data from wave one, and thus months before the election in September 2013, the consideration set would include the party the respondents finally voted for in 85 or 93.5 percent of the cases, respectively. These ratios get even better with the campaign unfolding. In wave 6 94.2 percent (97.1 percent) of the respondents do consider the

party they finally voted for in the election. The medium and the wide consideration set item thus seem to gauge the concept of consideration sets quite well and much better than the other operationalizations proposed here.

Table 5: Share of voters with elected party in consideration set in pre-election waves

	Wave 1	Wave 3	Wave 6
Narrow CS item	63.5	69.1	81.1
Medium CS item	85.0	86.4	94.2
Wide CS item	93.5	93.3	97.1
Positive thermometer	78.9	81.3	87.4
Maximum thermometer	73.9	77.1	87.6
Vote intentions	50.5	55.9	69.7

Source: ZA 5704, V 1.0.

Another more relaxed criterion is whether the party a respondent claimed voting for in wave 7 of the campaign panel was mentioned at least once in one of the previous waves. Since the direct question on considered parties was only part of waves 1, 3, and 6 we have calculated two different versions of the measures based on feeling thermometers and vote intentions. One of them uses information from all available waves, while the other one just draws on data from waves 1, 3, and 6, making these items directly comparable with the measures on considered parties. To ease comparisons Table 6 focuses on the seven most relevant German parties and also includes the sum of differences over all parties from 100 percent. Low values on this sum index indicate a high validity of the respective measure. This analysis delivers quite similar results compared to the previous one. The medium and the wide measure on considered parties are very accurate in comprising the elected party in one of the pre-election waves. The main reasons for the accuracy gap between both measures are FDP and AfD. Based on the medium indicator “just” 93.5 and 90.0 percent, respectively, of the later voters of these parties regarded them as part of their consideration sets. Measures based on feeling thermometers and vote intentions fare much worse in including the party respondents finally voted for in the pre-election waves of the campaign panel. This is particularly true for the two indices using vote intentions where the sum indicator easily tops values over 100. Looking at the accuracy of pre-election reports on vote intentions for single parties based on the

comparable measure for vote intentions in waves 1, 3, and 6, we see that between 59.4 and 83.8 percent of the respondents mention the party they finally voted for at least once. The measures based on feeling thermometers fare better once again, but still cannot keep up with the items based on direct measurement of consideration sets: The sum index for the items using feeling thermometers is at least two times higher than for the medium consideration set item. Accordingly, our measure of consideration sets seems to be more valid than the alternatives proposed and presented here.

Table 6: Share of voters with elected party in consideration set in at least one of the pre-election waves

	CDU/ CSU	SPD	FDP	Greens	The Left	Pirate Party	AfD	Sum of differences from 100%
Narrow CS item	92.4	88.9	87.1	91.8	86.0	87.7	74.3	91.8
Medium CS item	98.0	98.3	93.5	99.5	97.1	94.9	90.0	28.7
Wide CS item	99.6	99.5	99.1	100.1	98.3	97.0	95.8	10.6
Positive thermometer, W1-6	95.3	94.4	91.7	97.3	92.6	88.8	82.5	57.4
Positive thermometer, W1, 3, 6	93.5	92.5	90.7	97.0	91.2	88.7	80.0	66.4
Maximum thermometer, W1-6	98.6	94.3	75.0	97.0	96.1	93.8	94.2	51.0
Maximum thermometer, W1, 3, 6	96.3	90.0	66.7	94.9	89.7	85.7	85.3	91.4
Vote intentions W1-6	86.1	86.1	78.7	86.7	81.5	81.6	61.6	137.7
Vote intentions W1, 3, 6	83.5	83.0	75.0	83.8	79.5	76.6	59.4	159.2

Source: ZA 5704, V 1.0.

