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Onderzoek

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Abstract

In Dutch election studies one of the main variables of interest is the position of parties and voters on a left–right scale. Van der Eijk and Niemöller (1983) have proposed that the left–right dimension is the main ordering dimension in Dutch politics. It has been asserted that the vote can be explained to a large extent using the left–right positions of parties and subjects on this scale and a smallest distance hypothesis.

In this study we will investigate this assertion, implementing some logical requirements that we feel should be met before proceeding to test the smallest distance hypothesis. Furthermore, psychophysical scaling methods will be applied to obtain the necessary extra information with respect to the precision and reliability of the measurements and to overcome the disadvantages of a single indicator in general and those of the originally used 10-point category scale for the assessment of ideological positions of parties and voters in particular.

Introduction

The Downsian approach (Downs 1957) to the explanation of the party choice has been subject to several criticisms from empirical researchers. A major point of debate has been the assumption of a uni-dimensional ideological space. David Stokes for example asserted that 'attitude dimensions with respect to different policy areas are found to be statistically independent' (Stokes 1966). The work of Converse casts some doubt whether the assumption of uni-dimensionality can be reconciled with empirical evidence from multi-party systems (Converse 1966 a, b). For the Dutch situation some researchers found the ideological space to be 3-dimensional (Bronner and De Hoog 1978). On the other

hand the empirical evidence given by Van der Eijk et al. with respect to this topic suggests the Dutch ideological space to be uni-dimensional. Because the question of the dimensionality of the ideological space is so crucial in any empirical evaluation of Down's theory we will report our own findings with respect to this topic.

A second point of debate is the extent to which the party preference can be construed as rational in Downsian terms, i.e. the extent to which voters prefer the party that is closest to them on the left-right dimension. In our view the conclusions reached by Van der Eijk and Niemöller (p. 277, 278) that the smallest distance hypothesis can not be rejected for 83.2% of the electorate is far too optimistic. In the first place 22.9% of their respondents were found to opt for a party one position more distant than the party closest to them. For these cases the results were considered indeterminate although clearly the smallest distance hypothesis had to be rejected. For the remaining 60.3% of the cases the smallest distance hypothesis could not be rejected. However, for about one third of these cases several parties were found on equal distance to the voters ideological position. In an earlier article by Van Holsteyn (1989) the problem of these 'tied predictions' was discussed and severe doubt was expressed whether in such cases the results could be interpreted as confirming the theory. Since the problem of 'tied predictions' is one of considerable magnitude, we wanted to look into it.

Plan of the article

In our evaluation of the Downsian approach to the explanation of the vote we concentrate on two questions. First we want to get some insight in the proportion of the electorate for which the smallest distance hypothesis might be an appropriate way to model their behaviour. Secondly we will try to shed some light on the question whether 'tied predictions' may be viewed as confirming the theory. Finally we will elaborate on the empirical evidence we found with respect to a possible additional determinant of the party choice.

As Van der Eijk and Niemöller already pointed out in their dissertation (p. 266) the following requirements should be met before left-right ratings can be used in testing the smallest distance hypothesis;

1. The voters should be able to rate at least reasonable number of parties upon the left-right scale.
2. The voters should employ this scale consistently.
3. There must be consensus about the instrumental meaning of the left-right dimension.

Because only a single indicator was available for the left-right ratings, the authors were not able to evaluate the second requirement. The third requirement was investigated using multi-dimensional scaling techniques. These techniques, however, do not allow the researcher to pinpoint which individual respondents do not comply with the uni-dimensional configuration that was found.

Furthermore, the 10-point rating scale that is normally used to measure the left-right positions is likely to be a factor in the frequent occurrance of ties, since in the Netherlands the number of parties to be rated exceeds the number of positions on the scale.

In order to overcome these drawbacks we used three alternative measurement procedures to assess the ideological positions of parties and voters. This allows us to check the second and third requirement for each individual respondent. Also, because of the enhanced precision, the alternative rating scales can be used to investigate the problem of the ties.

Data collection and measurement

The data used in this study was collected by NIPO (Dutch Gallup) in 1983 and it was part of surveys (Kontinu Onderzoek) conducted by the Faculty of Political Science at the University of Amsterdam. A multistage sampling procedure was used. First *communities* were selected, then *starting addresses* within these communities. Finally the *person* was selected from each starting address, who was at least 17 years of age and whose birthday was the first following the date of the interview. This sampling procedure has been known to cause some bias in the different steps and has been discussed by Bakker and Koopman (1982). Their conclusion was that the various forms of bias tend to cancel each other out and that the resulting sample may be regarded as relatively unbiased.

For testing the smallest distance hypothesis however, not all of the completed interviews could be used. The data should include the most preferred party and a left-right self rating. This has led to a substantial reduction in the number of cases that were suitable for analysis.[1] Complete records were obtained for 341 respondents. Yet we are confident that insofar as any bias is present, it is small enough not to jeopardize the validity of our conclusions, considering the questions at hand.

