HAL
open science

The Social Choice of EU Treaties

Mogens K. Justesen

To cite this version:

Mogens K. Justesen. The Social Choice of EU Treaties. European Union Politics, 2007, 8 (4), pp.537-553. 10.1177/1465116507082813 . hal-00571753

HAL Id: hal-00571753
https://hal.science/hal-00571753v1

Submitted on 1 Mar 2011

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

European Union Politics
DOI: 10.1177/1465116507082813
Volume 8 (4): 537–553
Copyright© 2007
SAGE Publications
Los Angeles, London, New Delhi and Singapore

The Social Choice of EU Treaties

Discrepancies between Voter Preferences and Referendum Outcomes in Denmark

Mogens K. Justesen
University of Southern Denmark, Denmark

ABSTRACT

The article applies Social Choice theory to analyse new and so far undiscovered aspects of the Danish referendums on the Maastricht Treaty in 1992 and 1993. The article queries whether the amended Maastricht Treaty adopted in 1993 was, in fact, the most preferred alternative for a majority of Danish voters. A reconstruction of voter preferences regarding the political alternatives in the European Union – the Maastricht Treaty, the amended Maastricht Treaty and the Status Quo – reveals that the amended Maastricht Treaty, despite the fact that it was the Condorcet winner and won the 1993 referendum, may not have been preferred by a majority but was probably the most preferred alternative only for a minority of the electorate.

KEY WORDS

- Maastricht Treaty
- referendum
- social choice
- voting

Introduction

In 1992 and 1993 Danish voters faced a fundamental choice concerning the future of Danish integration in the European Community/Union (EC/EU). Voting on the Maastricht Treaty in 1992, a small majority of 50.7% of the voters rejected the treaty, whereas a year later a majority of 56.7% of the voters accepted an amended version of the Maastricht Treaty. A common perception of the results of these referendums is that they somehow reflect the 'will of the people', i.e. that the amended version of the Maastricht Treaty represents the Danish electorate's collectively most preferred outcome. Indeed, the very raison d'être of referendums supposedly is that they somehow express some form of popular will. This justification for referendums is associated with what William Riker (1982) calls the 'populist' conception of democracy. On this view, referendums are perceived to be a fairer and more democratic way of making political decisions, since the collective choice is made directly by the voters (i.e. 'the people') rather than by indirect means, e.g. through legislation in parliament (see Siune and Svensson, 1993: 100). One important virtue of referendums is, no doubt, that they allow voters to express their preferences directly regarding one or more policy issues. However, this does not mean that the outcome of referendums necessarily reflects a common electoral will or a unique social welfare function in any meaningful sense. In fact, from a social choice theory perspective, such a conception of referendums is misconceived mainly owing to a lack of awareness of the way referendums are designed and the importance of the institutions and collective choice mechanisms that amalgamate individual preferences into a social choice (see Nurmi, 1997; Brams et al., 1997, 1998; Saari, 2001).

However, whereas social choice theory notoriously tends to emphasize problems that appear to be nothing but theoretical constructs and that are difficult to corroborate empirically, mainstream approaches to the study of referendums within political science have witnessed a surge in empirical analyses of EU referendums in recent years (Siune and Svensson, 1993; Siune et al., 1994; Franklin et al., 1994, 1995; Hug and Sciarini, 2000; Christin and Hug, 2002: Svensson, 2002; Franklin, 2002; Hobolt, 2006, 2007). Many resources have been devoted to examining factors influencing voter decisions in referendums on European integration, for instance the role of information, campaigning, party alignment, and party endorsement of the issue in question (e.g. Siune and Svensson, 1993; Hobolt, 2006, 2007). In this regard, a particularly contested issue is whether voters in EU referendums primarily vote according to policy preferences or according to their (lack of) support for the incumbent government (see Svensson, 2002; Franklin, 2002; Garry et al., 2005). Indeed, the relative importance of policy issues versus concerns

for rewarding or punishing incumbent governments leaves voters in EU referendums in an uncomfortable dilemma between favouring a proposal for its political qualities and thereby rewarding an unsuccessful government or rejecting the proposal, with the implication that a popular government is punished (Schneider and Weitsman, 1996). Moreover, Hug and Sciarini (2000) have shown that domestic institutions relating to whether referendums are binding or non-binding and required or non-required affect voter decisions on whether or not to support a proposal. Similarly, Christin and Hug (2002) provide a theory and some evidence suggesting that institutionally induced opportunities to subject EU-related policy proposals to a referendum may increase voter support for European integration.