The final criterion introduced before is whether undecided and decided voters differ significantly with respect to the number of parties in their consideration set. Our expectation is that voters who have made up their mind yet ought to exhibit smaller consideration sets than those who are unsure whom to vote for. Table 7 thus shows differences in consideration set size for our seven measures of consideration sets between those voters who were already decided for a party (D) and those who were not yet decided in the respective wave of the campaign panel (U). The figures do not deliver consistent results over the different measures: While the wide consideration set indicator as well as the item based on maximum thermometer values deliver the expected result, larger consideration sets among undecided voters over the whole survey, the other measures show that the size of consideration sets is

either similar between both groups of respondents or is even higher for decided voters. These results might be a bit irritating at first sight, but make sense when we take into account the construction of the items based on the specific questions on consideration sets (also see section 3). If respondents mention that they intend to vote for a party this party will be included in their consideration set. Thus, the respective measure is “inflated” by one party. This is not the case for undecided voters. Consideration sets for this group of respondents by definition include one party less than for decided voters, because these respondents lack an intention to vote. Bearing in mind this artificial inflation of the measures for decided voters, we can see from Table 7 that all measures based on the question on considered parties deliver the expected results: smaller consideration sets for respondents who have an intention to vote. This means that our measurement of consideration sets is also valid in this particular respect.

Table 7: Size of consideration sets among decided and undecided voters over the course of the 2013 German federal election campaign with different measures

	Wave 1		Wave 3		Wave 6		Wave 7	
	D	U	D	U	D	U	D	U
4-point CS item	2.56	2.63	2.57	2.57	2.49	2.37	2.49	2.11
Narrow CS item	1.41	0.62	1.42	0.64	1.42	0.62	1.46	0.66
Medium CS item	2.42	2.54	2.42	2.48	2.35	2.24	2.37	1.92
Wide CS item	3.86	4.72	3.87	4.59	3.71	4.25	3.65	3.76
Positive thermometer	2.27	1.57	2.35	1.42	2.15	1.18	2.11	0.94
Maximum thermometer	1.35	2.76	1.37	3.00	1.35	3.16	1.42	3.13
Vote intentions	-	-	-	-	-	-	-	-

Source: ZA 5704, V 1.0.

Note: D: decided voters (with intention to vote for a party), U: undecided voters (without intention to vote for a party).

5. Conclusion and discussion

The main goal of this paper was to find out whether the measurement of consideration sets applied by the GLES short-term campaign panel, repeated direct questions on parties considered by a respondent for her electoral decision, is valid and hence provides any additional value compared to previously used operationalizations of the concept of consideration sets. Overall, we tested seven measures. The different empirical analyses show that asking respondents directly on considered parties makes sense and delivers more valid

estimates than measures based on feeling thermometers or intentions to vote. Especially the high share of respondents whose consideration sets before the election already include the party they finally voted for when using the medium or wide measure on considered parties, makes us confident to use the respective indicators in future research and follow-up papers. However, we have to consider the possibility that we still did not measure the full consideration sets of citizens because we did not ask for all parties running in the 2013 election. The very small likelihoods for voters to consider “other parties”, though, show that limiting the questionnaire to the six or seven most relevant parties makes sense and does not lead to inappropriate measurement of consideration sets. Another possible flaw of our analyses and our specific operationalization of consideration sets is that we have applied a probability-logic to the original indicator when we transformed its scale to a range between 0 and 1. In addition, the dichotomous measures treat considered parties and consideration sets as deterministic constructs which might not be adequate from the perspective of individual voters. We also have to keep in mind the fact that our findings might be dependent on the specific data source employed here as well as characteristics of the German polity and this particular federal election and the related campaign. Tackling these issues implies to include the items on considered parties in additional surveys on different future elections in Germany and other countries. In terms of additional validity tests it might be useful to look at other data sources on the federal election 2013 as well. The control cross-section surveys that were part of the campaign panel and the RCS-survey (Rolling Cross Section) with its pre-post-election panel component seem to be logical candidates for this purpose.

Leaving aside these contextual and methodological issues, we are able to use the presented measure on considered parties in subsequent papers in which we will address more substantive issues related to consideration sets. In these forthcoming papers, we will more closely analyze whether the composition of consideration sets as defined and measured in this paper is reflected in the search and processing of information during the campaign period. We will also look at the determinants of consideration set size, specific combinations of parties in the consideration set, and changes of consideration set size and content during the campaign. Additional analyses will also try to determine the number of stages in the decision-making process and look at the determinants of decision mechanisms at the different decision stages. One could also think of analyses which try to identify different types of decision-makers that might use a different number of steps in their decision process. With these analyses to come we will be able to get much more detailed and elaborate insights into information processing

and decision-making by voters during campaigns in Germany and possibly in multi-party parliamentary democracies in general.