In addition to the 10-point category scale, psychophysical scaling methods have also been applied in this study. With these procedures, ideological positions of parties and voters are expressed on a continuum.

Examples of continua, or 'modalities', as used with metric stimuli in psychophysical research and also in social science research (Wegener 1982; Lodge 1981) are line length or line production (further abbreviated as LP) and numbers (magnitude estimation further abbreviated as ME). For more details regarding these procedures, we refer to the literature (Hamblin 1973; Lodge et al. 1976, 1979, 1981; Wegener 1982; Saris et al. 1977, 1981; Stevens 1966, 1975). The actual format of the questions we asked (translated into English) can be found in the appendix. It can be seen there, that for the ME-task scores were asked with respect to the distance to the midpoint of the left–right dimension. These scores were given the appropriate sign, according to the direction of the responses in lines (LP).

Implementation of the requirements

Working towards a test of the shortest distance hypothesis, we looked into the implicit assumptions of the model mentioned earlier in this article. It is clear that only for voters who are able to use the left–right dimension in an unambiguous way can the hypothesis be regarded as plausible. However, no objective criteria exist for the requirements mentioned by Van der Eijk et al. Therefore, a certain arbitrary element will always be present in any effort to make them operational.

The first implicit assumption was that using left–right ratings implies that the respondents are able to place themselves and a reasonable number of parties on a left–right continuum. We have already made sure that the ideological positions have been recorded for all respondents included in the study. Of course a party choice based upon the ideological positions of parties can only be made if a voter has an opinion with regard to these positions. Since some parties are better known than others, voters cannot reasonably be expected to have an opinion on the location of all parties. In the Dutch situation, we feel that respondents should give ratings for at least four parties. Only 7 (2%) out of the 341 respondents failed to meet this requirement.

The second requirement is that respondents should be able to use the left–right dimension in a consistent manner. A consistent opinion with respect to the ideological positions should be reflected in high correlations between the ratings obtained with the different scaling procedures.[2]

Before checking on individual consistency, however, we want to give some insight into the relative performance of the measurement procedures used. In table 1, we present an overview of average individual reliability. It can be seen that the average correlation between the

individual ratings are higher for the psychophysical procedures LP and ME than for the combinations with the categorical scale.

Table 1: Mean correlations for individual L–R scales (n=334)

	prod.–mom	rank
correlation CA-LP	.89	.85
correlation CA-ME	.86	.84
correlation LP-ME	.95	.91

This pattern occurs irrespective of the type of correlation used. We may conclude that the respondents can give consistent and precise ratings when using the continuous scales. Similar results have been found for other variables (Van Doorn 1983). We further checked whether respondents might be more consistent when judging parties near to their own ideological position. We found the degree of consistency in the ideological ratings of the parties to be virtually identical and therefore conclude that the consistency of the ratings is independent of the voters' own ideological position.

Low correlations between the ideological ratings using different scales would indicate that the respondent does not have a clear idea as to the relative positions of the parties and therefore cannot be expected to make their party choice on this basis. We decided to select those respondents who scored above .85 for two out of three inter-scale correlations. A correlation of .85 corresponds with an explained variance of 72%, which in our opinion constitutes a reasonable lower bound for individual consistency. This criterion was not met by 67 respondents, about 20% of the cases with complete data.

One dimension

Having selected 267 respondents on the basis of the first two requirements formulated by Van der Eijk and Niemöller, we now turn to the third criterion. The issue here is whether or not respondents who give consistent ratings on their individual L–R scales are all employing the same scale. In other words, do voters interpret the terms 'left' and 'right' in the same way? We tried to find subgroups with different scales in two ways.

First, a cluster analysis was performed using the individual scales. This resulted in a number of clusters of respondents with comparable left–right

scales. The scales of mean scores for the different clusters, however, turned out to be quite similar. The principal difference pertained to disagreement or confusion with respect to the position of the CP, a young and controversial party holding one seat in parliament. The correlations between the scales for different cluster all levelled .95 or higher. From this analysis we concluded, that all respondents interpreted the left–right dimension in much the same way.

Another way in which we looked into the matter of uni-dimensionality was to select subgroups of respondents ourselves on the basis of theoretical considerations. In the literature it has been argued that voters attach different meanings to the terms 'left' and 'right' (Lipschits 1969). Many voters describe the term 'right' as meaning 'religious'. Moreover, in empirical research the religious–secular dimension is often recognized as an important one in Dutch politics (Bronner et al. 1976). We therefore computed a scale of mean scores using only the ratings given by adherents of clearly religious parties (CDA, GPV, SGP, RPF) and another scale of mean scores for the adherents of small left wing parties (CPN, PSP, PPR). If differences did indeed exist, they would surely become visible in the scales for these two groups with such widely differing political views. Again, only a small difference in the scales could be detected as far as the level of correlations (.92) was concerned. The difference in ordering of the parties however, cannot go unnoticed. The religious voters placed the large rightwing secular party VVD left of the religious parties, including the large christian–democratic party CDA. Apparently, they are more inclined to associate 'right' with religious. The leftwing voters on the other hand placed the VVD amidst the religious parties, to the right of the CDA, which is more in accordance with the interpretation of socio-economic conflict dimension for the left–right continuum. Although we find that the placement of VVD and CDA depends upon the type of voter, the actual numerical differences in the L–R scale resulting from this is negligible and can hardly be thought of as a cause of low correlations between individual scales and the group scale of mean scores. For practical purposes, therefore, the left–right continuum has the same meaning for different groups of voters.