The present article departs from this literature by, firstly, adopting an explicit social choice theory perspective on referendums. Although game theory models have previously been used to analyse referendums on EU integration (Schneider and Weitsman, 1996; Christin and Hug, 2002), little attention has been given to the topic from the angle of social choice theory. As such, the purpose of the paper is to analyse problems that potentially arise in relation to the use of referendums as a method of preference aggregation. Secondly, the paper does not primarily deal with the more traditional political science issues, such as why voters vote 'Yes' or 'No' in EU referendums, or whether EU referendums possess a 'second-order election' or 'issue-voting' character. Rather, the article contributes to the empirical literature on EU referendums by analysing possible discrepancies between the policy preferences of voters and social choice that emerge in situations of sequential referendums and/or three or more distinguishable alternatives. This will be illustrated by highlighting novel features of the Danish referendums on the Maastricht Treaty in 1992 and 1993 that have so far been completely overlooked.

The following section considers possible relations between voter preferences and the social choices that emerged from the referendums in 1992 and 1993. I attempt to disentangle the preference orders of those voters who voted Yes or No in both the 1992 and the 1993 referendums. The third section asks whether there is a Condorcet winner among the set of EU political alternatives, and the concluding section gives the key findings.

Voter preferences, collective rationality and social choice

Almost immediately after the voters' rejection of the Maastricht Treaty in 1992, negotiations between the Danish government and key parliamentary opposition parties began on the future of Danish EU membership (see Siune et al., 1994). The negotiations resulted in agreement on the so-called 'national

compromise', which was supported by the government, the Social Liberal Party, the Social Democratic Party and, significantly, the initially anti-Maastricht Socialist People's Party.

Substantially, the national compromise entailed that Denmark should opt out of EU cooperation on four key dimensions that were all part of the original Maastricht Treaty. These were (1) justice and home affairs, (2) a common currency, (3) common citizenship, and (4) a common defence policy. Subsequently, the governments of the other EU member countries agreed to grant Denmark special status on the basis of the national compromise, allowing Denmark to adopt an amended version of the Maastricht Treaty (the so-called 'Edinburgh Agreement'), which included opt-out clauses on the four policy issues.

In 1993 a new referendum was held on the amended Maastricht Treaty. The result of the referendum was that the amended Maastricht Treaty received a majority of 56.7% of the votes, thereby beating the Status Quo.[1] Table 1 shows the change in Yes and No votes in the two referendums based on survey data collected by Siune et al. (1993) and Andersen et al. (1993) after the 1993 referendum.

It is clear from Table 1 that most voters chose to stick to their original vote: an overwhelming majority (96–97%) of those voting Yes in 1992 also voted Yes in 1993. Not surprisingly, more voters (18–23%) changed their vote from No to Yes than the reverse (3–4%). Thus, introducing the amended Maastricht Treaty as a third alternative implied that the No vote from the 1992 referendum was split to a degree that resulted in a relatively clear majority in favour of the amended Maastricht Treaty.

Table 1 Voting changes in the Maastricht and Edinburgh referendums

	Edinburgh (amended Maastricht)			
Maastricht	*Yes (%)*		*No (%)*	
	Siune	*Andersen*	*Siune*	*Andersen*
Yes	97	96	3	4
No	23	18	77	82

Sources: Siune et al. (1993) and Andersen et al. (1993).
Note: The real net change in votes between the Maastricht and Edinburgh referendums was 56.7 – 49.3 = 7.4 percentage points.

Possible voter preferences

On the basis of the distribution of votes in Table 1, the question is whether it is possible to make inferences with regard to voter preferences over the set of EU political alternatives, X = {Maastricht (M), Edinburgh (E) and Status Quo (SQ)}.[2] It is fairly obvious that the voter population consisted of (at least) four groups, $N = \{1_{yy}, 2_{yn}, 3_{ny}, 4_{nn}\}$, where the subscript indicates each group's voting behaviour at the referendum in 1992 and 1993, respectively. That is, the voter groups voted as follows: Group 1_{yy}: 'Yes–Yes'; Group 2_{yn}: 'Yes–No'; Group 3_{ny}: 'No–Yes'; Group 4_{nn}: 'No–No'.

Given the distribution of votes in Table 1, it is further possible to estimate the size of the four voter groups, as shown in Figure 1.[3] As Figure 1 shows, the largest voter groups (1_{yy} and 4_{nn}) were either in favour of both the Maastricht Treaty and the Edinburgh Agreement or against them. However, for the purpose of this study, the interesting thing to notice is that none of the voter groups had an absolute majority. The largest group (over 47%) consisted of those who voted Yes in both 1992 and 1993, whereas the smallest group (up to 2%) voted Yes to the Maastricht Treaty but No to the Edinburgh amendments.

