# A Take-It-or-Leave-It Proposal with Incomplete Information: What is Parliament's Share of the Pie under Maastricht's Co-Decision

# Diego Varela

The London School of Economics and Political Science

#### ABSTRACT

The existing literature has treated the conciliation endgame as one with complete information. If we add to this the fact that the Council has, in the case of conciliation breakdown, the institutional prerogative to make the Parliament a take-it-or-leave-it proposal, the Council is pictured as an almighty agenda setter. Under the assumption of complete information, therefore, the European Parliament does not obtain more than the minimum acceptable offer guaranteed by its veto power. To test this prediction is an arduous task which will not be undertaken here. However, there is a secondary prediction of the complete information model, namely, that the EP's veto will never be exercised. This prediction collides with the evidence of two parliamentary vetoes. Therefore, this paper develops an alternative model with incomplete information which takes account of that evidence, and assesses how divergent the new predictions are as compared to those of the standard complete information model.

#### INTRODUCTION

When the Treaty of Maastricht was agreed upon, co-decision was generally considered as an indubitable upgrade in the EP's powers. However, rational choice models from the other side of the Atlantic (or rather, from the Pacific!) introduced discomfort among those European authors who believed in the parliament-friendly nature of the procedure. This essay is motivated by that discomfort and by the belief that empirical evidence continues to support the view that co-decision represents an increase in the EP's powers with respect to co-operation. There was therefore a need to disproof those models and replace them with others whose predictions would be more in consonance with empirical evidence. This essay attempts precisely that.

One way to attempt that is to question the assumptions on which those models are based. One of those assumptions is complete information. It has been generally assumed in the existing literature on the co-decision procedure that the preferences (ideal points) of all actors involved in the game are common knowledge, i.e., everyone knows them and everyone knows that the others know them and so on... This assumption is sometimes reduced to the final stage of the game: the conciliation endgame. The reservation is made in order to account for the fact that any amendments are ever made and the subsequent delay is produced in reaching an agreement in the presence of impatient actors. However, the assumption of incomplete information, even when reduced to the last stage of the game, fails to explain the fact that the outcome of the conciliation process, whether a unilateral Council proposal or a compromise text, is ever vetoed by the Parliament in plenary. The veto has occurred twice so far and the existing complete information models do not allow for those events.<sup>3</sup>

This essay will be divided in three sections. In the first section the existing complete information model and its predictions will be summarised. In the second section, a new model with incomplete information will be developed and new predictions derived. Finally, the predictions of both models will be compared after which some conclusions will be drawn.

# THE TSEBELIS' MODEL4

Under the co-decision procedure, as regulated by the Maastricht Treaty, if the Council does not accept all of Parliament's amendments, a conciliation committee is convened to resolve interinstitutional differences. This conference committee has a high degree of autonomy in relation to the possibility of introducing new issues into the negotiations in order to find a compromise. However, the conciliation committee has a special feature that differentiates it from most of conference committees in the world, namely, in the case of failure to find a compromise in committee, the Council has the prerogative to reinstate its common position, possibly with some of parliament's amendments. According to Tsebelis, this gives the Council the possibility to propose virtually any outcome between the Council's and the EP's ideal points as a take-it-or-leave-it offer. The conciliation endgame can be consequently represented as a bilateral sequential bargaining process in which the Council makes the last offer from a virtually continuous set of options along the contract line between the two institutions. The conciliation endgame can be better seen with the aid of a spatial model, with 2 dimensions:

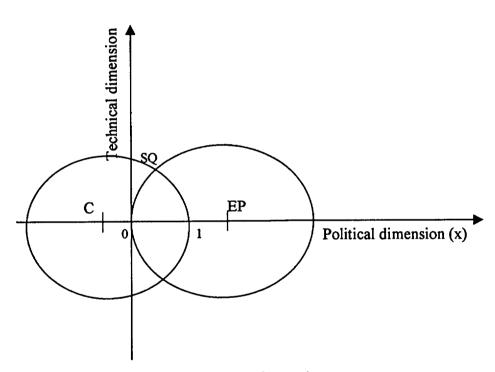


Figure 1. The conciliation endgame with complete information

Figure 1 depicts the Council's ideal point (C, which coincides with our origin of coordinates), the Parliament's ideal point (EP) and the status quo (SQ) on a two-dimensional issue space. The circles around C and around EP are indifference curves and represent the set of points which yield the same utility as the status quo to the Council and to the Parliament, respectively. The vertical dimension has been labelled technical dimension because along that dimension the utility of both the Council and the Parliament move together, so it should be easier to find an agreement. Conversely, the horizontal dimension has been denominated political dimension, since along that dimension, for points between C and EP, the Council's and the EP's interests are in conflict. It is on this political dimension that this essay will from now on focus.

Given this setting, the complete information model developed by Tsebelis predicts that from the set of possible agreements along the political dimension, segment [0,1] in figure 1 (which I will hereafter call "the pie"), the Council will always offer something only infinitesimally greater than 0, which the Parliament will always accept. Therefore, the theory presents two main predictions:

- 1) Parliament will never get more than its restitution utility.
- 2) Parliament's vetoes will never occur.

We will move now to the incomplete information model and assess its alternative predictions.

### THE INCOMPLETE INFORMATION MODEL

When the Council makes Parliament a take-it-or-leave-it offer in conciliation the Council is faced with uncertainty about MEPs' preferences and therefore about the possibility of a parliamentary veto. This veto can be exercised as a consequence of the breakdown of conciliation without an agreement, and the Council unilaterally reaffirming its common position. This is what happened in July 1994 with the Voice-Telephony bill. But it is not necessary that conciliation breaks down in order to see the EP's veto exercised. Even when acceptable to the EP's delegation to the conciliation committee, the Council's proposal may be unacceptable to the plenary. This is what seemed to happen with the Biotechnology bill in March 1995. Nevertheless, however different these cases may be, they share a very important point in common, namely, on the Parliament's side, it is the plenary and *only* the plenary who can veto a bill under codecision.

To pass a law under the co-decision procedure, the Council can follow two main strategies but under either of these strategies it must take the Parliament's position into consideration. The first strategy consists in being intransigent in the conciliation committee. The Council can then impose its common position, with or without EP amendments, but the Council must ensure that the proposal will not be vetoed by Parliament in plenary. This is equivalent to saying that the veto pivot does not vote against the bill. Under the existing treaty provisions, the veto pivot is the MEP who can make or break an absolute majority of MEPs (314 at present) vote against the bill. In order to locate the minimum acceptable offer for the veto pivot in terms of our model, the Council must know the location of MEPs preferences in relation to the status quo, as well as the transaction costs of voting for the MEPs. Knowing this, the Council could impose on the veto pivot losses up to the extent of the transaction costs of vetoing the proposal.

The second strategy consists in agreeing with the Parliament a joint text in the conciliation committee. According to the Treaty, for a joint text to become law, it must be approved by an absolute majority of the votes cast in the EP's plenary. If this majority is not achieved within six weeks (eight if the period is extended) of the approval of a joint text by the Conciliation Committee, the bill dies. Therefore, in order to effectively veto a conciliation joint-text under the co-decision procedure, it is enough for the opponents to prevent during 6-8 weeks the formation of an absolute majority of the votes cast in favour of the bill, by voting against or by simply abstaining.

Consequently, if the Council wants a joint text to pass under co-decision, it must make a majority of those MEPs voting better off than the status quo. The transaction costs of voting for those in favour of a proposal could be assumed to be equal to the transaction costs for the opponents. In this case, the Council would have to make a proposal equal or better than the status quo for the median voter along the political dimension. But the transaction costs of voting differ across MEPs and also at different points in time. So transaction costs must also be taken into consideration by the Council.

