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WHY RESIST THE TEMPTATION TO APPLY POWER INDICES TO THE EUROPEAN UNION?

Geoffrey Garrett and George Tsebelis

ABSTRACT

The temptation to apply power indices to decision-making in the European Union should be resisted for two reasons. First, power index approaches either ignore the policy preferences of relevant actors in the EU or incorporate them in ways that generate unstable and misleading results. Second, no matter how sophisticated, power indices cannot take into account the strategic properties of the procedures that govern Europe's legislative processes, especially concerning changes in the institutional location of agenda-setting power. Proponents have responded to our criticisms of earlier power index research with ingenious efforts to include functional substitutes for institutions and preferences. The problems with power indices, however, are congenital and cannot be adequately addressed without moving to a non-cooperative game theoretic framework.

KEY WORDS • agenda-setting • European integration • European Union • legislative processes • power indices

Introduction

The Journal of Theoretical Politics has recently published numerous articles that apply power indices to decision-making in the European Union (EU). This mirrors the proliferation of similar research in other prominent journals, including the British Journal of Political Science, Economic Policy, European Economic Review, International Organization and International Studies Quarterly.\(^1\) It is easy to explain the appeal of the power index approach. Decisions in the EU’s Council of Ministers have increasingly been taken since the mid 1980s by qualified majority vote (QMV, which aggregates weighted member government votes using a super-majority decision rule).\(^2\) Unlike simple majority voting where the median voter theorem holds under many circumstances, applying non-

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1. For citations to these studies, see Tsebelis and Garrett (1996: 359).
2. The current qualified majority required is 62 out of 87 votes. Governments are allocated votes in the Council in loose approximation to their countries’ populations, although the voting weights are biased in favor of smaller countries. Today, these weights are: France, Germany, Italy and the United Kingdom, 10; Spain, 8; Belgium, Greece, the Netherlands and Portugal, 5; Sweden and Austria, 4; Denmark, Finland and Ireland, 3; Luxembourg 2.
cooperative game theory to QMV does not normally generate stable point predictions about outcomes.

Enter the types of calculations pioneered by Banzhaf (1965) and Shapley and Shubik (1954). The influence of an actor over an outcome is considered to be a function of the portion of all mathematically winning coalitions to which its support is pivotal. Determining the ‘power’ of different countries in the Council of Ministers is thus quite simple. It only requires formulating an algorithm that generates all possible QMV coalitions and the portion of these in which each government participates.

We have proposed elsewhere two fundamental reasons why analysts should resist the temptation to apply power indices to decision-making in the EU (Garrett and Tsebelis, 1996; Tsebelis and Garrett, 1996). First, most power index approaches essentially ignore the policy positions of EU governments in the Council of Ministers (and of other institutional actors in the EU as well). This typically results in calculations that overestimate the influence of governments with extreme preferences (especially those from large countries such as the United Kingdom) and that underestimate the power of more centrist governments (particularly from smaller countries such as the Benelux group). Second, power indices, no matter how sophisticated, cannot take into account the effects of the institutional rules that govern Europe’s legislative processes. Most important, the power index approach conceals the substantial effects of changes in the institutional location of ‘agenda-setting power’ (the ability to make proposals that are difficult to amend) among the Council of Ministers, the Commission and the European Parliament that were brought about by the Single European Act (SEA) and the Treaty on European Union (TEU).

Some recent power index articles have sought to address the preferences problem, but they have frequently done so in ways that generate unstable and misleading results. One reason is that (normalized) power indices are not additive. For example, Lane and Maeland’s (1995) calculations suggest that governments that vote as blocs in the Council have less power than when they vote alone – begging the question as to why they would ever form coalitions in the first place. Moreover, the institutions problem is pervasive and congenital. No power index analysis that we know of adequately takes into account the structure of the legislative games played among the Council and Commission and the European Parliament – arguably the most interesting and original institutional feature of the European Union.3

We develop these points in four sections. Section 1 briefly reprises the damaging effects of taking policy preferences into account for conventional