The interesting question, then, is whether it is possible on the basis of the information provided in Table 1 and Figure 1 to reconstruct the voter groups' ordinal preference orderings with regard to the three relevant alternatives.[4]

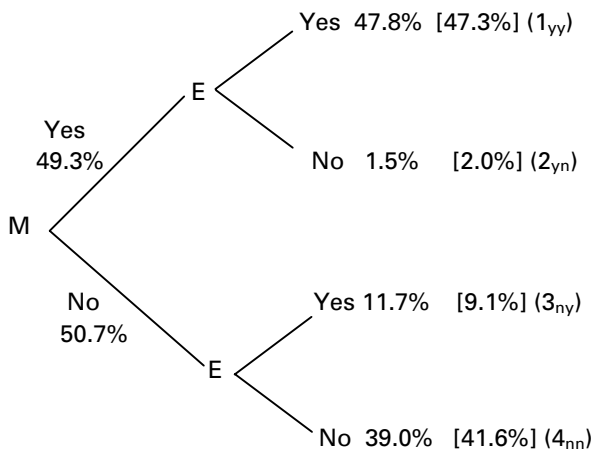

Figure 1 Voter behaviour in the Maastricht and Edinburgh referendums.
Notes: Percentages not in brackets are based on Siune et al. (1993); percentages in brackets are based on Andersen et al. (1993).

The numerically largest voter group (group 1_{yy}) voted Yes in both the 1992 Maastricht referendum and the subsequent 1993 referendum, and was as such the most pro-EU of the four groups. The implication of the voting behaviour of group 1_{yy} could lead one to reason that its *most* preferred alternative *might* be the original 1992 Maastricht Treaty. The fact that group 1_{yy} voted Yes in 1993 as well further indicates that the Edinburgh Agreement was a *more* preferred alternative than the Status Quo. Consequently, it is straightforward to infer that the Status Quo was the *least* preferred alternative. On this reasoning, an ordinal preference ordering would place the Edinburgh Agreement between the Maastricht Treaty and the Status Quo. Thus, one might tentatively infer that the collective preference order of group 1_{yy} can be written as: $M > E > SQ$. The problem is, of course, that it is difficult to establish whether all Yes–Yes voters preferred the Maastricht Treaty to the Edinburgh Agreement; i.e. whether $M > E$ or $E > M$. We will return to this problem below.

Group 2_{yn} voted Yes to the 1992 Maastricht Treaty but No in the Edinburgh referendum. Inferring from the voting behaviour of group 2_{yn}, the Maastricht Treaty was its *most* preferred alternative and the group's rejection of the 1993 Edinburgh Agreement indicates that the Status Quo was *more* preferred than the Edinburgh Agreement, making the latter group 2_{yn}'s *least* preferred alternative. That is, since $M > SQ$ and $SQ > E$, then by transitivity $M > E$. This places the Status Quo in between the 1992 Maastricht Treaty and the 1993 Edinburgh Agreement. Consequently, the collective preference order of group 2 must be as follows: $M > SQ > E$.

Thirdly, group 3_{ny} voted No in 1992 but Yes in the Edinburgh referendum in 1993. The fact that group 3 voted Yes to the Edinburgh Agreement strongly indicates that this alternative was more preferred than both the Status Quo and the original Maastricht Treaty, thus making the Edinburgh Agreement the *most* preferred alternative for group 3_{ny}. The same logic entails that the Status Quo for group 3_{ny} was *more* preferred than the Maastricht Treaty, which must then be considered the *least* preferred of the three alternatives. In short, since $E > SQ$ and $SQ > M$, then by transitivity $E > M$. Placing the Status Quo alternative between the Maastricht Treaty and the Edinburgh Agreement results in the following ordinal preference ordering for group 3_{ny}: $E > SQ > M$.

Finally, the No votes of group 4_{nn} in both referendums indicate that it strongly disapproved of both the original Maastricht Treaty and the Edinburgh amendments. On the basis of the voting behaviour of group 4_{nn}, it is therefore relatively uncontroversial to infer that the Status Quo was the group's *most* preferred alternative. Furthermore, one might presume that the 1992 Maastricht Treaty was the *least* preferred alternative, the reason being

that the Edinburgh Agreement did after all reduce the level of Danish integration into the EU, and so was probably perceived as being a lesser evil than the Maastricht Treaty. This would place the Edinburgh Agreement between the Status Quo and the Maastricht Treaty in an ordinal preference ordering. The resulting collective preference order of group 4_{nn} would then be: SQ $>$ E $>$ M. However, as with the Yes–Yes voters, the difficulty with this reasoning is that it is not straightforward to establish whether M $>$ E or E $>$ M for all No–No voters.[5]

Given the analysis above, the provisional ordinal preference orderings of the four voter groups regarding the three EU political alternatives are summarized in Table 2. The most striking observation from Table 2 is that the 1993 Edinburgh Agreement may have been the most preferred alternative for a very small proportion of voters, possibly as few as 9.1%. Despite the fact that the Edinburgh Agreement was the winning alternative and became the social choice following the two referendums, this indicates that the Edinburgh Agreement may have ranked highest in the preference order of only a small minority of Danish voters.