Both strategies require a considerable amount of information. The Council must locate the ideal points and estimate the transaction costs of voting for 626 different MEPs. With this information the Council must subsequently locate the pivotal MEP and his or her minimum acceptable offer for each of the two main strategies (conciliation agreement or breakdown). Finally, the Council must choose between these two strategies and make a proposal accordingly (in conciliation or unilaterally after conciliation breakdown). But, unfortunately for the Council, the required information about MEP's policy preferences and transaction costs of voting is not always readily available. The existence of multiple policy dimensions makes the task even harder for the Council.

## Multidimensionality increases uncertainty

The existence of multiple policy issues increases the uncertainty for the Council about what its optimal take-it-or-leave-it proposal should be. So far I have shown that the Council faces uncertainty about what proposal to make along the 'political dimension' or 'dimension of conflict'. When there are multiple issues at stake, however, the Council must first discover such 'political dimension'. In terms of our model, that means that the Council must locate the line that unites the Council's and the Parliament's ideal points in a multidimensional issue space. The Council risks mislocating this line, as happens in figure 2. In figure 2 the 'political' dimension perceived by the Council differs from the actual dimension of conflict. The consequence is that the would-be optimal offer along the perceived dimension of conflict turns out to be inappropriate for the real dimension of conflict.

That misperception of the dimension of conflict was what happened, according to some, in the case of the proposal to apply open network provision (ONP) to voice telephony. After two meetings of the conciliation committee on 29 March and 26 April 1994, the Council had made considerable concessions to the Parliament on the issue of the level of protection towards users. However, there was no rapprochement between the two institutions on the matter of committology. The EP delegation to the committee felt the Council's offer was insufficient, so conciliation broke down without a compromise. Subsequently, in spite of Parliament's warnings against, the Council decided to press ahead and reaffirm its common position without any of the Parliament's amendments. The result was a parliamentary veto in the first plenary of the parliament elected in 1994, by an ample majority of 379 votes to 45 with 13 abstentions, when the absolute majority needed for rejection was 284 votes. The reason for that veto was, according to the same analysts, that the Council underestimated the salience of the issue of commitology for the Parliament.

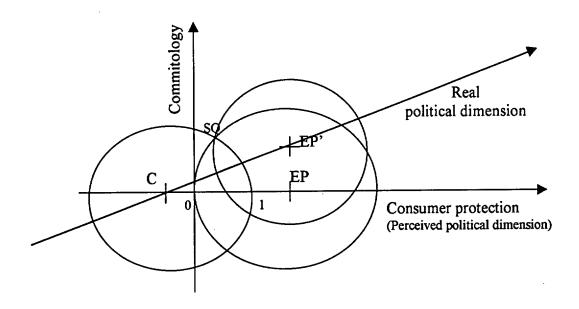


Figure 2. Misperception of the dimension of conflict: ONP-voice-telephony

The existence of multiple potential issues at stake is a source of increased uncertainty for the agenda setter. The risk lies as much on misestimating the salience of an issue as on neglecting it altogether. This risk is considerable for proposals that cut across the jurisdictions of different committees. But the formal involvement of several parliamentary committees is not necessary. Even within a single jurisdiction proposal there is a variety of potential issues to be dealt with. To the potential multiplicity of issues specific to the bill the likely existence of 'horizontal' issues must be added. Horizontal issues are overarching issues that affect most of the bills that fall under codecision. Between them the issue of the committee procedures applied for implementation of the law (commitology) and of the amounts of funding to be included in acts are recurrent. 11 Because of the possibility of creating precedents, with the presence of horizontal issues the impact of a legislative act is likely to be felt away from the circle of more closely involved MEPs. Therefore more information is needed about MEPs preferences and the likelihood of both over- or underestimating the salience of an issue increases when horizontal issues exist. In summary, proposals often involve a multiplicity of issues and interests. As the dimensionality of the issue space increases so increases uncertainty for the agenda setter (the Council) concerning what the minimum acceptable offer for the chooser (the EP) will be.