We shall now turn to the implementation of the consensus criterium. Although different groups of voters could not be found to order the parties in an essentially different way, there is the possibility that individual voters do have different conceptions of the configuration of the parties. By comparing the individual scales to the scale of mean scores for all 267 remaining repondents, we can identify this type of respondents. To allow for more error, we lowered the hurdles somewhat, setting the

criterion value at a correlation of .75 (instead of .85 as used for the individual reliability), for at least two of the three correlations between individual scales and the group scale. The group scale was constructed from the mean scores for the seven (instead of twelve) best known parties CPN, PSP, PvdA, D'66, CDA, VVD, GPV. The group scales all correlated .99 with one another. Therefore, we could limit ourselves to the use of a single group scale (based on categorical ratings).

For 60 respondents, the individual left–right ratings did not meet our criteria. Although they have a consistent opinion about what they feel is 'left' or 'right', their interpretation of these terms was quite different from the general pattern. Within this group, no systematic patterns with regard to alternative interpretations of the left–right dimension could be found. These cases were left out, reducing the number of respondents selected for further analysis to 207. For these remaining 207 respondents, the smallest distance hypothesis based on the left–right ratings can be considered as a reasonable one.

With the implementation of the three requirements already mentioned by Van der Eijk et al., it becomes clear that the proportion of the electorate for which the smallest distance hypothesis might be the appropriate way to model party choice is rapidly diminishing. Table 2 gives an overview of the losses caused by applying the subsequent criteria.

Table 2: Selection of respondents, implementing the three requirements

	freq	% of total
Total complete records:	341	100.0%
1- less then four parties placed	7	2.1%
2- individual ratings inconsistent	67	19.6%
3- interpretation L-R differs too much	60	17.6%
Leaves	207	60.7%

It would be interesting to see whether the selection process resulted in bias. For this purpose we compared the distributions of several variables[3] of the selected group with the original distributions. As might be expected, the strongest effects were observed for the variables religion and education level. The implementation of the requirements has resulted in underrepresentation of religious voters and overrepresentation of highly educated voters.

Only about 50% of the church members were selected as opposed to

72% of the secular voters. This was also reflected in the fact that voters for the christian democratic CDA showed with 45% a below average level of selection. Voters for secular parties were represented slightly above average in the selected group. This result is not so surprising as we already pointed out that religious voters tend to have a slightly different interpretation of the left-right dimension, switching the positions of two major right wing parties. This will have led to slightly lower correlations between the individual scales and the group scale and thus to a somewhat lower probability to meet the third criterion.

Comparing the chances of selection for the highest and lowest levels of education we found that 25% more were selected from the best trained group. This result also seemes fairly logical to us. Since there are many parties, some of which are quite similar, consistent placement of the parties with respect to their ideological position is by no means an easy task and requires a considerable degree of political knowledge.

Having implemented the three requirements we can be pretty sure that the selected respondents are able to use the left-right dimension in a meaningful way. We may therefore expect that for these carefully selected respondents a test of the smallest distance hypothesis will – if true – yield better results as compared to the findings reported by Van der Eijk and Niemöller.

A test of the smallest distance hypothesis

When we speak of prediction of the vote by another variable, this implies that a single party should be identified as most preferred. As we have mentioned earlier, the researcher may be confronted with several parties rated at equal distances to the respondents own ideological position. In such cases, a decision based on the ideological distance is impossible and hence other variables are necessary to explain party choise.

The occurrence of ties may be explained in two different ways. First, the voter may, in fact, perceive the distance between the ideological positions of several parties and his own position to be equal. In this case, the voter cannot decide between these parties solely on the basis of their L-R position. Another possibility is that ties may be due to imprecise measurement. As we have seen, respondents can make distinctions in the positions of the parties using the LP or ME scales that could not have been made using the category scale.