The difficulty with the analysis above, however, is that, although the preference orders for groups 2 and 3 seem reasonable given their voting behaviour, it is – as mentioned – less reasonable to infer the preference orders M $>$ E $>$ SQ for group 1_{yy} and SQ $>$ E $>$ M for group 4_{nn} as a whole, because at least substantial parts of these groups may, in fact, have had preference orders in which the E and M alternatives were reversed.

Reconsidering the preference order of the Yes–Yes and No–No voters

To resolve the problem of the ranking of the M and E alternatives for the Yes–Yes and No–No voters, I have empirically tried to estimate the relative

Table 2 Possible voter preferences regarding EU political alternatives

Group 1_{yy} 47.8/47.3%	Group 2_{yn} 1.5/2.0%	Group 3_{ny} 11.7/9.1%	Group 4_{nn} 39.0/41.6%
M	M	E	SQ
E	SQ	SQ	E
SQ	E	M	M

Note: The first percentage figure is based on Siune et al. (1993); the second figure is based on Andersen et al. (1993).

size of the subgroups of voters in groups 1_{yy} and 4_{nn} who (possibly) preferred E > M rather than M > E. To this end, I use data from the same surveys on which Tables 1 and 2 are based. The surveys in Siune et al. (1993) and Andersen et al. (1993) provide data on a number of questions pertaining to the attitudes of the respondents to the Maastricht Treaty and the Edinburgh Agreement, and specifically the issues relating to the Edinburgh amendments. Furthermore, these issues have been shown to be important for how the Danish voters voted in 1992 and 1993 (Siune et al., 1993, 1994; Svensson, 2002).

However, the analyses below implicitly rest on the assumption that 'policy matters' in voter decisions on whether to vote Yes or No in the referendums. In light of the debate on whether EU referendums are really on EU political issues or are for or against the incumbent government (Siune and Svensson, 1993; Siune et al., 1994; Franklin et al., 1994, 1995; Franklin, 2002; Svensson, 2002; Garry et al., 2005), I have – in order to substantiate the assumption – performed a number of logistical regressions so as to investigate whether voter attitudes towards the (amended) Maastricht Treaty were instrumental in determining the propensity of voters to vote either Yes or No. The results are presented in the appendix.[6] The regressions clearly demonstrate that voter attitudes towards the (amended) Maastricht Treaty were important for voters' decisions on whether to vote Yes or No.[7] Thus, the underlying assumption of the analyses below seems quite reasonable.[8]

The question is, then, how we can estimate the size of the subgroups of Yes–Yes and No–No voters who might have preferred E > M? Obviously, this is an inherently difficult task. As a starting point, I note that for the Yes–Yes voters it is, as shown above, reasonable to preclude any preference order in which SQ is ranked above M or E. Similarly for the No–No voters, we can exclude any preference order in which M or E is ranked above SQ. Secondly, on the basis of the surveys by Siune et al. (1993) and Andersen et al. (1993) I have constructed a series of indicator variables of voter attitudes to the (amended) Maastricht Treaty, which can help establish the preference orders of the Yes–Yes and No–No voters. Because the surveys contain different questions relating to the same policy issues, I have constructed six different indicators based on different questions. However, all the questions do solely concern voter attitudes to the opt-out clauses of the Edinburgh Agreement (see appendix for details).

I then constructed two types of indicators. In the first, I isolated the group of voters who were in favour of EU political integration in *all* the policy areas where Denmark was granted opt-out clauses in 1993 and on which the surveys contain information. This group was then compared with the group of voters who were against one or more of the same policy areas. Because the first group comprises voters who were in favour of more EU political

integration than the Edinburgh Agreement offered, it seems reasonable to assume that that they preferred the full Maastricht Treaty to the Edinburgh Agreement (M ≻ E). On the other hand, the voters in the second group were against integration in at least one of the policy areas, and therefore in favour of at least one of the opt-out clauses, and were consequently less positive about full integration. The preference order of these voters is thus assumed to be given by E ≻ M.

However, this approach is likely to overestimate support for the Edinburgh Agreement. For instance, if a voter was against only one of the four policy areas and in favour of integration on the other three issues, then s/he is assumed to prefer E ≻ M, even though s/he was in favour of integration on a majority of issues, and may therefore have preferred M ≻ E. To rectify this problem I constructed a second type of indicator variable, which is a replication of the first index, except that the voters who were in favour of *all but one* issue are assumed to prefer M ≻ E, whereas the remainder of the voters are assumed to prefer E ≻ M. This will probably provide a somewhat more realistic account of the size of the voter groups who preferred M ≻ E or E ≻ M, respectively. Regardless of which aggregation method one prefers, we get – if nothing else – a measure of the interval of support for the alternatives among the voters.

On the basis of the six indicator variables, the Yes–Yes and No–No voters from Table 2 were divided into two subgroups with the preference orders M ≻ E and E ≻ M, respectively. Table 3 shows the support for the Maastricht Treaty and the Edinburgh Agreement within each subgroup of Yes–Yes and No–No voters.