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3. Our critique of power indices is thus similar to the distinction made by Miller (1981) between the game form (the institutional structure) and preferences and payoffs.
power indices. Section 2 shows that even more sophisticated power index calculations that seek to take policy positions into account conceal the strategic implications of the spatial distribution of preferences. Sections 3 and 4 address the effects of the institutional details of decision-making in the EU on likely policy outcomes. Section 3 discusses efforts to do this within a power index framework. In Section 4 we demonstrate that this exercise is fatally flawed because power indices cannot take into account the effects of institutional context on the strategic behavior of actors (in this case, the differences between agenda-setting and veto power). This leads power index analyses to draw erroneous conclusions about the effective power of the governments in the Council, the Commission and the Parliament under the different legislative procedures used in the contemporary EU.

1. Power Indices and the Council of Ministers

We begin our analysis with the assumption common to most power index studies: that the Council of Ministers is the pre-eminent decision-maker in the EU. It is important to analyze this baseline case because it demonstrates most simply the problems inherent in power index calculations. Consider a seven-member Council in which each member’s vote is weighted equally and five votes constitute a qualified majority. This is the simplest way to represent decision-making under the qualified majority thresholds that have obtained in actual configurations of the Council. From a power index perspective, the ability of a member-state government to influence Council decisions is a function of the fraction of all mathematically possible qualified majority coalitions to which its support is necessary. In the case of a seven-member Council with equal voting weights, there are 21 (= 7!/5!2!) ways that five-member coalitions can be put together. Each of the seven governments would be pivotal to 15 (= 6!/(4!2!)) of these coalitions. Normalizing using the Banzhaf power index, the score for each government would be the same: 1/7.

One striking feature of these calculations is that they ignore the policy preferences of member governments in Council decision-making. This is not to suggest that power index analysts consider preferences either irrelevant or impossible to determine. But the consensus view is that taking preferences into account can only sharpen the analytic insights of power indices. Examining preferences, in principle, should complement and supplement power indices, not damage them.

We demonstrate, however, that the consequences for power indices of taking policy preferences into consideration are far from benign. Consider the simplest case of a one-dimensional spatial model of the policy space. In
coalition 12346 is impossible (5 will join)

Figure 1.

this model, members of the Council have Euclidean preferences (‘ideal points’) that can be represented on a continuum from less to more European integration (see Figure 1).4

Recall that from a power index perspective, each government in the Council is equally ‘powerful’ \( P(n) = 1/7 \): that is, the ability of each government to influence policy outcomes is the same. How reasonable is this conclusion? According to the power index literature, a coalition such as 12346 will occur with probability 1/21. So long as members of the Council have the policy preferences depicted in Figure 1, however, the probability that this coalition will emerge is not 1/21, but 0. This is because there is no policy proposal to which governments 1, 2, 3, 4 and 6 would agree that government 5 would not also support.

Begin by assuming that the status quo is to the left of government 1 (or to the right of government 6). All five governments in the coalition 12346 prefer policy outcomes that are closer to their ideal points than is the status quo (for example, at the preferences of government 1). But so does government 5. When a vote is taken in the Council of Ministers, members 1, 2, 3, 4 and 6 cannot stop government 5 from voting with them. If the status quo were somewhere between 1 and 6, there would be no proposal that governments 1 and 6 would both support. In these collectively exhaustive and mutually exclusive cases, the coalition 12346 would not arise.

Coalitions such as 12346 cannot occur when one takes the policy preferences of governments into account because they are not ‘connected’ (that is, they do not include a member whose preferences are located between those of members in the coalition). As a result, an agreement among the members of the coalition either is not possible or, if an agreement is possible, the excluded member will go along. This new coalition is not vulnerable to the defection of any single member since it can reduce its size by one and still win (that is, coalition 123456 can be reduced to 12345). Consequently, non-connected coalitions do not form

4. It should be noted, however, that our argument holds in any number of dimensions (Garrett and Tsebelis, 1996).
when voting is done on the basis of policy positions.\textsuperscript{5} This is the simplest critique provided by non-cooperative game theory (where the behavior of actors is assumed to be ‘strategic’, i.e. taking into account the expected behavior of others) of power index calculations (which assume that actors are not strategic).

