

Holzinger, Katharina

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## The influence of the new member states on EU environmental policy-making: A game theoretical approach

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**DISCUSSION PAPER**



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**The Influence of the New Member States on EU  
Environmental Policy-Making. A Game Theoretical  
Approach.**

Katharina Holzinger

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**Forschungsschwerpunkt:**  
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### **The Influence of the New Member States on EU Environmental Policy-Making. A Game Theoretical Approach.**

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Wissenschaftszentrum Berlin für Sozialforschung  
Reichpietschufer 50, D-10785 Berlin

*Tel.:* +49/30/25491-0 • *Fax:* +49/30/25491-684  
*E-mail:* wzb@wz-berlin.de • *Internet:* <http://www.wz-berlin.de>

## Abstract

In January 1995 Austria, Sweden, and Finland became member states of the European Union. All three countries have traditionally given comparatively high priority to environmental protection. This paper deals with the question of what influence the new members will have on environmental policy-making in the European Union. Two aspects must be considered: First, what influence could the new member states have on decisions taken by the Council of Ministers? Second, what relative weight does the Council of Ministers have in the three procedures applicable to environmental decision-making, provided for in the Maastricht Treaty? Game-theoretical analysis shows clearly that the accession of Austria, Sweden, and Finland has caused the balance within the Council of Ministers to shift a great deal in favour of the environmentally more progressive member states, since they can no longer be overruled when qualified majority voting applies. The constraints on forming majority coalitions will now lead to far greater emphasis on consensus among the larger member states in future negotiations with the Council. The European Parliament's newly gained power in the co-decision procedure should benefit the environmental frontrunner states at least in the short term. Thus, the enlargement should be very welcome in the eyes of Denmark, the Netherlands, and Germany.

## Zusammenfassung

Im Januar 1995 traten Österreich, Schweden und Finnland der Europäischen Union bei. Alle drei Staaten betreiben traditionellerweise eine in Europa vergleichsweise fortschrittliche Umweltpolitik. Das vorliegende Papier befaßt sich mit der Frage, welchen Einfluß der Beitritt dieser drei Staaten auf die Umweltpolitik der Europäischen Union haben wird. Dabei müssen zwei Aspekte berücksichtigt werden, nämlich erstens die Frage, welchen Einfluß die neuen Mitgliedstaaten bei der Abstimmung im Ministerrat ausüben können, und zweitens das relative Gewicht, das dem Ministerrat im Vergleich zu den beiden anderen Organen der Gemeinschaft bei den drei nach dem Vertrag von Maastricht für die Umweltpolitik anzuwendenden Entscheidungsverfahren zukommt. Die spieltheoretische Analyse ergibt, daß durch die Norderweiterung die Balance der Mitgliedstaaten im Rat der Umweltminister erheblich zugunsten der umweltpolitischen Vorreiterstaaten verschoben wurde, da diese bei Anwendung der qualifizierten Mehrheit nun nicht mehr überstimmt werden können. Aufgrund der Mehrheitsverhältnisse werden die Verhandlungen im Rat in Zukunft wieder sehr viel stärker auf einen Konsens zwischen den großen Mitgliedstaaten ausgerichtet sein müssen. Die im Kodifizierungsverfahren neu gewonnene Macht des Europäischen Parlaments dürfte (zumindest kurzfristig) den umweltpolitischen Vorreiterstaaten zugute kommen. In den Augen der bisherigen Vorreiter Dänemark, Niederlande und Deutschland ist die Norderweiterung daher sehr zu begrüßen.

## Introduction

In January 1995 Austria, Sweden and Finland became members states of the European Union. All three of them, and particularly the Nordic countries, have a tradition of giving comparatively high priority to environmental protection. Two questions are of interest to the new members: first, what will be the consequences of EU membership for their domestic environmental policy? Will their level of environmental protection be threatened by lower standards set by the EU? And second, what will be the impact of the new members on environmental policy making in the EU? Can they expect to raise the standards of EU environmental policy-making or might the reverse be the case? The second question is also of interest to all other EU member states, especially to those who have traditionally followed a progressive environmental policy. The Nordic countries may stimulate EU environmental policy, but their impact is subject to several factors, including differences in the approach and priorities of environmental policies and institutional constraints.

This paper will focus on the second question with respect to EU institutions. What are the prospects for the Nordic member states of influencing the EU environmental policy output, i.e. the norms set in directives and regulations? To what extent will they be able to carry through their own environmental aims and agendas? Can they successfully form coalitions with the other traditionally environmentally progressive countries, Denmark, the Netherlands, and Germany, within the *Council of Ministers*? How will the other major political actors in the decision making process, the *European Parliament* and the *European Commission* affect environmental policy output?

The analysis presented here will be somewhat formal, although not too technical. For the sake of simplicity some assumptions will be made, and the models used are abstract and *a priori*, and can therefore only show part of the (empirical) truth. Nevertheless they provide some valuable insights. My analysis focuses on formal decision-making procedures in the context of environmental regulation, because they act as constraints on the participants' chances of influencing policy outputs. Of course, there is also a great deal of power exerted in informal ways, e.g. by lobbying in the European Parliament, or committee participation at Commission level during the phase of drafting a proposal, by the Presidency's control of the agenda in the Council of Ministers, and so on. But the formal steps of the process are vital since they cannot be avoided, and they provide a framework within which the informal negotiations take place. In order to assess the impact of the new member states on environmental policy output I will compare the situations before and after their accession on the one hand,

and before and after the Maastricht Treaty on the other because both events have changed the conditions under which policy decisions on the environment are made.

I will start with a description of the three most important decision-making procedures for environmental policy. In the second section I will use a model showing how much voting power each member state has in the Council of Ministers' negotiations. Thirdly, I will discuss what that might mean for the outcome of environmental policy negotiations. I will simplify the model by assuming that in environmental matters there are three fixed coalitions of member states: the environmental "frontrunners", the "hesitants", and the "in-betweens". In the final section, the relative weight of Council, Parliament, and Commission in the different procedures, and their influence on policy output is shown.

## **Decision-making procedures provided for in the EU Treaties**

Three major institutions take part in the EU decision-making process: the Council of Ministers, here the Council of the Ministers for the Environment, the European Commission, and the European Parliament. At the core of decision-making are still the negotiations in the Council, but the Commission and the Parliament also play a role. The extent of the influence exerted by each institution—and therefore by each member state—varies according to the decision-making procedure applied. The Maastricht Treaty provides for three main procedures that are applicable to environmental policy issues: the consultation procedure, the co-operation procedure, and the newly introduced co-decision procedure (Art. 189 of the Treaty).