Table 3 reveals some variation in the estimates of the size of the positive Yes–Yes voters (top row) and the less positive Yes–Yes voters (second row).

Table 3 Voter support for Maastricht and Edinburgh, Yes–Yes and No–No voters (%)

	Index					
	A *(4/4)*	*B* *(3/4)*	*C* *(4/4)*	*D* *(3/4)*	*E* *(3/3)*	*F* *(3/3)*
Yes–Yes (M ≻ E)	19.0	34.1	25.1	48.6	28.8	31.4
Yes–Yes (E ≻ M)	81.0	65.9	74.9	51.4	71.2	68.6
No–No (M ≻ E)	0	1.6	0.4	4.0	2.0	1.5
No–No (E ≻ M)	100	98.4	99.6	96.0	98.0	98.5

Note: Numbers denote the percentages of each subgroup of Yes–Yes and No–No voters within the total group of Yes–Yes and No–No voters, respectively. See appendix for details.

On the most optimistic estimate (index A), the Edinburgh Agreement seems to have been more preferred than the Maastricht Treaty for around 80% of the Yes–Yes voters. However, as mentioned this estimate is probably biased upwards, i.e. in the direction of exaggerating support for the Edinburgh Agreement. On the other hand, according to the least optimistic estimate (index D), the Yes–Yes voters were (roughly) equally divided in their support for Maastricht and Edinburgh. Therefore, it seems safe to conclude that at least 50% and at most 80% of the Yes–Yes voters preferred E $>$ M, whereas somewhere between 20% and 50% preferred M $>$ E.

As might be expected, an overwhelming majority of No–No voters were consistently against further EU political integration in the policy areas contained in the opt-out clauses of the Edinburgh Agreement. In fact, only a very small minority – at most 4% – of the No–No voters were positive towards increasing EU integration despite voting No. We can therefore divide the No–No group into two subgroups, in which a small minority had a preference order where SQ $>$ M $>$ E, whereas the preference order of the large majority is given by SQ $>$ E $>$ M.

Overall, these results suggest that it is indeed reasonable to divide the Yes–Yes and No–No voters into subgroups with different priorities as to the choice between the Maastricht Treaty and the Edinburgh Agreement. However, doing so is particularly important for the Yes–Yes voters. This supports the view that not all Yes–Yes voters preferred M $>$ E, and that a substantial proportion of the voters who voted Yes to the Maastricht Treaty in 1992 did so despite being only moderately positive in their attitudes towards the Maastricht Treaty, and despite having some (at the time unspecified) intermediate alternative as their most preferred alternative. Since the size of the remaining two voter groups is unaffected by the re-estimation of the size of the new groups of Yes–Yes and No–No voters, Table 4 summarizes information on the ordinal preference orderings and size of the now six voter groups.

Table 4 provides a somewhat more realistic account of the relative size of the voter groups. This obviously means that the Edinburgh Agreement was the most preferred alternative for a proportion of the voters (groups 2_{yy} and 4_{ny}) that was significantly greater than the 11.7% (or 9.1%) estimate in Table 2. That is, apart from the voters in group 4_{ny}, somewhere between 24.6% and 38.7% of the voters (group 2_{yy}) preferred the Edinburgh Agreement to the Maastricht Treaty.

Given this information, we can derive an estimate of the proportion of voters supporting each of the three EU political alternatives (M, E and SQ). This is done in Table 5. The estimates show that the two alternatives with the greatest support in the electorate were the Edinburgh Agreement and the

Table 4 Ordinal preference structure regarding EU political alternatives given six voter groups

	Voter groups and preference order					
Index	*Group* 1_{yy} *M>E>SQ*	*Group* 2_{yy} *E>M>SQ*	*Group* 3_{yn} *M>SQ>E*	*Group* 4_{ny} *E>SQ>M*	*Group* 5_{nn} *SQ>M>E*	*Group* 6_{nn} *SQ>E>M*
A (4/4)	9.1	38.7	1.5	11.7	0.0	39.0
B (3/4)	16.3	31.5	1.5	11.7	0.6	38.4
C (4/4)	12.0	35.8	1.5	11.7	0.2	38.8
D (3/4)	23.2	24.6	1.5	11.7	1.6	37.4
E (3/3)	13.6	33.7	2.0	9.1	0.8	40.8
F (3/3)	14.9	32.4	2.0	9.1	0.6	41.0

Notes: Numbers are percentages. Horizontal summation within rows equals 100.