Literature

Alba, Joseph W. and Chattopadhyay, Amitava 1985. Effect of Context and Part-Category Cues on Recall of Competing Brands. In: *Journal of Marketing Research* 22, 340-349.

De Vries, Catherine E. and Rosema, Martin 2009. Taking voters' consideration set into consideration: Modelling electoral choice in two stages. Paper presented at the 5th ECPR General Conference in Potsdam.

Iyengar, Shanto and Kinder, Donald .R. 1987. *News That Matters: Television and American Opinion*. University of Chicago Press.

Kardes, Frank R. et al. 1993. Brand Retrieval, Consideration Set Composition, Consumer Choice, and the Pioneering Advantage. In: *Journal of Consumer Research* 20, 62-75.

Lau, Richard R. and David P. Redlawsk 2006. *How Voters Decide. Information Processing during Election Campaigns*. Cambridge: Cambridge University Press.

Lau, Richard R., Andersen, David J., and Redlawsk, David P. 2008. An Exploration of Correct Voting in Recent U.S. Presidential Elections. In: *American Journal of Political Science* 52, 395-411.

Lazarsfeld, Paul F., Berelson, Bernard, and Gaudet, Hazel 1968 [1944]. *The People's Choice. How the Voter Makes up His Mind in a Presidential Campaign*. 3rd edition. New York, London: Columbia University Press.

Oscarsson, Henrik 2004. Verkligen väljande väljare. In: Holmberg, Sören and Oscarsson, Henrik (eds.), *Väljare. Svenskt väljarbeteende under 50 år*. Stockholm: Norstedts.

Oscarsson, Henrik 2009. Identifying Voters' Consideration Sets. Paper presented at the 5th ECPR General Conference in Potsdam.

Oscarsson, Henrik, Gilljam, Mikael, and Granberg, Donald 1997. The Concept of Party Set – A Viable Approach or Just Another Way to Slice the Same Cheese? Working paper presented at the Annual Meeting of the Swedish Political Science Association in Uppsala.

Oskarson, Maria, Oscarsson, Henrik E., and Boije, Edvin 2014. How Voters make up their minds. Consideration Set Models for Party Choice in European and National Elections. Paper prepared for the Swedish Network for European Studies in Political Science Conference: Elections and Democracy in Europe in Brussels.

Paap, Richard et al. 2005. Consideration sets, intentions and the inclusion of “don’t know” in a two-stage model for voter choice. In: *International Journal of Forecasting* 21, 53-71.

Rattinger, Hans et al. 2014. Wahlkampf-Panel (GLES 2013), 20.6.-04.10.2013. GESIS Datenarchiv, Köln: ZA5704 Datenfile Version 1.0.0, doi: 10.4232/1.11846.

Redlawsk, David P. and Lau, Richard R. 2013. Behavioral Decision-Making. In: Huddy, Leonie, Sears, David O., and Levy, Jack S. (eds.), *Oxford Handbook of Political Psychology* (2nd ed.). Oxford: Oxford University Press, 130-164.

Shocker, Allan D. et al. 1991. Consideration Set Influences on Consumer Decision-Making and Choice: Issues, Models, and Suggestions. In: *Marketing Letters* 2, 181-197.

Simon, Herbert A. 1985. Human nature in politics: The dialogue of psychology with political science. In: *American Political Science Review* 79, 293-304.

Steenbergen, Marco R. and Hangartner, Dominik 2008. Political Choice Sets in Multi-Party Elections. Paper prepared for the Conference “The Politics of Change” in Amsterdam.

Steenbergen, Marco R., Hangartner, Dominik, and de Vries, Catherine E. 2011. Choice under Complexity: A Heuristic-Systematic Model of Electoral Behavior. Paper presented for the Annual Meeting of the Midwest Political Science Association in Chicago.

Weiss, Janet A. 1993. Coping with Complexity: An Experimental Study of Public Policy Decision-Making. In: Kinder, Donald R. and Thomas R. Palfrey (eds.), *Experimental Foundations of Political Science*. Ann Arbor: University of Michigan Press, 185-208.

Wilson, Carole J. 2008. Consideration Sets and Political Choices: A Heterogeneous Model of Vote Choice and Sub-national Party Strength. In: *Political Behavior* 30, 161-183.

Wright, Peter 1975. Consumer Choice Strategies: Simplifying vs. Optimizing. In: *Journal of Marketing Research* 12, 60-67.