### ***(1) Consultation Procedure (Art. 189a)***

As in all other procedures the first step is that the Commission drafts a proposal and forwards it to the Council, in most cases also to the Parliament, in many cases to the *Economic and Social Committee*, and in some to the *Committee of the Regions*. These bodies give their *Opinion* on the subject which the Council can, but need not take into account. Then the Council discusses the proposal (in practice the Council conducts negotiations in parallel, although it cannot formally adopt a proposal until the Opinions have been submitted). The adoption of a proposal requires a unanimous vote from the Council. As a consensus has to be reached that includes all member states, negotiations may take a long time. In the past it was the rule rather than the exception that decision-making processes on environmental directives under the consultation procedure took

four to five years. The consultation procedure is the EU decision procedure closest to that of an international regime. Sovereign states negotiate a solution within the Council, the other European institutions have hardly any influence at all.

## ***(2) The Co-operation Procedure (Art. 189c)***

The co-operation procedure was introduced in 1987 by the Single European Act. The main features of the new procedure were that proposals in the Council could now be passed by a qualified majority of member states' votes, cast in a system of weighted voting, and that the European Parliament gained a suspensive veto that could only be overruled by a unanimous vote from the Council. The first steps (proposal and Opinion) are the same as in the consultation procedure. In the so-called *First Reading* the Council adopts by a qualified majority a *Common Position* which is forwarded to the Parliament. In the *Second Reading* the Parliament has the options of approving the Common Position by a simple majority, amending it by an absolute majority, or rejecting it by an absolute majority. In the case of an amendment the Commission can decide whether to support the Council's Common Position or the Parliament's amendments, or whether to propose new amendments itself. The Council's options in the Second Reading depend on the actions taken by the Parliament and the Commission. If the Parliament has approved the Common Position the Council can adopt it by a qualified majority, in the case of rejection it can only be adopted by a unanimous vote. If the Parliament has made any amendments there are three possibilities: in case the Commission supports the Common Position, the Council can adopt it by a qualified majority; in case the Commission supports the Parliament, a unanimous vote in the Council is required; in the case of amendments made by the Commission the Council can approve them with qualified majority, or unanimously adopt either the Common Position, or the amendments by Parliament. If one of the majority requirements is not met the decision process breaks down. To sum up, as long as consensus can be achieved within the Council it can have its way. Otherwise a minority of member states can form a "coalition" with the Parliament and/or the Commission so that the whole process breaks down or the options proposed by Parliament or the Commission are adopted.

## ***(3) The Co-decision Procedure (Art. 189b)***

After the Maastricht Treaty came into force in November 1993, for many environmental proposals the even more complicated co-decision procedure must be applied. The Parliament now has a final veto at several stages of the process, the

Council can take almost every decision by qualified majority voting, and should the Parliament intend to reject the Common Position or to propose amendments, which the Council is unwilling to accept, a *Conciliation Committee* is summoned. This can be seen as a first move within the European Union towards a two-chamber-system comparable to those in federalist states.

The First Reading is the same as in the co-operation procedure. In the Second Reading, as a first step the Parliament has again three choices. First, it can approve the Common Position by a simple majority. Then the Council can adopt it by a qualified majority. Second, it can announce that it intends to reject the Common Position. Then the Council may summon the Conciliation Committee in order to explain its position to the Parliament. The Parliament then either confirms the rejection or proposes amendments, both with an absolute majority. Third, the Parliament can propose amendments to the Common Position. At this stage the European Commission comes into the process again. It can support either the Common Position or the proposal amended by the Parliament. In contrast to the Co-operation Procedure there is no opportunity for the Commission itself to propose amendments. If the Council agrees with the Parliament's amendments it can adopt them with a qualified majority, on condition that they are supported by the Commission. Otherwise, a unanimous vote is required. If the Council is not prepared to accept the amendments the Conciliation Committee has to be summoned. If there is no agreement on a compromise in the Conciliation Committee the Council may with a qualified majority vote confirm the Common Position or adopt the Parliament's amendments. In a final step the Parliament can approve the Council's choice with a simple majority or veto it with an absolute majority. If the Conciliation Committee finds a compromise, again, both institutions have to vote on it. For adoption, approval by both bodies is necessary. A qualified majority is required in the Council for approval, an absolute majority in the Parliament; otherwise the proposal is not adopted.

At three stages the Parliament now has the right to veto the Council's proposal: (1) at the beginning of the Second Reading; (2) should the Conciliation Committee fail to achieve a compromise and the Council reaffirm its Common Position; and (3) should the Parliament not accept the Conciliation Committee's compromise proposal. Compared to the co-operation procedure, where the veto could be overruled by the Council, this is a substantial increase in the Parliament's powers. The Commission, however, has lost power: the only influence left to the Commission in the new procedure is—if it strongly opposes Parliament's amendments—to force the Council either to vote for the Parliament's amendment unanimously or to summon the Conciliation Committee. The co-decision procedure is very complicated and it is hard



to see that its introduction contributes to the transparency of European institutions as is often called for.

Now, which procedure is applicable to which matters of EU environmental policy? This is set out in articles 130s and 100a of the Maastricht Treaty. The co-decision procedure applies to the adoption of environmental action programs which contain no obligatory regulations but only general policy goals (Art. 130s). But co-decision is also applicable to all decisions concerning the creation and functioning of the internal market (Art. 100a). In the environmental field this concerns all measures designed to harmonize national environmental legislation, as well as measures which could affect competition among industries in the member states. As a rule, all environmentally motivated product and, to some extent, production norms are subject to co-decision. From past experience, when the same line had to be drawn between the co-operation (Art. 100a) and the consultation procedure (Art. 130s), it can be assumed that almost half of all environmental proposals will be legislated upon according to the co-decision procedure. In critical cases it will be a matter of dispute between the institutions, especially the Council and the Parliament, as to which procedure applies to a specific proposal. In general, the co-operation procedure is now the rule in environmental policy. It is applicable to all environmental bills except a number of matters, enumerated in the Treaty, which are still subject to the consultation procedure. These include all proposals affecting taxes, and legislation in the fields of planning policy, land use, water resources policy, and energy policy (Art. 130s).

In all three procedures two important variables determine the influence of a political actor: the decision rule used in the Council (unanimity or qualified majority) and the degree of influence exerted by the European Commission and the European Parliament. The accession of the new members has direct influence only at the level of the Council. But if we want to look at the regulatory output that is to be expected, the whole decision-making process must be taken into account. This has to be done in two steps. First, it is necessary to look at the negotiation, coalition forming and voting procedures in the Council, in particular in comparison of the situations before and after the enlargement and the subsequent changes in the distribution of votes and the relative weight of environmentally friendly member states. Second, one must look at the roles the Commission and Parliament play in the various decision procedures. Here a comparison of the situations before and after the Maastricht Treaty is relevant.