The proportion of *single* predictions can be expected to increase when LP or ME scores are used rather than the categorical measurements, since

respondents are less likely to rate two more parties at exactly the same distance from their own ideological position. Since we have carefully selected our respondents on the basis of the individual consistency of their ratings, the assumption is justified that they are indeed capable of giving more precise and meaningful information when continuous measurement is used. Consequently, one may also expect the proportion of *correctly* predicted party preferences to increase, provided the smallest distance hypothesis is valid. This last statement needs some further explanation. We can distinguish four different situations:

a. Categorical measurement already suffices to identify the nearest party. It is very unlikely that this party would not be identified using the LP or ME scales. In clearcut situations like these, we would expect the results of the test to be roughly the same regardless of the type of measurements used.

b. Categorical measurement results in a tied prediction, reflecting the actual situation of several parties at the same ideological distance to the voter. The LP or ME scales might also result in a tie, in which case the choice of measurement makes no difference.

c. Categorical measurement results in a tied prediction, reflecting the actual situation of several parties at the same ideological distance to the voter. Yet, using continuous measurement, a single most proximate party may be identified as a consequence of random measurement error. This will lead to a higher proportion of unique predictions, some of which will be correct. We may therefore expect an increase in unique and correct predictions.

d. Categorical measurement results in a tied prediction, whereas in reality differences in ideological distance exist. In these cases, the differences may be expressed in the LP or ME scores and the most proximate party may yet be identified.

In short, we expect more precise measurement to operate as a tie breaking mechanism, either as a reflection of actual differences in ideological positions or as a consequence of random measurement error. Also, we may expect for many of these 'new' unique predictions that they identify the right party as most preferred. Therefore, as the precision of the measurement instrument increases we would expect the proportion of ties to decrease and the proportion of correct and unique predictions to increase.

Table 3 represents the results of a test of the smallest distance hypothesis performed on our selected group of voters. As we expected, the proportion of ties does indeed decrease with the use of a more precise measurement instrument, ranging from 44.4% for the categorical

Table 3: A test of the smallest distance hypothesis, n=207

predictions: scale used:	unique & correct	tied & correct	total correct	total propor- tion of ties
	%	%	%	%
CA-scale	41.1	32.8	73.9	44.4
ME-scale	37.2	24.2	61.4	35.3
LP-scale	42.5	7.3	49.1	9.7

measurement procedure to 9.7% when the Line Production ratings were utilized. Although more precise measurement procedures have dealt with most of the ties (especially with the LP scores), this has not led to an increase in the proportion of unique and correct predictions of the party choice as would be expected if the smallest distances hypothesis was correct. Through our selection procedure we know that our respondents were able to perceive and report small ideological distances in a meaningful way. Yet the proportion of unique and correct predictions was found to be more or less constant at 40% (about the same as found by Van der Eijk et al.). Obviously, for a certain proportion of the voters the relative ideological position is such that the shortest distance hypothesis can hardly be refuted. The model cannot, however, describe the choice process in less obvious situations, i.e. small differences in ideological distances. The total proportion of correct predictions (ties included) *decreases* with the precision of the measurement procedure that is utilized. Using the categorical measurements, a total of 73.9% correct predictions was found, significantly higher than the 60.3% Van der Eijk et al. reported (probably due to our selection of respondents), whereas only 49.8% correct predictions were found when the LP scores were used. These results indicate that voters tend to use other selection criteria more often as the options for the party choice tend to resemble each other more closely. We must conclude that the many 'correct' ties one finds when utilizing categorical measurements should not be construed as a straightforward confirmation of the theory.

When we look at the performance of the smallest distance hypothesis for the prediction of party preferences in the Dutch electorate, the picture is not very promising. In the first place, we have found that for about 40% of the electorate this hypothesis could *a priori* not explain party choice, mainly because this group of voters could not rate the parties in a consistent way or their perception of what is 'left' and what is 'right' differed too much from the general interpretation. For the remaining 60%

of the electorate party choice could be explained in about 40% of the cases. Therefore, the hypothesis could only explain party choice for roughly a quarter of the electorate. Without selection of respondents, Van Holsteyn found the proportion of unique and correct predictions for the electorate te be 26.4%, 26.3% and 34.5% for the election years 1981, 1982 and 1986 respectively (Van Holsteyn 1989: 142). Bearing in mind that the larger political formations in the Netherlands (PvdA and CDA) invariably get more then 30% of the votes, we would do just as well to assume that every Dutch voter is a socialist (PvdA) or a christian democrat (CDA).

Large versus small parties

The use of more accurate measurement procedures has largely reduced the problem of tied predictions. Yet the proportion of correct predictions (ties included) decreased considerably. These findings contradict our expectations under the assumption that the ideological position is indeed the motivating force behind party choice. This is not so strange when we consider that we treated every difference in ideological distance as equally important for party choice. In fact, as the results point out, this may not be the case. Small distances may not be as important as larger ones. It is clear that with the use of more accurate measurement the test increasingly involves smaller ideological distances, i.e. the former ties. At the same time, our ability to correctly predict party choice decreases or, to put it in another way, the probability that party choice is determined by *other considerations* increases. What was gained in terms of precision is largely lost because of the *decreasing importance of the observed ideological distances* as they get smaller. It seems that the left-right dimension is not necessarily unimportant to the party choice, but other variables are also necessary to explain party choice of a major part of the electorate.

To gain some more insight into the matter, we broke down the results for those cases in which the smallest distance hypothesis predicted a preference either for one of the large parties (PvdA, CDA or VVD), or, on the other hand, for one of the smaller parties.