# Revelation of preferences through debate

Before the conciliation endgame the Parliament will have already gone through two (or even three) parliamentary readings, with the corresponding debates. Why will then the EP not have revealed its preferences to the Council by the conciliation endgame? Simply because it is not in its interest.

The Parliament's transmission of information through debate can be considered as cheap talk. The costs of transmitting this information are relatively low. It is known

from game theory that in order for cheap talk to convey information in bargaining, the game must contain some positive sum component. In terms of the game depicted in figure 1, the positive sum component consists in the Council proposing a deal as close as possible to the contract line between the two institutions. Namely, both the Council and the EP win by moving the status quo closer to the horizontal axis in figure 1. It is in the interests of the EP to show the Council the direction of the proposals that should be made. However, the Parliament will not reveal the position of its minimal acceptable offer along that line.

In the model of figure 1 I assume that the Council believes there is room for compromise with the Parliament. The Council thinks that there is a segment [0,1] (the 'pie') along which both institutions can agree. Therefore, it will always be in the interests of the Council to make some proposal rather than none along that segment. The actual proposal the Council makes will depend on the Council's beliefs about the EP's preferences. Whether this proposal is acceptable or not to the EP, the EP's optimal message to the Council will always be that the offer is insufficient to be accepted, and that more is needed for the plenary's acceptance. Therefore, as the Parliament's message will always be the same, the Council will never get any information out of it about what the EP's minimum acceptable offer is.

In practice debate occurs pretty much like the model predicts. The Parliament offers the Council a large number of amendments. These amendments point to the Council the direction of policy change that the EP desires from the Council's ideal position. However, along all the stages of debate the EP representatives never indicate how many of those amendments need to be accepted by the Council at least for the proposal to pass through the plenary, or they indicate a number amendments always greater than the real minimum acceptable. In summary, from the Parliament's cheap talk, the Council will learn more or less in what direction it has to make concessions, but never exactly how many will suffice. <sup>13</sup>

## The nature of Council's uncertainty

When the Council makes a take-it-or-leave-it proposal to the Parliament, therefore, the proposal has to be based on the Council's beliefs about the position of the Parliament's minimum acceptable demand. In this model, it is assumed that the Council makes rational predictions about the position of Parliament's minimum acceptable demand. Therefore, I assume that the Council does not make systematic mistakes about the position of parliament's minimum demand, i.e., the Council is right on average about the position such a demand. However, that the Council will be right on average does not mean that it will always be right, not even that it will be ever right. The Council has some degree of uncertainty with respect to how little the Parliament will be willing to accept.

In this paper I model the Council's uncertainty as the Council facing a normal distribution of Parliament minimum demands. I have chosen a normal distribution not only for the sake of simplicity, but also because it is a quite plausible representation of the nature of the Council's uncertainty. For instance, if MEPs' minimum demands were normally distributed along a single-issue dimension, the Council's task would be to estimate their median minimum demand (which would coincide with the mean of the

minimum demand distribution). The task is not easy for the Council since, as I have argued above, MEPs will not transmit true information to the Council about their minimum demands. There are, however, other means that the Council can use in order to obtain this kind of information. For example, the Council can look at costly actions from Parliament. In principle, the Council could try to assess the minimum demand of each and every MEP and, afterwards, calculate the mean. However, to obtain this information on every MEP would be rather costly, if not entirely impossible. Therefore, it is a more likely strategy that the Council will make its estimation of the Parliament's median based not on the whole population but rather on a sample of MEPs. And under the assumptions above, the mean of a random sample is distributed normally around the mean of the population.