## Voting in the Council

In the first step the general question raised in this paper is reduced to the following: What are the chances for the new member states of influencing the Common Position of the Council of Ministers? Can they form winning coalitions with other member states? To what extent can they have their way in the Council? An answer to these questions will be given in terms of the probability of member states or coalitions of member states (e.g. the Nordic states) of succeeding in a vote.

Which member states are successful in negotiation and voting on a certain proposal depends on many not easily measurable variables. A long negotiation process normally takes place before the final vote, first in working groups at the Council, later in the *Committee of Permanent Representatives*. The behaviour of a state during negotiations depends on many factors: to what extent it is affected by the respective proposals, whether it is under pressure from domestic interest groups, its position in the relevant market(s), and so on. The chances of negotiating successfully will depend on the (strategic) behaviour of the others, the possibilities of finding a compromise solution or package deals, and so forth. Analysing negotiations in the Council is an important and interesting subject,<sup>1</sup> but I would like to concentrate here on formal aspects, i.e. on the institutional constraints on coalition building and voting.

At this stage it is necessary to take a look at the voting requirements within the Council. What is the impact of the different decision rules on the outcome of negotiations, i.e. on the Common Position? What is the difference between unanimous and qualified majority voting in terms of their effects on environmental legislation? Could another decision rule, such as that of a simple majority vote, possibly have more (or less) desirable consequences? In the case of required unanimity, each member state has one vote and each vote is necessary for the adoption of a proposal (or, more precisely, it does not matter, whether the members have a different number of votes or not, since every member's consent is required). However, qualified majority voting in the EU means weighted voting (Art. 148 of Maastricht Treaty). The background of weighted voting is the democratic idea of "one man one vote" which implies that the size of representatives' constituencies should be roughly similar. Larger member states should have more voting power than smaller ones.<sup>2</sup>

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<sup>1</sup> I have dealt with negotiation in the Council in an extensive case study on the EC decision-making process leading to the introduction of the catalytic converter in Europe (see Holzinger 1994).

<sup>2</sup> It is doubtful whether this argument really applies to a federalist chamber. Voters in a federalist state are proportionally represented in the first chamber, and it is not the voters, but the member states which are

Table 1 shows the population of EU member states and the distribution of their votes in the Council. In the first column the absolute number of inhabitants is given, in the second each country's share of total population in the EU. The third column shows the numbers of votes each member state has in the Council after enlargement, while the fourth column contains each country's share of votes. Comparison of the second and the fourth columns shows that the representation of member states in the Council is not proportional to their population. The four large member states (especially post-unification Germany) are underrepresented, while the smaller ones (especially Luxemburg) are overrepresented.<sup>3</sup> In the fifth column the vote distribution closest to proportional representation is given. Due to rounding, it is not perfectly proportional, as the sixth column shows.

But the share of votes does not give an adequate measurement of the influence a member state can exert in voting. It is not equivalent to voting power since it may well be that no matter what a member votes for it can never influence decisively the results of a vote. This, for example, was the case with Luxemburg within the six-member EEC before the accession of the United Kingdom, Ireland, and Denmark. With its one vote Luxemburg had a share of 5.8% of all votes, but was in no possible combination of member states able to transform a coalition into a winning or a losing one. It simply did not matter what legislative option Luxemburg voted for. This is an extreme case, but it shows that the share of votes does not tell the whole truth about voting power.

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represented in the second chamber. But both solutions are political reality: the US Senate follows the "one state one vote"—principle, the German Bundesrat uses weighted voting.

<sup>3</sup> Berg/Maeland/Stenlund/Lane recently observed that the distribution of votes is almost proportional to the square root of population shares (1993, p. 261).

**Table 1: Population and Votes Distribution in the EU, 15 Member States, 1995**

	Population		Votes Distribution Council of Ministers		Votes Proportional to Population		Shapley-Shubik-Index	
	Millions	%	Votes	%	Votes	%	62 Votes	44 Votes
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Denmark	5.1	1.4	3	3.45	1	1.15	0.90	0.92
Netherlands	15.1	4.1	5	5.75	4	4.60	3.53	3.67
Sweden	8.7	2.3	4	4.60	2	2.30	1.76	1.86
Finland	5.1	1.4	3	3.45	1	1.15	0.90	0.92
Germany	80.2	21.6	10	11.49	19	21.84	22.38	23.52
Austria	7.9	2.1	4	4.60	2	2.30	1.76	1.86
Belgium	10.0	2.7	5	5.75	2	2.30	1.76	1.86
Luxemburg	0.4	0.1	2	2.30	1	1.15	0.90	0.92
France	57.2	15.4	10	11.49	13	14.94	15.90	15.12
Italy	57.8	15.5	10	11.49	14	16.09	16.81	16.42
U. K.	57.6	15.5	10	11.49	14	16.09	16.81	16.42
Ireland	3.5	0.9	3	3.45	1	1.15	0.90	0.92
Greece	10.3	2.8	5	5.75	2	2.30	1.76	1.86
Spain	39.1	10.5	8	9.20	9	10.34	12.17	11.81
Portugal	9.8	2.6	5	5.75	2	2.30	1.76	1.86
EU 15	367.8	100	87	100	87	100	100	100

Voting power in a weighted voting situation is usually measured by *a priori* voting power indices, such as the *Shapley-Shubik index* or the *Banzhaf index*. The basic idea of these indices is the following concept of "voting power": A certain member of a voting body exerts power if the decision will be altered when the member changes its vote. Or, in other words, "power" means the capability of a member to turn a losing coalition into a winning coalition (or vice versa). This potential is called a *pivotal position*, the member in question is the pivot. The indices now measure *a priori* voting power by counting the number of pivotal positions (or, as it is called in the Banzhaf index, the number of *swings*) a certain member has in a voting body characterised by a given vote distribution and a decision rule. The index for that member, then, is its share of pivotal positions compared to all possible pivotal positions in that body.

The two indices differ in what exactly they count. The Shapley-Shubik index looks at all permutations of the members of a body. Thus, the voting power of a member is weighted by the number of possible orders in which the same winning coalition may appear. As a consequence of weighting by permutations the voting power of large members is slightly overestimated, whereas that of smaller members are underrated. At first sight this does not seem very sensible. But the idea to treat the order in which members join a coalition as important becomes more convincing if one thinks of situations where there is long negotiation before the final vote. The Banzhaf index disregards permutations and looks only at all possible winning coalitions. The voting power of a member is therefore unweighted. The Banzhaf index is more appropriate where there is just a final vote and not a long process of negotiation. Hence, in case of the Council of Ministers in the EU the Shapley-Shubik index seems more appropriate.<sup>1</sup> Since for the EU Council the indices do not differ enormously and in no case result in different power rankings of member states I will give only the Shapley-Shubik index values in the following tables. Calculation of both indices for EU institutions has already been carried out frequently,<sup>2</sup> although not on the basis of the most recent distribution of votes.