At the time of the interview, about 85% of the electorate voted for one of the large parties. Within the analysed group, 75% indicated intending to vote for a large party. Table 4 shows that with more accurate measurement, the predicted distribution of voters over the parties shifts further away from the real distribution and is biased towards the small parties. Using the categorical measurements, the predicted distribution over large and small parties reflects the actual preferences fairly

Table 4: Predictions for large and small parties separate

scale used:	CA scale		ME scale		LP Scale	
	n	%	n	%	n	%
large party indicated:	87	75.6	84	62.7	101	54.0
small party indicated:	28	24.4	50	37.3	86	46.0
total unique predictions:	115	100.0	134	100.0	187	100.0

accurately. But when the LP scale was utilized, the predicted share of the vote for the large parties decreased to as little as 54%. How this is reflected in the probability for correct predictions can be seen in table 5.

Table 5: Probability of correct predictions for large and small parties

scale used:	CA scale	ME scale	LP scale
large party indicated:	n=87	n=84	n=101
correct %:	87.4	77.4	72.3
small party indicated:	n=28	n=50	n=86
correct %:	32.1	24.0	17.4

Chances of correct predictions are much higher if a large party is closest to the voter's own ideological position rather than a small party. Given the fact that the distribution of the predictions is biased towards the small parties, we may conclude that although for many voters a small party is closest in ideological position, often they prefer to vote for a large party, especially if the difference in ideological distance is small. There is no reason to assume that the shortest distance hypothesis should not apply simply because a voter is ideologically closest to a small party. Therefore, the results point to 'party size' as an additional variable which determines the party preference. This isn't entirely surprising, since larger parties are most likely to participate in a government and hence most likely to transform their ideas into government policy. Therefore voters may expect to gain more utility from a vote cast for one of the larger parties.

To illustrate the matter in a more detailed manner, we made a crosstabulation of actual and predicted party preferences. We chose the LP ratings to construct this table because it offers the largest number of unique predictions. The general picture does not deviate from those using the CA or ME scales. The parties are ordered according to their left–right positions on the group scale.

Table 6: Crosstabulation of predictions (rows) and vote intention (columns)

	CPN	PSP	PPR	EVP	PvdA	D'66	CDA	VVD	RPF	GPV	SGP	CP	n	%
	1	2	3	4	5	6	7	8	9	10	11	12		
1	1	1			10								12	6.4
2		7	1		3		1						12	6.4
3		2	3		8			2					15	8.0
4		2					6	5					13	7.0
5		3	3		33	1	1						41	21.9
6					6	4	1	1					12	6.4
7					3		18	6					27	14.4
8							8	22	2	1			33	17.6
9					3		2	4	1				10	5.3
10					3			2		1			6	3.2
11								2			1		3	1.6
12										1	1	1	3	1.6
n:	1	15	7	0	69	5	37	44	3	3	2	1	187	
%	0.5	8.0	3.7	0	36.9	2.7	19.8	23.5	1.6	1.6	1.1	0.5		

We can see that party preference is not distributed independently of the ideological position one occupies along the left–right continuum. The results show that usually the most preferred party is located not very far away from the predicted party, since most cases are located close to the diagonal. Secondly, in cases where a small party is incorrectly indicated as most preferred, a disproportional number of respondents preferred the large party closest to their own position. This points towards party size as an important variable in explaining the vote.

It seems clear that the smallest distance on the left–right dimension is not a good predictor of party preference. Yet, the ideological position of the voter does give a rough indication of the party preference in that it seems to narrow down the area within which the voter looks for a suitable party to vote for. However, he may arrive at his final choice using other criteria, such as issue positions, feelings towards party leaders (candidates) or party size. The decisive argument may be quite specific and need by no means be applicable to all voters in the same way. It should be noticed that these findings correspond to a large degree with the ideas of Van der Eijk and Niemöller where they discuss ideological identification: 'If, however, several parties are located in this region (of ideological identification, C.F.M.) a voter may switch parties, which decision may be legitimately based on non-ideological considerations' (Van der Eijk et al.: 346).

Discussion

In this article, we have been investigating some problems relating to the left–right dimension and the use of a smallest distance hypothesis. Making use of multi-dimensional scaling methods, Van der Eijk et al. had already shown the left–right dimension to be the main *ordering* dimension in Dutch politics. Because these methods can only lead to conclusions on an aggregate level, it was difficult to establish whether all voters did indeed use the same scale, or whether the left–right ordering of the parties was merely the best fitting constellation with limited meaning to individual voters.

Another problem in their analysis was how to check the ability of voters to make use of the left–right dimension, since no repeated measurements for the ideological positions of parties and voters were taken. A third difficulty was posed by the coarseness of the 10-point category scale used to measure the ideological positions. Application of this instrument led to a high proportion of tied decisions (about 20% of the cases), thus obscuring the performance of the smallest distance hypothesis.