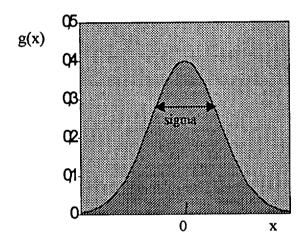


Figure 3. Council's uncertainty about the position of the minimum acceptable offer

Figure 3 depicts the density function of a normal distribution of average 0 and standard deviation  $\sigma$  (the sampling distribution). The standard deviation  $\sigma$  indicates in our model the quality of the Council's information about Parliament's preferences. The lower the standard deviation, the more concentrated are the likely types of parliaments around the central value and the greater confidence the Council can have in it predictions. Council's uncertainty ( $\sigma$ ) decreases with the cohesion in Parliament, with the size of the sample or with the quality of the measure of each of the minimum demands of the sample of MEPs. The Council can try to minimise its uncertainty by increasing the size and/or quality of its sample of MEP minimum demands. However, as it is costly to achieve the necessary information and the benefits from additional information are decreasing, the Council will normally stop collecting information before having absolute certainty about the Parliament's minimum demand. Therefore, Council's uncertainty ( $\sigma$ ) will be generally greater than 0. The area under the density function is its the distribution function, which is pictured in figure 4.

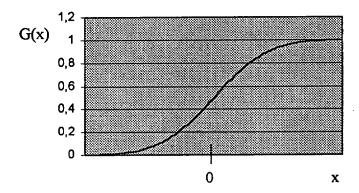


Figure 4. Normal distribution function

Figure 4 represents G(x), the accumulative distribution function of the minimum offer that the Parliament is willing to accept according to Council's beliefs. Therefore, every possible offer x the function indicates the a priori probability that the Parliament will accept the offer. As we see, around the central offer x = 0, minor increases in the offer can increase the probability of acceptance (decrease the probability of a veto) substantively. Therefore, the Council is before a trade-off. It must choose between a smaller offer with smaller chances of being accepted, and a bigger offer with greater chances of being accepted.

# Estimating Council's optimum offer

Let's assume then that the Council maximises the expected value a certain utility function U(x). We have:

$$\underset{\mathbf{x}}{\operatorname{argmax}} \ \mathbf{U}(\mathbf{x}) \cdot \mathbf{G}(\mathbf{x}, \, \sigma) = \mathbf{x}^* \tag{1}$$

If the magnitude of  $\sigma$  were known, it would be straightforward to calculate the Council's optimal offer, given a certain utility function. But the value of  $\sigma$  is not directly measurable. Nevertheless, an information is readily available which is related to both the offer and the  $\sigma$ , namely the effective rate of acceptance of the Council's final offer. That effective rate of acceptance is the best estimator of the *a priori* likelihood of acceptance of Council's optimal offer for a given period. Between 1 November 1993 and 31 July 1998 Parliament's veto was exercised in 2 out of 130 co-decision procedures. Therefore the a priori likelihood of parliament's acceptance can be estimated as 128/130. In mathematical terms:

$$G(x^*, \sigma) = 128/130$$
 (2)

Equations (1) and (2) together form a system of two equations with two unknowns (x and  $\sigma$ ).

I have solved the system numerically for several utility functions of the form  $U(x) = (1-x)^{1/n}$ , for n = 1, 2, 3... and I have obtained the following results:

$U(x) = (1-x)^{-1/n}$	n = 1	n = 2	n = 3	n = 4	n = 5
σ	3,62%	6,72%	9,40%	11,74%	13,80%
X*	7,83%	14,52%	20,30%	25,35%	29,80%

Table 1. EP's share of "the pie" as a function of the risk aversion coefficient

Table 1 shows the result of solving our system of two equations for different utility functions. The parameter n of the utility function I use indicates the risk aversion of the Council, namely, the greater the value of n, the greater the risk aversion of the Council. For the value of n equal to one, the Council is completely risk-neutral, whereas for a value of n equal to 5 the Council presents a high degree of risk aversion. From these results we must highlight two points:

- 1. Even in the case the Council were completely risk neutral (n = 1), the incomplete information model predicts that the Council would make an offer which is on average greater than the minimum acceptable offer for Parliament (approximately 8 percent of the "pie", i.e., of the segment under dispute (0,1) of figure 1).
- 2. With greater levels of risk aversion (greater n), the incomplete information model predicts that the Council will increase its average offer to the Parliament. This relation between risk aversion and Parliament's average share of the pie can be better appreciated with the aid of a graph:

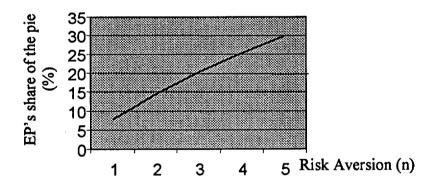


Figure 5. Risk aversion and the EP's share of the pie

Why Council members are likely to be risk averse

As figure 5 shows, the potential effects of council's risk aversion on parliament's share of the pie are considerable. But why would council members be risk averse? Why would they not just maximise their expected payoffs? The reason is that Council members are officials (elected or not) who are answerable to others in the short or medium term. In other words, they are agents either of a minister, of a government, of a national parliament, or directly of voters. And these principals do not have the same information as the agent. In concrete, it is very difficult for them to appreciate weather the agent has given more than the EP's minimum acceptable demand. Conversely, it is

very visible to see that the agent has played too hard and caused a parliamentary veto which will force the Council to wait until a similar bill is reintroduced. Therefore, the agent will present a tendency to offer more than what would maximise the Council's expected payoff. In other words, the ambassadors who represent member states in the conciliation committee are likely to be risk averse.

## THE TWO MODELS COMPARED

The basic difference between the two models under consideration is the prediction about the Parliament's share of the "pie". The complete information model developed by Tsebelis predicts that the European Parliament will systematically get no share of the "pie" under dispute with the Council. On the other hand, the incomplete information model developed here predicts that Parliament will systematically receive a considerable share of the pie even if we assume the Council to be risk neutral, and that this share is greater the greater we assume the Council's risk aversion to be.

A secondary divergence between the two models is that while the complete information model does not allow for the existence of parliamentary vetoes, the incomplete information model developed here does. However a point should be here clarified, namely, the role that the role vetoes play in the model with incomplete information. In this model there is a relationship between vetoes exercised by the European Parliament and its power under the co-decision procedure. The direction of my argument goes from vetoes to power and not vice versa. My model will by construction always agree with the observed number of vetoes, and it is from that observation that the influence of the European Parliament will be deduced. Therefore, in the incomplete information model, the actuality of vetoes is the explanatory variable and the power of the European Parliament the prediction.

#### **CONCLUSION**

In this paper I have developed an alternative model to the standard complete information model of the Maastricht's co-decision procedure. Although other authors had previously pointed at the existence of incomplete information in the co-decision endgame, none had formally modelled it before. This paper models the co-decision endgame taking into account incomplete information, based on the actual number of parliamentary vetoes observed. The model tries to assess how much of the EP's influence under Maastricht's co-decision can be explained by the presence of incomplete information. The prediction is that the EP will not have to conform with the crumbs of the legislative pie but will systematically have a bite at it.

This model, however, does not intend to be exhaustive. It just tries to point out the importance of incomplete information. Other factors, such as the repeated nature of the game, are not analysed in this paper. Moreover, the model assumes a configuration of preferences which do not necessarily include all actual and potential cases of the codecision game. In this last respect, the elaboration of power indexes by means of simulations of an institutionally rich game would be an interesting task. Also lacking in the literature is a definitive way to measure legislative influence. These are many questions. But I would be quite happy if this paper has shed some light on the question

of how much parliamentary influence can be explained by the presence of incomplete information in the co-decision endgame.

First, it cannot be negative, because of parliament's veto.

Second, it cannot be zero. In my model, that would only be the case if the Council had complete information. However, complete information is contradicted by the existence of two parliamentary vetoes. Therefore parliament's share of the pie is strictly positive. And in the paper I make the most likely prediction of that share. <sup>16</sup> See Scully, 1997.

<sup>&</sup>lt;sup>1</sup> See Tsebelis, 1997 for the American side and Scully, 1997 for the European one.