In table 2 the Shapley-Shubik index is given for the situation in the EC before enlargement. Columns 1 and 2 show the votes, and the share of votes for each member state. Then the index is calculated for several majority requirements. "76 votes", "54 votes" and "54 votes plus at least 8 member states" were used in Council voting until

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<sup>1</sup> There are other ways to interpret the differences between the two indices, but I do not want to discuss further technicalities here, especially since there is already a vast amount of literature on this subject, e.g. Straffin 1988; The Shapley Value 1988

<sup>2</sup> Cf. Weiersmüller 1968, Brams/Affuso 1976, Borrmann 1992; Holzinger 1994; Herne/ Nurmi 1993 and Berg/Maeland/Stenlund/Lane 1993 also give Banzhaf index values for a variety of decision rules in the EU Council.

enlargement. The index for simple majority voting is given for comparison. Each member state's percentage of pivotal positions is given, as well as the ratio of the index value to the percentage of votes. The ratio allows to see immediately whether a country's voting power is greater (above 1) or less (below 1) compared to its share of votes. In the case of unanimity, power distribution is equal since each vote—i.e. each member state—is required for each decision. Therefore each member state has the same number of pivotal positions and a share of 8.33% of voting power. Compared to the number of their votes large countries have relatively less voting power while small ones have more. That distortion shrinks considerably if one looks at the other decision rules. In all three cases the ratios of the Shapley-Shubik index and the share of votes are either slightly above or below 1. The only exception is Luxemburg whose voting power is significantly lower than its share of votes, especially when qualified majorities apply. The differences between the three decision rules are not that large and there are no simple rules, such as that smaller/larger states gain advantage from a higher/lower majority requirement. For a continuum of decision rules in the 12-member-EC and the 15-member-EU, Herne/Nurmi (1993, p. 276) show which member states have their maximum Shapley-Shubik or Banzhaf index value at which decision rule. In general, this analysis shows that most of the maxima are located far beyond the decision rules ever used in the real EC/EU, namely in the region of majority requirements of above 90%.

**Table 2: Votes and Power Distribution According to the Shapley-Shubik-Index in the EC, 12 Member States**

Member State	Votes Distribution		Unanimity 76 Votes		Qualified Majority 54 Votes		Qualified Majority 54 Votes, 8 Members		Simple Majority 39 Votes	
	Votes	%	%	Ratio <sup>a</sup>	%	Ratio <sup>a</sup>	%	Ratio <sup>a</sup>	%	Ratio <sup>a</sup>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Denmark	3	3.95	8.33	2.11	4.26	1.08	4.62	1.17	3.82	0.97
Netherlands	5	6.58	8.33	1.27	6.37	0.97	6.57	1.00	6.31	0.96
Germany	10	13.16	8.33	0.63	13.42	1.02	13.01	0.99	13.55	1.03
Belgium	5	6.58	8.33	1.27	6.37	0.97	6.57	1.00	6.31	0.96
Luxemburg	2	2.63	8.33	3.17	1.18	0.45	1.59	0.60	2.27	0.86
France	10	13.16	8.33	0.63	13.42	1.02	13.01	0.99	13.55	1.03
Italy	10	13.16	8.33	0.63	13.42	1.02	13.01	0.99	13.55	1.03
United Kingdom	10	13.16	8.33	0.63	13.42	1.02	13.01	0.99	13.55	1.03
Ireland	3	3.95	8.33	2.11	4.26	1.08	4.62	1.17	3.82	0.97
Greece	5	6.58	8.33	1.27	6.37	0.97	6.57	1.00	6.31	0.96
Spain	8	10.53	8.33	0.79	11.13	1.07	10.88	1.03	10.68	1.01
Portugal	5	6.58	8.33	1.27	6.37	0.97	6.57	1.00	6.31	0.96

a index value/percentage of votes

The data for the EU after enlargement are given in table 3. The decision rules under consideration here are unanimity; the qualified majority of 62 votes, which was agreed on in principle at the EU summit in Summer 1994; the "virtual qualified majority" of 65 votes; and the simple majority, again for comparison. The virtual qualified majority is the result of a compromise found at the 1994 summer summit between the United Kingdom and Spain on the one hand, and all other member states on the other. John Major demanded that the blocking minority should stay the same as before enlargement (23 votes). Under that condition the qualified majority after enlargement would be  $87 - 23 + 1 = 65$  votes. That would mean a rise in the majority requirement from 71% to 75%. The compromise was having a legal majority rule of 62 (71%), but should the potentially winning coalition have less than 65 votes, negotiations would be continued and the final voting would be postponed until a majority of 65 was achieved. For that reason I have also calculated the index for the "virtual majority of 65 votes". There is not yet enough empirical evidence to predict which rule will be used in practice.

The results are generally the same as before the accession of the new members. Voting power according to the Shapley-Shubik index does not deviate too much from vote distribution. Again, the only substantial difference to the 12-member-EC lies with Luxemburg: its ratio of index value to share of votes is far closer to 1 after the enlargement. As a result it can be said that the main distortion takes place in the vote distribution itself, since it is not proportionate to population. In table 1 I have calculated a vote distribution proportional to population. In the last two columns the Shapley-Shubik index for a qualified majority of 62 votes and for a simple majority is given. Both decision rules imply a clear underrepresentation of small countries and a slight overrepresentation of large countries.