Implementation of three basic requirements for the use of left–right ratings made it clear that for 40% of the respondents, the smallest distance hypothesis could not explain the vote. Either consistent ratings could not be given or a different scale was used, i.e. the respondents interpreted the terms 'left' and 'right' in different ways. This result indicates that a considerable part of the electorate is probably using other criteria in arriving at a party choice. With respect to the dimensionality of the Dutch party space, we concluded that there was no reason to abstain from the assumption of uni-dimensionality, since groups of voters with a consistently different ordering of the parties could not be found.

For only about a quarter of the analysed group could party choice be correctly explained by the model. We feel that this result severely undermines the idea that the left–right dimension is the main motivational force behind party choice in the Netherlands. Possibly other explanations would do just as well. Our analysis illustrates that for a vast majority of voters additional criteria are also used as a basis for voting decision.

The use of more precise rating scales in evaluating the performance of the smallest distance hypothesis did not result in a larger proportion correct predictions, as would be expected if the hypothesis was correct. In cases where the difference in ideological distance between competing parties was relatively large (i.e. unique predictions using the crude categorical measurements), we observed the smallest distance hypothesis to perform much better than in less clearcut situations (i.e. where more

accurate measurement had broken the ties and small differences in distance between competing parties became decisive). Therefore, the large number of ties found when using the categorical ratings should not be construed as confirming the theory. We can further conclude that small differences in ideological distances can easily be overruled by other considerations.

It was shown that the most preferred party, although not necessarily nearest in ideology, was located not too far from the voters own position. This suggests that a voter may operate within an 'ideological range' in which certain parties are considered viable options for his vote, rather than from a single ideological position. The choice between these options will depend on other variables. We have drawn attention to the fact that the probability of a correct prediction was much higher if one of the large parties was indicated. We also noted, that if a small party was predicted, the party given by the respondent as his preference was often the large party closest to his own position. These findings indicate that party size may be an important additional variable in making a party choice. The fact that a voter is ideologically closest to a small party might be outweighed by a large party's ability to effectuate it's points of view in government policy.

Both of these suggestions seem plausible, but the evidence presented here is as yet insufficient. However, the suggestion of an ideological range within which a voter makes his choice is particularly congruent with findings from other research (Van der Eijk et al. 1984, 1985; Maas 1990) which deal with multiple party identification, party potentials and voting probabilities.

Notes

1. For the purpose of our analysis not all completed interviews could be used, since information on party preference and ideological self placement was sometimes lacking. This considerably reduced the number of cases that could be used.

Original number of completed interviews:	657	100.0%
Unknown party preference (no vote intention):	206	31.4%
L-R self ratings (partly) missing:	110	16.7%
Leaves:	341	51.9%

The number of missing values for the respondents own position was made equal for all three response modalities. This was originally quite different, with far more missing values for the LP and ME scores. For the party ratings such large differences in the number of missing values did not exist. This must be explained

by the unfortunate place of the self placement tasks for the LP and ME measurements. We decided that the left right self ratings should be present for all three measurement procedures. This meant having to omit 110 cases for our analysis. In our opinion the necessity to compare the procedures for the same respondents was more important.

2. This required the use of an SPSS-compatible computer program (PERCASE; M. de Pijper 1982).

3. We compared the distributions of the following variables: political participation and political interest, both Mokken scales (stochastic cumulative scaling, Mokken 1971; Van der Eijk et al. 1981, 1982), selfperception of social status, age, income, religion, selfplacement on the left-right scale, vote intention, sex and education level.

Appendix: Formulation of the questions for the different measurement procedures

The category scale – Political beliefs are often said to be *left* or *right*. Here we show a scale going from *left* to *right*. When you think of your own political beliefs, where would you place yourself? Which box would you mark?
(The interviewer presents a showcard to the respondent.)