Status Quo. Generally, the Maastricht Treaty was not particularly popular: at best it was the most preferred alternative for around 25% of voters, and at worst for as few as 10%. According to the most optimistic estimates (column 1), the Edinburgh Agreement may, in fact, have been the most preferred alternative for a bare majority of 50.4% of Danish voters. However, it would probably be premature to conclude that the Edinburgh Agreement was preferred by a majority based on this result. Firstly, the estimate of 50.4% is almost certainly exaggerated (see above). Secondly, whereas the other estimates suggest that support for Edinburgh was substantial, more realistic estimates (e.g. index B in column 2) show that support for the Edinburgh amendments was probably well below 50%, somewhere in the neighbourhood of 40%, and perhaps even as low as 36% (index D). In fact, of the six estimates in Table 5, five indicate that the Edinburgh Agreement was not preferred by a majority, but rather was preferred by a plurality of Danish voters. Thus, whereas the Edinburgh Agreement was certainly the most preferred alternative for a large proportion of voters, it is probably reasonable to conclude that a majority of Danish voters preferred a different alternative. That is, the polarization of voters as to the most preferred level of EU political integration meant that a majority probably preferred either more or less integration than was offered by the Edinburgh Agreement.

Why, then, did the Edinburgh Agreement become the social choice? The obvious answer is that it did so, not necessarily by being the most highly valued alternative for the majority of voters, but because it was the alternative that – given the choice between the Edinburgh Agreement and the Status

Table 5 Total support for the three EU political alternatives as the most preferred alternative

	A (4/4)	*B (3/4)*	*C (4/4)*	*D (3/4)*	*E (3/3)*	*F (3/3)*
Total support for E. (groups $2_{yy} + 4_{ny}$)	50.4	42.9	47.5	36.3	42.8	41.5
Total support for M. (groups $1_{yy} + 3_{yn}$)	10.6	18.1	13.5	24.7	15.6	16.9
Total support for SQ. (groups $5_{nn} + 6_{nn}$)	39.0	39.0	39.0	39.0	41.6	41.6

Notes: Numbers are percentages. Vertical summation within columns equals 100.

Quo – was closest to the bliss-point of the median voter. Compared with the 1992 referendum, the combination of the votes of groups 1_{yy}, 2_{yy} and 4_{ny} was sufficient to form the majority necessary to beat the Status Quo.

The Condorcet winner

On the basis of the structure of voter preferences displayed in Table 4, it is now possible to examine whether the set of alternatives X = (M, E, SQ) contains a Condorcet winner; i.e. an alternative that can beat all other alternatives in a pairwise comparison regardless of the voting sequence and using simple majority voting (Riker, 1982: 100; Gehrlein, 1983: 162; McLean, 1988: 66; Kurrild-Klitgaard, 2001). In so far as the Edinburgh Agreement was preferred by a majority, it was obviously the Condorcet winner too. However, since it is more likely that the Edinburgh Agreement was preferred by a plurality rather than by a majority, and because plurality winners are not always Condorcet winners (Riker and Wright, 1989), it is reasonable to query the status of the Edinburgh Agreement as a Condorcet winner.

From the two referendums we know that the Edinburgh Agreement beat the Status Quo with 56.7% of the votes.[9] Secondly, we know that Status Quo beat the Maastricht Treaty by a majority of 50.7% in the 1992 referendum. From Table 4 we can furthermore infer that the Edinburgh Agreement was majority-preferred to the Maastricht Treaty by between 73.7% and 89.4% of the voters (groups 2_{yy}, 4_{ny} and 6_{nn}). Using the Condorcet method we accordingly obtain the following collective preference order: E $\succ$ SQ $\succ$ M.

This result is interesting for (at least) three reasons. First of all, it reveals that the Edinburgh Agreement – the winner of the 1993 referendum – was

the Condorcet winner and thus the collectively most preferred alternative, despite the fact that it was probably not the most preferred alternative for a majority of voters. Secondly, the fact that a Condorcet winner exists rules out the possibility of a Condorcet paradox (i.e. a collectively intransitive preference order where $A \succ B \succ C \succ A \ldots$). Thus, in so far as the Condorcet method is considered a kind of democratic fairness criterion (McLean, 1988: 66), the 1993 referendum did, in fact, produce the 'right' social choice. Thirdly, since the collectively most preferred alternative was probably the most preferred alternative only for a plurality of voters, it would be possible – and quite legitimate – for a majority of between 52.5% and 63.7% of the voters to be dissatisfied with the final result of the two referendums in 1992 and 1993. Stated differently, for a majority of the voters, the winning alternative may not have been the most preferred alternative, but instead a lower-ranking and less preferred alternative.

Although the Edinburgh Agreement was probably the Condorcet winner and the collectively most preferred alternative, given the alternatives for consideration, this makes an unambiguous interpretation of the results of the 1992 and 1993 referendums much more difficult. We cannot say that the Edinburgh Agreement was preferred by a majority of the Danish electorate simply because 56.7% of the voters voted Yes in 1993. To understand the EU political preferences of the Danish voters, we need to disentangle voter preferences instead, and take into account that a substantial proportion of voters – most likely a majority – preferred a level of integration different from the one offered by the Edinburgh Agreement. This fundamentally alters the way we perceive the result of the Danish EU referendums in 1992 and 1993 and the four amendments that were added to the Maastricht Treaty in 1993 and that are still in effect today.