**Table 3: Votes and Power Distribution According to the Shapley-Shubik-Index in the EU, 15 Member States**

Member State	Votes Distribution		Unanimity 87 Votes		Qualified Majority Treaty: 62 Votes		Qualified Majority Virtual: 65 Votes		Simple Majority Assumed: 44 Votes	
	Votes	%	%	Ratio <sup>a</sup>	%	Ratio <sup>a</sup>	%	Ratio <sup>a</sup>	%	Ratio <sup>a</sup>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Denmark	3	3.45	6.66	1.93	3.53	1.03	3.32	0.96	3.26	0.95
Netherlands	5	5.75	6.66	1.15	5.52	0.96	5.66	0.98	5.56	0.97
Sweden	4	4.60	6.66	1.45	4.54	0.99	3.98	0.86	4.64	1.01
Finland	3	3.45	6.66	1.93	3.53	1.03	3.32	0.96	3.26	0.95
Germany	10	11.49	6.66	0.58	11.67	1.02	12.06	1.05	11.83	1.03
Austria	4	4.60	6.66	1.45	4.54	0.99	3.98	0.86	4.64	1.01
Belgium	5	5.75	6.66	1.15	5.52	0.96	5.66	0.98	5.56	0.97
Luxemburg	2	2.30	6.66	2.90	2.07	0.90	1.85	0.80	2.18	0.95
France	10	11.49	6.66	0.58	11.67	1.02	12.06	1.05	11.83	1.03
Italy	10	11.49	6.66	0.58	11.67	1.02	12.06	1.05	11.83	1.03
United Kingdom	10	11.49	6.66	0.58	11.67	1.02	12.06	1.05	11.83	1.03
Ireland	3	3.45	6.66	1.93	3.53	1.03	3.32	0.96	3.26	0.95
Greece	5	5.75	6.66	1.15	5.52	0.96	5.66	0.98	5.56	0.97
Spain	8	9.20	6.66	0.72	9.56	1.04	9.36	1.02	9.17	1.00
Portugal	5	5.75	6.66	1.15	5.52	0.96	5.66	0.98	5.56	0.97

a index value/percentage of votes

The Shapley-Shubik index can also be interpreted as a prediction of the results of voting (cf. Straffin 1988; Holler/Illing 1992: 331). The option the pivot prefers will win the vote.<sup>1</sup> The *a priori* voting power indicates how often a member of a voting body plays the role of the pivot. Hence, it also indicates how often a member can push through its preferred alternative. In other words, Finland would be able to push through its own position in 3.53% of all votes in the Council if the qualified majority of 62 is used, in 3.32% of all cases if there is voting according to the "John Major scheme", and in 3.26% within a would-be simple majority of 44 votes. For Sweden and Austria the corresponding figures are 4.54%, 3.98%, 4.64%. Sweden and Austria would be slightly worse off under the "John Major scheme", while the four large countries would be a bit better off. But the differences are relatively minor.

The concept of *a priori* voting power gives information about the structure of a decision-making body. However, it takes into account only the distribution of resources (votes) and the institutional constraints (decision rule). It does not say anything about all the other factors which add up to "real power". It cannot take into account informal factors that give political weight to the member of a body, the power to set agendas, or members' preferences and therefore the fact that some coalitions are highly unlikely while others are highly likely. I do not want to deal here with the not easily measurable informal factors or with the agenda setting powers of the Council presidency. But I will deal with similarity and dissimilarity of member states' preferences in the next section.

## Environmental policy coalitions in the Council

My method for handling the problem of similarity between members' preferences is simple and therefore perhaps somewhat crude: I simply divide the member states into three groups with similar preferences in environmental policy matters. The groups have been chosen according to the observed behaviour of member states in the past. There are states who traditionally act in an "environmentalist" way, others who are "anti-environmentalist", and finally those who sometimes vote with the environmentalists and sometimes with the anti-environmentalists. Since no state would like to be called "anti-environmentalist" I call the first group "frontrunners", the second group "hesitants", and the third group "in-betweens".

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<sup>1</sup> This proposition is only valid if there is no possibility of internal negotiation or compensation in a coalition, which may be plausible in a simple final vote but less so for a body like the Council of Ministers in the EU.

In the Shapley-Shubik model I treat these groups as fixed coalitions. Thus I can handle them as if they were simply three members with a different number of votes. It is plain to see that this model is an abstraction. In every single decision-making process in the real EU the actual coalitions formed may, and do, differ from these groupings. Which coalitions are formed depends on how member states are affected by the proposal in question. However, even though in the real world the coalitions are not permanently fixed it is highly likely that they will hold together in voting for a particular regulatory option.

I do not think my grouping should be empirically controversial to EU environmental policy experts. The Netherlands, Denmark, and Germany have always had the reputation of being the environmental "frontrunners" in EU environmental policy and there is a lot of empirical evidence for their negotiating and voting behaviour in the Council. And—taking into account their domestic environmental legislation—it is not too wild an assumption to predict that the new member states, especially Sweden and Finland, will belong to the frontrunner group, as well. The United Kingdom has always been the leader of the "hesitants" and Ireland generally votes with the United Kingdom. Both Spain and Portugal also vote mostly with the "hesitant" coalition. The same is true for Greece, although Greece voted with the "frontrunners" in some instances where regulation of air pollution caused by traffic was concerned. France and Italy cannot be characterized as either "hesitants" or "frontrunners". They sometimes supported the "frontrunners", but at other times also the United Kingdom. For France this is shown by several case studies in Héritier et al. (1994: 194ff.). Belgium and Luxemburg are "in-betweens" as well, but have become gradually more liable to vote with the "frontrunners" in recent years.

As the reader may already have noticed, the ordering of member states in the tables above is not alphabetical. Instead it mirrors roughly my personal ranking of member states with respect to their behaviour towards EU environmental policy. The first six countries form the "frontrunner" group, the next four the "in-betweens", and the last five the "hesitants". The ordering within the groups is not intended to be a strict ranking. In the following two tables I have simply added the votes of the three groups and then calculated the Shapley-Shubik index values for the coalitions.<sup>2</sup> Table 4 depicts the situation before enlargement, table 5 the situation after the accession of the new members.

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<sup>2</sup> Which are in these cases identical with the values of the Banzhaf index.

**Table 4: Votes and Power Distribution in Three Environmental Coalitions in the Council of Ministers, Shapley-Shubik- and Banzhaf-Index<sup>a</sup>, 12 Member States**

Coalition	Votes Distribution		Unanimity 76 Votes		Qualified Majority 54 Votes		Simple Majority 39 Votes	
	Votes	%	%	Ratio <sup>b</sup>	%	Ratio <sup>b</sup>	%	Ratio <sup>b</sup>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Frontrunners	18	23.68	33.3	1.41	0	0	33.3	1.41
In-betweeners	27	34.53	33.3	0.94	50.0	1.41	33.3	0.94
Hesitants	31	40.79	33.3	0.82	50.0	1.23	33.3	0.82

a both indices are identical in this case

b index value/percentage of votes

**Table 5: Votes and Power Distribution in Three Environmental Coalitions in the Council of Ministers, Shapley-Shubik- and Banzhaf-Index<sup>a</sup>, 15 Member States**