1   LEFT
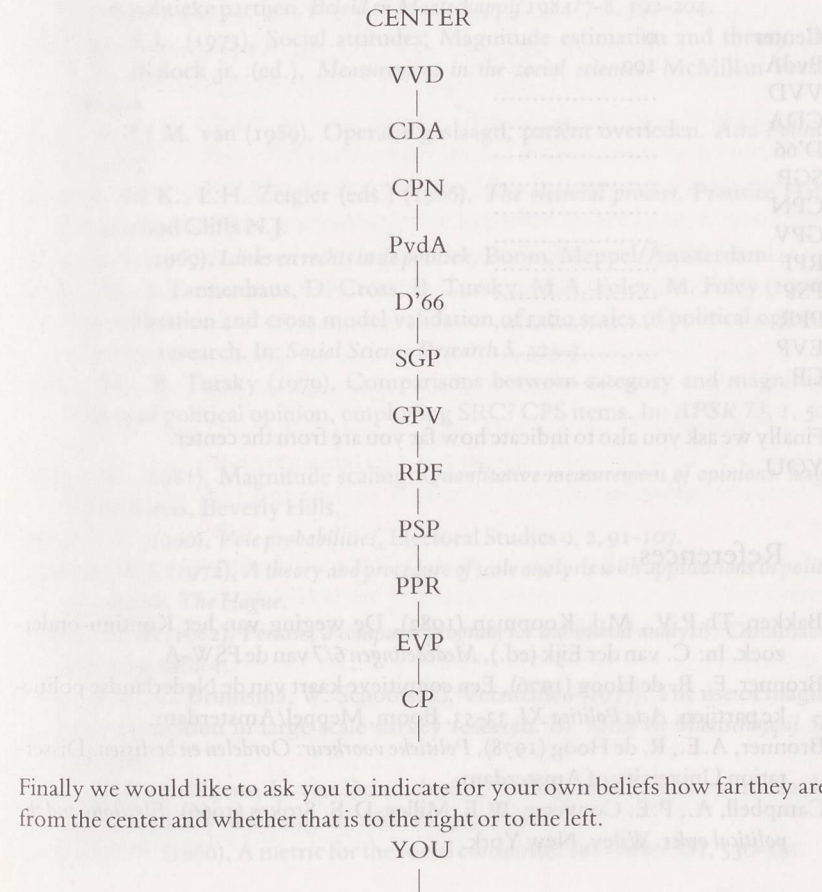2
3
4
5
6
7
8
9
10 RIGHT

On the next page – Political beliefs are often said to be *left* or *right*. (Interviewer shows this page to the respondent.) Here you see the parties mentioned. Please give the number of the box for each party that according to you represents how *left* or *right* this party is.

	LEFT									RIGHT	
	1	2	3	4	5	6	7	8	9	10	don't know
PvdA											
VVD											
CDA											
D'66											
SGP											
CPN											
GPV											
RPF											

	LEFT									RIGHT	
PSP											
PPR											
EVP											
CP	1	2	3	4	5	6	7	8	9	10	don't know

The line production task:
(*interviewer*: let the respondent read this himself)

Political beliefs are often said to be *left* or *right* or that they are between *left* and *right*. If you think of the center, an extreme rightwing party will be very *far* from the center, just as an extreme leftwing party is. A moderate leftwing party will be closer to the center and a moderate rightwing party also. We will now ask you to indicate below how far the respective parties are from the center. You can indicate this by drawing from the center long or short lines to the left for the left parties and to the right for the right parties. If you think that a party is exactly in the center, you just mark the center.

```
                    CENTER
                      |
                     VVD
                      |
                     CDA
                      |
                     CPN
                      |
                     PvdA
                      |
                     D'66
                      |
                     SGP
                      |
                     GPV
                      |
                     RPF
                      |
                     PSP
                      |
                     PPR
                      |
                     EVP
                      |
                      CP
                      |
                     YOU
```

Finally we would like to ask you to indicate for your own beliefs how far they are from the center and whether that is to the right or to the left.

```
                     YOU
                      |
```

The magnitude estimation task:
(interviewer: again let the respondents read and complete this question them-
selves.)

Now you have indicated with lines how far you think the parties are from the
center. To get a better insight into your opinion we ask you to answer the question
in a different way, that is by using numbers.

The purpose is that you indicate with a number how far a party is away from the
center.

A party in the middle, which is exactly between left and right, is indicated with
0. Furthermore, the distance of the PvdA from the center will be arbitrarily indi-
cated with 100. When a party is closer to the center than the PvdA you give it a
smaller number. If you think that a party is further away from the center than the
PvdA, you give it a larger number. For this question it does not matter whether a
party is either left or right, only how far it is away from the center.

Now indicate for the parties below how far they are from the center. Do this by
comparing its distance to the center with that of the PvdA which we have given
100.

Center	0
PvdA	100
VVD	....
CDA	....
D'66	....
SGP	....
CPN	....
GPV	....
RPF	....
PSP	....
PPR	....
EVP	....
CP	....

Finally we ask you also to indicate how far you are from the center.
YOU ....

References

Bakker, Th.P.V., M.J. Koopman (1982), De weging van het Kontinu-onder-
zoek. In: C. van der Eijk (ed.), *Mededelingen 6/7* van de FSW-A.

Bronner, F., R. de Hoog (1976), Een cognitieve kaart van de Nederlandse politie-
ke partijen. *Acta Politica XI*, 33-53. Boom, Meppel/Amsterdam.

Bronner, A.E., R. de Hoog (1978), *Politieke voorkeur: Oordelen en beslissen*. Disser-
tation University of Amsterdam.

Campbell, A., P.E. Converse, W.E. Miller, D.E. Stokes (1966), *Elections and the
political order*. Wiley, New York.

Converse, P.E. (1966a), Information flow and the stability of partisan attitudes.
In: Campbell, Converse, Miller and Stokes, 136-157.

Converse, P.E. (1966b), The problem of party distances in models of voting chan-
ge. In: Jennings and Zeigler (eds.), 175-207.

Doorn, L. van, W.E. Saris, M. Lodge (1983), Discrete or continuous mea-
surement, what difference does it make? In: *Kwantitatieve Methoden*, 1983 no.
10.

Downs, A. (1957), *An economic theory of democracy*. Harper & Row, New York.