Conclusion

The purpose of this article has not been to assess whether the outcome of the Danish referendums in 1992 and 1993 was right or wrong. The purpose has solely been to analyse the relationship between voter preferences and the outcome that emerged as the social choice following the referendums in 1992 and 1993. The most significant finding in this article is that it is doubtful whether the Edinburgh Agreement – despite the fact that it won the 1993 referendum and despite its probable status as a Condorcet winner – constitutes an expression of some general EU political will of the Danish people in any meaningful sense. Nevertheless, on the positive side, there are strong arguments that the Edinburgh Agreement was the 'right' outcome of the 1992

and 1993 referendums. Regardless of how voter preferences are reconstructed, the Edinburgh Agreement comes out as the Condorcet winner and the median voter favourite. In addition, it may also have been the most preferred alternative for the largest proportion of voters. On the other hand, taking into account that a substantial proportion of Danish voters preferred the Maastricht Treaty or the Status Quo to the Edinburgh Agreement, the latter was most likely not preferred by a majority of voters. This renders the interpretation of the outcome of the referendums in 1992 and 1993 more ambiguous than has been recognized until now, and questions the presence of a unique social choice that reflects the Danish voters' most preferred level of integration into the EU. As such, it is quite simply questionable whether referendums can be conceived as a procedure by which information on individual preferences and values in a simple and uncomplicated manner can be translated into an unambiguous social choice that somehow reflects the will of the people on the issue in question.

Notes

I am grateful to Hannu Nurmi, Steven Brams, Peter Kurrild-Klitgaard, Robert Klemmensen, Gerald Schneider and the anonymous referees at EUP for constructive comments, and to Jens Wagner at the Danish Data Archive for kindly providing data and documentation on the Maastricht and Edinburgh referendums in Denmark. An earlier version of the paper was presented at the 2006 meeting of the European Public Choice Society in Turku, Finland, where it won the Wicksell Prize.

1 The Danish referendums in 1992 and 1993 have some similarity to the Irish referendums on the Nice Treaty in 2001 and 2002, where the Irish voters first rejected the Treaty but then voted in favour of it a year later (see Garry et al., 2005). However, in the Irish case, the 2001 and 2002 referendums were on the same Treaty. That is, unlike in the Danish case of the Maastricht Treaty, no opt-out clauses were added to the Nice Treaty following the 2001 rejection in Ireland. The only difference between the 2001 and 2002 referendums on the Nice Treaty was that the Irish government and the European Council issued two declarations at the Seville summit in 2002 stating that the Nice Treaty would not affect the policy of Irish military neutrality. However, these declarations did not substantially alter the Nice Treaty (see Garry et al., 2005: 207–8; Department of Taoiseach, 2002).

2 Note that the exact content of the alternative identified as Status Quo is somewhat unclear. In addition, it is possible that voter perceptions of the Status Quo – i.e. perceptions of what would happen if the outcome of 1993 referendum was another No – changed between 1992 and 1993 (see Svensson, 2002: 743). In any case, the Status Quo alternative might be interpreted as containing 'anything but' the Maastricht Treaty (or the Edinburgh Agreement),

involving, presumably, less integration into the EU. This includes a range of policy positions, from complete withdrawal from the EU to upholding the pre-1992 membership status.

3 The numbers in Figure 1 are calculated as the proportion of voters whose voting behaviour remained the same or changed between 1992 and 1993. For example, 97% of the 49.3% who voted Yes in 1992 also voted Yes in 1993; hence the net size of the 'Yes–Yes' voters is 47.8%.

4 Voter preferences are assumed to be both (strongly) transitive and complete. Preferences are transitive if $X \succ Y$ and $Y \succ Z \rightarrow X \succ Z$. Preferences are complete if, given a choice between X and Y, a person prefers either $X \succ Y$, $Y \succ X$ or $X \sim Y$, the latter expression indicating indifference.

5 A potential problem with constructing these voter groups is that it was not the exact same electorate that voted at the two referendums; i.e. changes occurred owing to natural causes and possible abstentions in one of the referendums. However, since the referendums were close – separated by approximately one year – the problem with changes in the electorate is not very severe. Turnout was 83.1% in 1992 and 86.5% in 1993.

6 The appendix is available at http://www.uni-konstanz.de/eup/issues.htm.

7 Ideally, the empirical analyses would focus on the dynamics of voters changing their votes from 1992 to 1993. However, this would require the use of a panel data set, which unfortunately – to the best of the my knowledge – does not exist for the 1992 and 1993 referendums.

8 Another objection to the analyses is that they presume that the policy space is unidimensional, whereas in reality it might be multidimensional. To investigate this, I have conducted a series of principal component factor analyses (PCA) in order to derive the number of underlying dimensions of EU policy space in the Danish electorate. The PCAs were based on the items listed in appendix A, Table A1. In all cases the PCAs extract only one factor. This validates the assumption that the policy space may be considered unidimensional. Detailed results are available upon request.