Coalition	Votes Distribution		Unanimity 87 Votes		Qualified Majority Treaty: 62 Votes		Qualified Majority Virtual: 65 Votes		Simple Majority Assumed: 44 Votes	
	Votes	%	%	Ratio <sup>b</sup>	%	Ratio <sup>b</sup>	%	Ratio <sup>b</sup>	%	Ratio <sup>b</sup>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Frontrunners	29	33.33	33.3	1.07	33.3	1.07	33.3	1.07	33.3	1.07
In-betweeners	27	31.03	33.3	0.94	33.3	0.94	33.3	0.94	33.3	0.94
Hesitants	31	35.63	33.3	1.00	33.3	1.00	33.3	1.00	33.3	1.00

a both indices are identical in this case

b index value/percentage of votes

Before enlargement there were only three frontrunner states which had a total of 18 votes, while the "hesitants" had 31, and the "in-betweens" 27 votes. For decisions on the basis of Art. 130s of the old Treaty, i.e. when unanimity was required, all three coalitions had the same voting power of one third. For the "frontrunners" this implied overrepresentation compared to their share of votes. But for decisions on the basis of Art. 100a of the Treaty, when qualified majority was the decision rule, the power distribution was different. As column 5 in table 4 shows, the "frontrunners" had no voting power at all, while the other coalitions had each a share of 50% of the voting power. This is due to the fact that the "frontrunners" had not enough votes to achieve the blocking minority of 23 votes. The "frontrunners" were in no case necessary for the formation of a winning coalition. (With the would-be simple majority of 39 the power distribution had been the same as with unanimity.) As a consequence, the "frontrunners" had a better chance of pushing their position through successfully when the proposal had to be passed unanimously (cf. Holzinger 1994, p. 417ff.). In these cases they were in the position of holding a veto. But the unanimity requirement also meant the use of the consultation procedure, where the Council's position was equivalent to the final regulatory output. Qualified majority voting, however, was used in the co-operation procedure, where the frontrunner states could hope to get support from the European Parliament. I will return to that in the next section.

With the accession of Sweden, Austria and Finland the situation has changed. The frontrunner group has gained 11 additional votes, so that they now possess a total of 29 votes, while the "hesitants" still have 31, and the "in-betweens" 27. Table 5 shows that this means a share of voting power of one third for each coalition, regardless of the decision rule used. For a unanimous vote each group is clearly a necessary member of the only winning coalition. However, the same applies now for qualified majority voting. Each group has enough votes to act as a blocking minority of 26 (or virtually 23). No coalition of two groups has enough votes for a qualified majority of 62 (or even 65) votes. There is only one winning coalition, the one that contains all three groups. This would change only if the assumed simple majority of 44 votes applied. Then there would be three possible coalitions of two groups. But in this case, too, each group would be equally often in a pivotal position. To sum up: after the enlargement power is equally distributed among the three groups of environmental "frontrunners", "hesitants", and "in-betweens". Since simple majority voting does not apply, there will consequently be negotiation until a consensus can be achieved. This may mean long phases of negotiation in the Council which could only be avoided by a simple majority requirement.

In practice the environmental positions of Germany and Great Britain will probably become even more important than they were in the past. Both countries have always been proponents of opposing views as to which environmental problems should be tackled at EU level and have always held different opinions on what are the appropriate regulatory instruments. The support of France was often decisive in previous environmental decision-making (cf. Héritier et al. 1994, p. 194ff.). France will also play an important role in the future. For both "frontrunners" and "hesitants" it will be vital to win the support of France, and with France probably most of the other "in-betweens". But the positions of Germany and Great Britain, as the largest and politically "strongest" members of their now equally powerful groups will presumably be the most important factor in negotiations. Since a coalition of the "in-betweens" and the "frontrunners" or "hesitants" would not have enough votes for a qualified majority they will also be the main addressees of attempts at winning them over to the opposite side.

From this analysis I conclude that after a phase (from 1987 to 1994), when the "frontrunners" ran a high risk of being overruled by a qualified majority of "hesitants" and "in-betweens", consensus will again play an important role in EU environmental policy-making from 1995 onwards. But this result is valid only in the negotiation and voting stage within the Council of Ministers. As mentioned above, looking only at the decision rule used in the Council is not enough. The role of the European Commission and the European Parliament in the co-operation and co-decision procedures must also be taken into account.

### **Influence of the European Parliament and the European Commission**

It might be helpful to review the roles of Commission and Parliament in the three decision procedures. In the consultation procedure both are concerned with legislation only in the preliminary stages. The Commission drafts a proposal and normally tries to anticipate what could be susceptible to a consensus within the Council. For that purpose the draft is discussed in advisory committees where national officials and representatives of interest groups take part. The Parliament delivers an Opinion where it confirms the draft or proposes amendments. But since the Council is not bound by the Opinion its influence is hard to assess. Therefore, the regulatory output of the consultation procedure is generally the same as the result of negotiations in the Council. Commission and Parliament have little influence on that procedure, their power is limited to informal factors.

Both institutions have considerably more power in the co-operation procedure. Figure 1 is a graphic representation of the procedure as described in the first section. Basically the figure represents the extensive form of a game. But it is not quite the same, since it does not describe a single game but a class of games. Moreover, the players here are collective political actors who are not free to act strategically (as is normally assumed in game theory) but are subject to majority constraints. It could be transformed into a standard dynamic game by making assumptions about payoffs and by distinguishing majority and minority players, or by distinguishing cases where different majority requirements in the Council and in the EP can be achieved.

For my purpose, however, it is enough to show all the decision paths that can be chosen and the regulatory alternatives that will be adopted after a specific path has been chosen. As an example I will follow one possible path in figure 1. After the Council of Ministers for the Environment (CE) has chosen an alternative A/CE in its Common Position by a qualified majority voting, the Parliament (EP) may choose to amend it with an absolute majority. Common Position plus amendments is called alternative A/EP. Now the Commission (COM) decides to add amendments itself and therefore the Council has to vote on an alternative A/COM. The Council fails to achieve unanimous support for its Common Position or for the Parliament's alternative. But it is able to adopt the Commission's alternative with a qualified majority, preferring that to a complete break-down (X) of the process. In this case the Commission has had its way.

But the figure shows that this is rather an exception. There are twelve possible end nodes, and at five of them the decision-making process will end with the alternative preferred by the Council. Three paths lead to the alternative the Parliament prefers, and only one is determined by the Commission. Three further end nodes mean failure of the process. This result, however, must be considered carefully, since the end nodes are not equally likely to be reached. The probabilities of the different paths depend on several factors: on the "length" of the path (how many choices have to be made before the end node is reached); on the payoffs for each alternative and for each player (how they rank the alternatives); and finally on additional factors influencing the chances of a player of reaching a majority requirement (e.g. at what time of the day the decision is on the agenda in the Parliament's plenary session and when the last flight leaves to Athens or Madrid). It is clear that in the co-operation procedure power lies mainly with the Council, but that Parliament and, to a lesser extent, the Commission have also a certain degree of power.