<sup>&</sup>lt;sup>2</sup> So far empirical evidence has been based on rates of acceptance of parliamentary amendments. This is a very imperfect measure of the EP's power, not only because not all amendments are equally important, but also because of the possibility of anticipatory compliance. Actors look ahead and it is possible that the Commission incorporates EP demands in its initial proposal, decreasing the observed rate of acceptance. Conversely, it is possible that the Parliament concentrates on the amendments which are more likely to be accepted, thus increasing the observed acceptance rate.

<sup>&</sup>lt;sup>3</sup> An alternative method to account for the presence of vetoes is to assume that the actors have an interest in vetoing, for instance because of position taking. See Huber, 1996.

<sup>&</sup>lt;sup>4</sup> This section is based on Tsebelis, 1997 and Tsebelis and Money, 1997.

<sup>&</sup>lt;sup>5</sup> Tsebelis points to the possibility of including any combination of parliament's amendments, which gives the Council a multiplicity of possibilities. However, these combinations cover the span between the Council's common position NOT the Council's ideal point and the Parliament's ideal point. If the Commission has previously exercised its agenda setting power in the direction of the EP's ideal point, it will be impossible for the Council to roll the outcome back, since it cannot incorporate negative parliament's amendments.

Conciliation Committee, 1996, paragraph 1.

<sup>&</sup>lt;sup>7</sup> This changes with Amsterdam. See Varela, 1999 for an analysis of the consequences of this change.

<sup>&</sup>lt;sup>8</sup> Article 189b of the EEC treaty as introduced at Maastricht.

<sup>&</sup>lt;sup>9</sup> See Jacobs, 1997, p. 11-12.

<sup>&</sup>lt;sup>10</sup> Simon Hix, personal communication with author.

<sup>&</sup>lt;sup>11</sup> Conciliation Committe, 1998, para 15-18.

<sup>&</sup>lt;sup>12</sup> Austen Smith, 1990, p. 145.

<sup>13</sup> I say more or less because transmission of information is not perfect, and the Council can fail to appreciate the real dimension of conflict, as I explained above.

See Lupia and McCubbins, 1998.

<sup>15</sup> This is of course an estimation and not necessarily the actual value of the a priori probability the EP accepting the optimal Council's offer (I thank Patrick Dunleavy for pointing at this). A confidence interval could be constructed for a given significance level, giving as a result an interval prediction of parliament's share of the pie. I have not done that for the sake of simplicity of exposition. However, the reader should not be worried about whether parliament's share of the pie will be significantly greater than zero. It will always be because:

## References

Austen-Smith, David (1990), 'Information Transmission in Debate', American Journal of political Science, vol. 34, no. 1 (February), pp. 124-52.

Conciliation Committee (1996), Progress Report, 1 March 1995 to 31 July 1996 on the Delegations to the Conciliation Committee, Brussels: European Parliament, 10 October 1996.

Conciliation Committee (1998), Progress Report, 1 August 1997 to 31 July 1998 on the Delegations to the Conciliation Committee, Brussels: European Parliament.

Huber, John D. (1996), Rationalizing Parliament, Cambridge: Cambridge University Press.

Jacobs, Francis B. (1997), 'Legislative Co-Decision: A Real Step Forward?', Paper produced for the Fifth Biennial ECSA conference in Seattle, 29 May to 1 June.

Lupia, Arthur and Mathew D. McCubbins (1998), The Democratic Dilemma, Cambridge: Cambridge University Press.

Scully, Roger M. (1997), 'The EP and the Co-Decision Procedure: a Reassessment', Journal of Legislative Studies, 3, 3, pp. 58-73.

Tsebelis, George (1997), 'Maastricht and the Democratic Deficit', Aussenwirtschaft, 52, 1 and 2, pp. 29-56.

Tsebelis, George and Jeannette Money (1997), *Bicameralism*, New York: Cambridge University Press.

Varela, Diego (1999), 'Packing the Conciliation Committee with Hawks: The EP Becomes the Agenda Setter under Amsterdam's Co-Decision', Paper presented at the 2<sup>nd</sup> CREST Conference, Norwich, 24-24 April.