9 Using the data from indexes A–D in the first four rows of Table 4, Edinburgh beat SQ by 59.5%. The small difference is owing to sampling error in the survey data.

References

Andersen, Jørgen Goul, Hans Jørgen Nielsen, Steen Sauerberg, Jens Hoff and Torben Worre (1993) *Gallup interviews og enquete efter unionsafstemningen 1993*. Data material DDA-1839. Odense: Danish Data Archive.

Brams, Steven J., Marc D. Kilgour and William S. Zwicker (1997) 'Voting on Referenda: The Separability Problem and Possible Solutions', *Electoral Studies* 16(3): 359–77.

Brams, Steven J., Marc D. Kilgour and William S. Zwicker (1998) 'The Paradox of Multiple Elections', *Social Choice and Welfare* 15: 211–36.

Christin, Thomas and Simon Hug (2002) 'Referendums and Citizens Support for European Integration', *Comparative Political Studies* 35(5): 586–617.

Department of Taoiseach (2002) *Treaty of Nice and Seville Declarations*. Dublin. URL: http://www.taoiseach.gov.ie.

Franklin, Mark (2002) 'Learning from the Danish Case: A Comment on Palle Svensson's Critique of the Franklin Thesis', *European Journal of Political Research* 41: 451–7.

Franklin, Mark, Michael Marsh and Christopher Wlezien (1994) 'Attitudes towards Europe and Referendum Votes: A Response to Siune and Svensson', *Electoral Studies* 13(2): 117–21.

Franklin, Mark, Cees van der Eijk and Michael Marsh (1995) 'Referendum Outcomes and Trust in Government: Public Support for Europe in the Wake of Maastricht', *West European Politics* 18: 101–17.

Garry, John, Michael Marsh and Richard Sinnot (2005) '"Second-Order" versus "Issue-Voting" Effects in EU Referendums: Evidence from the Irish Nice Treaty Referendums', *European Union Politics* 6(2): 201–21.

Gehrlein, William V. (1983) 'Condorcet's Paradox', *Theory and Decision* 15: 161–97.

Hobolt, Sara B. (2006) 'How Parties Affect Vote Choice in European Integration Referendums', *Party Politics* 12(5): 623–47.

Hobolt, Sara B. (2007) 'Taking Cues on Europe? Voter Competence and Party Endorsement in Referendums on European Integration', *European Journal of Political Research* 46(2): 151–82.

Hug, Simon and Pascal Sciarini (2000) 'Referendums on European Integration: Do Institutions Matter in the Voter's Decision?', *Comparative Political Studies* 33(1): 3–36.

Kurrild-Klitgaard, Peter (2001) 'An Empirical Example of the Condorcet Paradox in a Large Electorate', *Public Choice* 107(1–2): 135–45.

McLean, Iain (1988) 'Ships That Pass in the Night: Electoral Reform and Social Choice Theory', *Political Quarterly* 59: 63–71.

Nurmi, Hannu (1997) 'Referendum Design: An Exercise in Applied Social Choice Theory', *Scandinavian Political Studies* 20(1): 33–52.

Riker, William H. (1982) *Liberalism against Populism: A Confrontation between the Theory of Democracy and the Theory of Social Choice*. Illinois: Waveland Press Inc.

Riker, William H. and Stephen G. Wright (1989) 'Plurality and Runoff and the Number of Candidates', *Public Choice* 60(2): 155–75.

Saari, Donald G. (2001) *Decisions and Elections: Explaining the Unexpected*. Cambridge: Cambridge University Press.

Schneider, Gerald and Patricia A. Weitsman (1996) 'The Punishment Trap: Integration Referendums as Popularity Contests', *Comparative Political Studies* 28(4): 582–607.

Siune, Karen and Palle Svensson (1993) 'The Danes and the Maastricht Treaty: The Danish EC Referendum of June 1992', *Electoral Studies* 12(2): 99–111.

Siune, Karen, Ole Tonsgaard and Palle Svensson (1993) *Folkeafstemningen om Edinburghaftalen, 18. maj 1993*. Data material DDA-1784. Odense: Danish Data Archive.

Siune, Karen, Palle Svensson and Ole Tonsgaard (1994) 'The European Union: The Danes Said "No" in 1992 and "Yes" in 1993: How and Why', *Electoral Studies* 13(2): 107–16.

Svensson, Palle (2002) 'Five Danish Referendums on the European Community and European Union: A Critical Assessment of the Franklin Thesis', *European Journal of Political Research* 41: 733–50.

About the author

Mogens K. Justesen is a PhD candidate in the Department of Political Science, University of Southern Denmark, Campusvej 55, DK-5230 Odense M., Denmark.
Fax: +45 6550 2280
E-mail: mju@sam.sdu.dk