Figure 1: The Cooperation Procedure

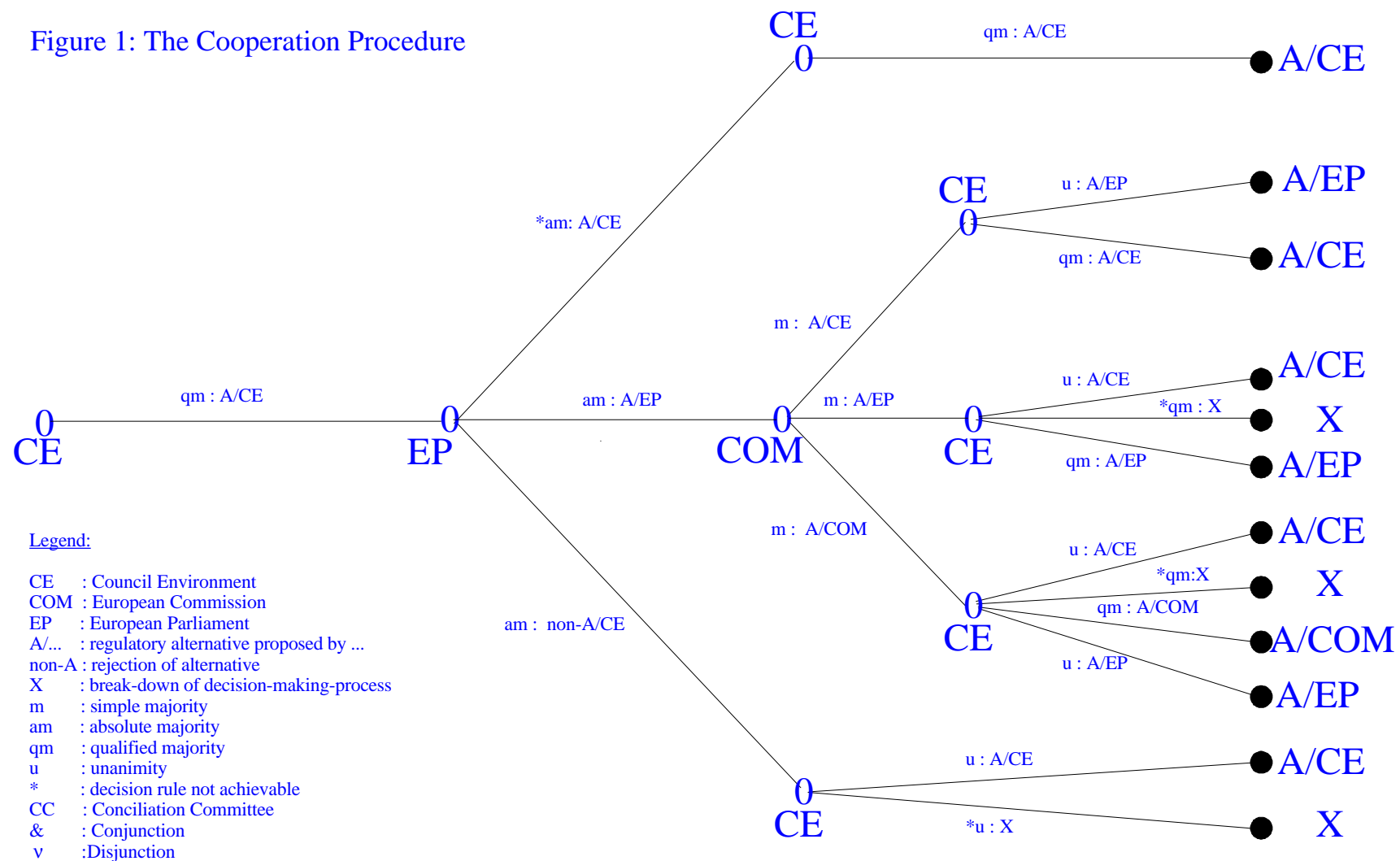
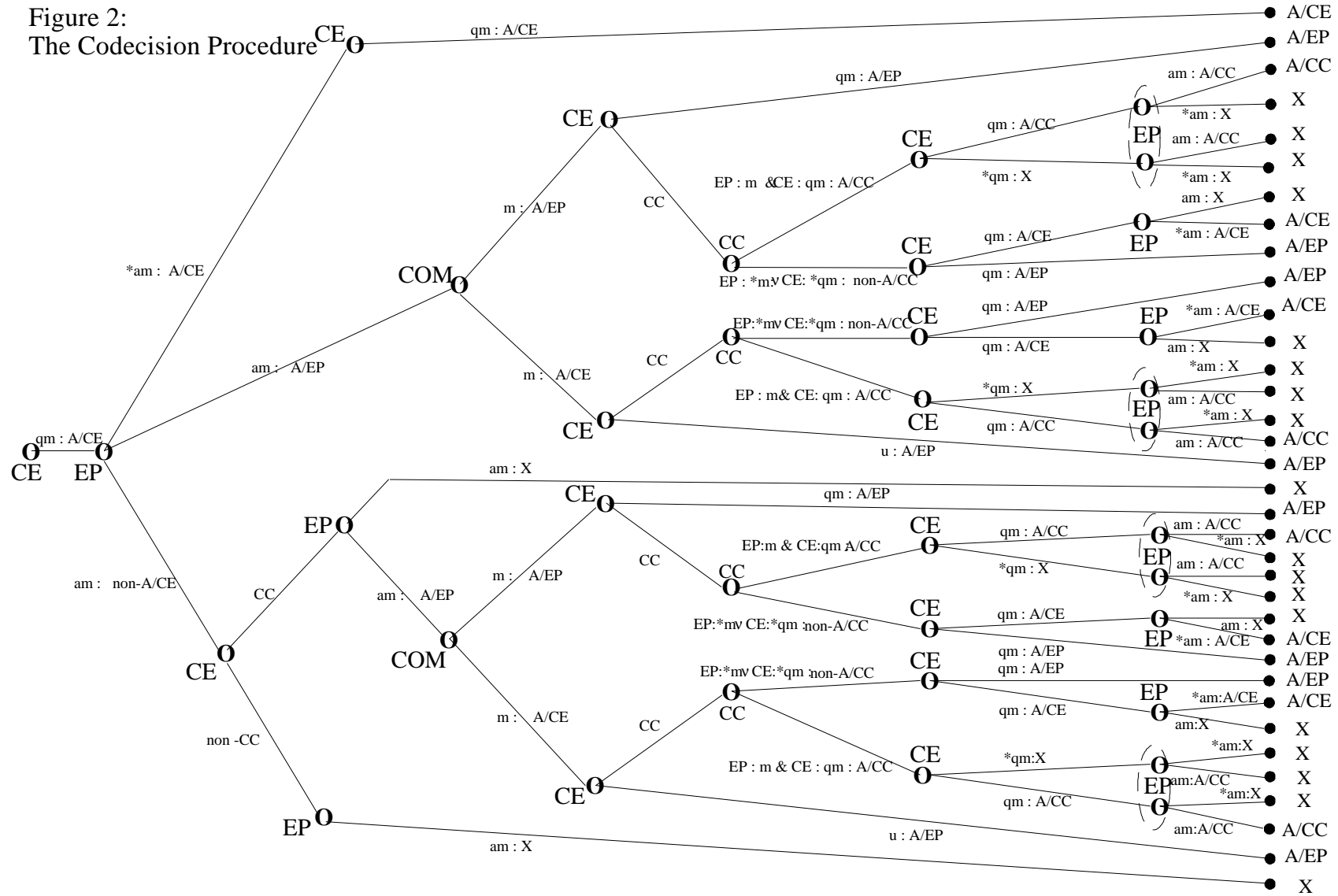