Eijk, C. van der, B. Niemöller, A.Th.J. Eggen (1981), *Dutch parliamentary election
study 1981*, Department of Political Science (FSW-A), University of Amster-
dam.

Eijk, C. van der, M.J. Koopman, B. Niemöller (1982), *Dutch parliamentary election
study 1982*. CT Press, Amsterdam.

Eijk, C. van der, B. Niemöller (1983), *Electoral change in the Netherlands, Empirical
results and methods of measurement*. Academic dissertation, CT Press, Amster-
dam.

Eijk, C. van der, B. Niemöller (1984), Het potentiële electoraat van de Neder-
landse politieke partijen. *Beleid en Maatschappij* 1984/7-8, 192-204.

Hamblin, R.L. (1973), Social attitudes; Magnitude estimation and theory. In:
H.M. Blalock jr. (ed.), *Measurement in the social sciences*. McMillan Press,
London.

Holsteyn, J.J.M. van (1989), Operatie geslaagd, patiënt overleden. *Acta Politica
XXIV/2*.

Jennings, M.K., L.H. Zeigler (eds.) (1966), *The electoral process*. Prentice Hall,
Englewood Cliffs N.J.

Lipschits, I. (1969), *Links en rechts in de politiek*. Boom, Meppel/Amsterdam.

Lodge, M., J. Tannenhaus, D. Cross, B. Tursky, M.A. Foley, M. Foley (1976),
The calibration and cross model validation of ratio scales of political opinion
in survey research. In: *Social Science Research 5*, 325-3.

Lodge, M., B. Tursky (1979), Comparisons between category and magnitude
scaling of political opinion, employing SRC? CPS items. In: *APSR 73*, 1, 50-
66.

Lodge, M. (1981), Magnitude scaling. *Quantitative measurement of opinions*. Sage
Publications, Beverly Hills.

Maas, C.F. (1990), *Vote probabilities*, Electoral Studies 9, 2, 91-107.

Mokken, R.J. (1972), *A theory and procedure of scale analysis with applications in politi-
cal research*. The Hague.

Pijper, M. de (1982), *Percase, a computer program for individual analysis*. Obtainable
from the author.

Saris, W.E., C. Bruinsma, W. Schoots, C. Vermeulen (1977), The use of magni-
tude estimation in large scale survey research. In: *Mens en Maatschappij 52*,
369-395.

Saris, W.E., P. Nijens, L. van Doorn (1981), Scaling social science variables by
multi modality matching. In: *MDN 2*, 3-21, 1981.

Stevens, S.S. (1966), A metric for the social consensus. In: *Science 151*, 530-541.

Stevens, S.S. (1975), *Psychophysics; Introduction to its perceptual, neural and social aspects*. Wiley, New York.

Stokes, D.E. (1966), Spatial models of party competition. In: Campbell, Converse, Miller and Stokes, 161-179.

Wegener, B. (1982), *Social attitudes and psychophysical measurement*. Reader Lawrence Erlbaum Ass., Hillsdale N.J.

Consumptieongelijkheid

Consumptieve bestedingen als basis voor ongelijkheidsmeting in landenvergelijkend onderzoek★

Marcel van Dam en Gerbert Kraaykamp

1. Inleiding

De ongelijke verdeling van welvaart is een onderwerp dat veel wetenschappers aanspreekt. Frequent verschijnen er publikaties waarin onderzoekers bevindingen op dit terrein rapporteren. Een belangrijk deel van deze studies heeft betrekking op de verschillen in ongelijkheid tussen landen. Met behulp van economische en politieke determinanten wordt getracht die verschillen te verklaren. Uitgebreide overzichten van dergelijke studies zijn te vinden in Isaac (1981), Bigsten (1983) en Bornschier en Chase-Dunn (1985). Welvaartsongelijkheid is daarbij veelal gedefinieerd als inkomensongelijkheid. Een struikelblok bij landenvergelijkend onderzoek naar inkomensspreiding is de beperkte internationale vergelijkbaarheid van de beschikbare gegevens voor inkomen. Hiervoor zijn diverse oorzaken aan te wijzen. Zo kan de definitie van inkomen per land verschillen en lopen de meettijdstippen veelal uiteen. Verder zijn inkomensgegevens gevoelig voor onder- en non-rapportage (zie voor uitgebreide uiteenzettingen over deze problematiek: Menard 1986; Mahler 1989; Ram 1989). Een aanvullende complicatie voor landenvergelijkend onderzoek is dat inkomensdata voor lang niet alle eenheden beschikbaar zijn; inkomensongelijkheid kan voor ongeveer vijftig landen worden berekend.

Recentelijk zijn diverse methoden ontwikkeld die de internationale vergelijkbaarheid van de inkomensgegevens vergroten (zie b.v. Summers, Kravis en Heston 1984; Altimir 1987; Hoover 1989). Deze methoden komen echter niet tegemoet aan al de problemen die kleven aan inkomensmeting. Bovendien is er een meer inhoudelijk probleem verbonden aan inkomensverdelingen. Gezien de theoretische bases die de verschillende