Figure 2 shows the co-decision procedure in the same way. At first sight it seems more complicated than it is, since there are repetitions of sections. I will leave it to the reader to check the correctness of all possible paths and just sum up the distribution of possible results over the total of end nodes. Altogether there are 35 end nodes. At only five of them the procedure results in the preferred alternative of the Council, eight paths lead to the Parliament's first preference, and not a single one to an alternative introduced by the Commission. This means that in the co-decision procedure the Commission has lost the freedom to make amendments after the Council has adopted its Common Position. Instead there are four end nodes where the decision taken is an alternative provided by the Conciliation Committee of Council and Parliament. A surprisingly high share of end nodes (18 out of 35) signals break-down of the process. In four cases break-down is determined by the Council, in ten cases by the Parliament, and in four cases by both. This is due to the right of veto the Parliament has gained in the co-decision procedure. But again one should bear in mind that the probability of an end node being reached varies greatly.

It is obvious that the Council has lost a substantial amount of power in the co-decision procedure as compared to the co-operation procedure. The Commission is even weaker in co-decision than it is in co-operation. The winner in the new procedure is the Parliament. What does this imply for environmental policy? The European Parliament has a tradition of acting in an environmentally friendly way. It has often initiated environmental legislation in the EU, in budget negotiations with the Council it has generally raised the share of the budget allotted to environmental objectives, and since the introduction of the co-operation procedure it has forced the Council in many cases to choose an environmentally more progressive solution. A well-known example is the Small Car Directive of 1989, where the Parliament succeeded in defeating the Council. As a consequence all cars had to be fitted with catalytic converters from 1993 onwards. The Parliament has already used its newly-won power in the co-decision procedure in the field of environmental policy: it rejected the Common Position on emissions of motor-cycles. But it could not achieve an absolute majority in spring 1994 when it tried to do the same in the case of the packaging directive.

Figure 2:  
The Codecision Procedure



It is not easy to predict what the new powers of the Parliament will mean for environmental policy in the long run. For the more power the Parliament gains, the more it will be held responsible for its actions, the more it will be subject to lobbying by industry or farmers, and the more weight national interests could gain. This might make it harder to find absolute majorities for progressive environmental proposals. But in the short term the co-decision procedure will surely have a positive effect on EU environmental policy outputs. It should not be forgotten that this procedure applies to all proposals affecting the internal market, i.e. to roughly half of all environmentally relevant decision-making processes.

## Conclusion

The effects of enlargement on EU's environmental policy must be considered for each decision procedure separately. It is hard to say which outputs the enlarged EU will produce when the consultation procedure is used, and therefore unanimity is required. On the one hand, there are theoretically more "frontrunner" countries (six) now against an unchanged number of "hesitants" (five) and "in-betweens" (four). On the other hand, it will probably be more difficult in practice to find a compromise solution between 15 member states compared to 12, and negotiations may take longer. In the co-operation procedure enlargement will clearly lead to a stronger position of the "frontrunner" countries in the Council since they now have more voting power when qualified majority applies. In addition, the European Parliament has gained power in the co-decision procedure, which gives rise to hopes for extra support for the frontrunner positions.

In conclusion it can be said that in the eyes of the three original "frontrunner" states Germany, the Netherlands, and Denmark the newcomers must be very welcome to the EU. With respect to environmental decision-making their accession turns the situation in the Council of Ministers much to the better. Therefore it can be presumed that the environmental policy of the EU will become more progressive in the future than it was in the past. At any rate, the three newcomers have less to fear from the impact of EU policies on their domestic environmental policy than it might seem if only the EU's environmental legislation in the past were considered. But I would not go so far as to claim that their accession is an environmentally positive development for these countries themselves.

## References

- Berg, Sven/Maeland, Reinert/Stenlund, Hans/Lane, Jan-Erik (1993): "Politics, Economics and the Measurement of Power", *Scandinavian Political Studies*, Vol. 16, pp. 251-268
- Borrmann, Christine (1991): "Verhandlungsspiele und EG-Entscheidungen", *Hamburger Jahrbuch für Wirtschafts- und Gesellschaftspolitik*, Vol. 36, Tübingen: Mohr, pp. 153-153
- Brams, Steven J./Affuso, P. J. (1976): "Power and Size: A New Paradox", *Theory and Decision*, Vol. 7, pp. 29-56
- Herne, Kaisa/Nurmi, Hannu (1993): "The Distribution of A Priori Voting Power in the EC Council of Ministers and the European Parliament", *Scandinavian Political Studies*, Vol. 16, pp. 269-284
- Holler, Manfred/Illing, Gerhard (1991): *Einführung in die Spieltheorie*, Berlin-Heidelberg-New York: Springer
- Holzinger, Katharina (1994): *Politik des kleinsten gemeinsamen Nenners? Umweltpolitische Entscheidungsprozesse in der EG am Beispiel der Einführung des Katalysatorautos*, Berlin: edition sigma
- Shapley, Lloyd S./Shubik, Martin (1988): "A method for evaluating the distribution of power in a committee system", in: *The Shapley Value*, pp. 41-48
- Straffin, Philip D. (1988): "The Shapley-Shubik and Banzhaf power indices as probabilities", in: *The Shapley Value*, pp. 71-81
- The Shapley Value (1988): *Essays in honor of Lloyd S. Shapley*, ed. by Alvin E. Roth, Cambridge, MA-New York: Cambridge University Press
- Weiersmüller, Rudolf (1971): "Zur Machtverteilung in den Gremien der EWG", *Schweizerische Zeitschrift für Volkswirtschaft und Statistik*, Vol. 107, pp. 463-469