There are cases in which the conventional power index approach may generate meaningful insights because non-connected coalitions are feasible – such as government formation in multiparty systems (Axelrod, 1970; Riker, 1962). But voting over policy in the Council of Ministers is very different from bargaining over the composition of coalition governments. Parties in a coalition government can exclude a potential (connected) member from participating (i.e. from holding cabinet portfolios). Moreover, they have motives to do so – for example, to increase their shares of the perquisites of office. This is impossible in the Council of Ministers. No Euro-government is formed. The Council simply votes on individual policy matters \textit{seriatim}. There are no perquisites inherent in being in the majority on any issue. Moreover, member governments are free to vote for any policies they choose.

The consequences of the biases introduced by the unrealistic assumptions of non-connectivity to decision-making in the Council of Ministers are serious. There are only three connected minimal winning coalitions in Figure 1: 12345, 23456 and 34567. Members 1 and 7 would participate in only one of these coalitions, members 2 and 6 would be included in two and 3, 4 and 5 would participate all three times. Thus, a more realistic (normalized connected) power index for this simple case would be: $PI(1) = 1/15$, $PI(2) = 2/15$, $PI(3) = 1/5$, $PI(4) = 1/5$, $PI(5) = 1/5$, $PI(6) = 2/15$, $PI(7) = 1/15$.

Even though the voting weights of all members in our example are the same – and hence each member would be considered equally powerful by conventional calculations of power indices – the influence of these countries over policies is clearly related to their centrality in the policy space. In the real world of EU decision-making, this helps explain why British conservative governments often reacted negatively to QMV decisions – they were likely to be isolated and impotent on many issues. Our argument also suggests that the small countries of the Benelux group, despite their few votes in the Council, are likely to be quite satisfied with many policy outcomes.

\textsuperscript{5} The possibility that oversized coalitions will form should also be considered from a power index perspective. Assume now that the status quo in Figure 1 is located far to the left of government 1, and that a decision to implement a policy at government 4’s ideal point is proposed. All the members of the Council prefer 4 to the status quo. If one were to allow for oversized coalitions, three more could form: 123456, 234567 and 1234567. These should be included in the computation of power indices.
2. Power Indices with Policy Preferences

Lane and Maeland (1995) attempt to introduce policy positions into their analysis by assuming that there are some ‘natural’ coalition groupings in the Council of Ministers. For example, they suggest that the governments from the Mediterranean countries may share similar preferences on numerous issues; so, too, might the Nordic countries or the founding members of the EU. What are the implications of these preference configurations for legislative influence in the Council? According to Lane and Maeland, the answer is straightforward. If a group of governments – say from the Mediterranean countries – votes as a bloc, this should be directly factored into the power algorithm. These countries together have 28 votes in the Council (Italy has 10; Spain 8; Greece and Portugal 5 each). One can thus simply recalculate the distribution of power in the Council by assuming that there are not 15, but 12 members, and one of these (‘the Mediterranean’) has 28 votes.

According to Lane and Maeland, pooling the Mediterranean governments’ votes would lead to a reduction in their combined power. If each voted separately in a 15-member Council, their combined power (using the Banzhaf normalized index) would be $0.112 + 0.092 + 0.059 + 0.059 = 0.332$ (Lane and Maeland, 1995: Table 1). Voting as a bloc, however, their index would be reduced to 0.247 (Lane and Maeland, 1995: Table 5). One should immediately ask the question: Why would these governments ever choose to vote as a bloc if in so doing they lose power? The logical reason why governments may wish to surrender some of their autonomy by forming voting blocs in the Council is that they will increase – not decrease – their collective influence over decisions.

Consider the Mediterranean case outlined earlier. The current QMV threshold in the 15-member Council is 62 out of 87 total votes. If a Mediterranean bloc formed, any winning QMV coalition would have to include it ($87 - 62 < 28$). The easiest way to think about this case is to assume that, in Figure 1, governments 1, 2 and 3 form a bloc (i.e. they all vote the same way). There is now only one minimum winning connected coalition that can form in the Council – 12345. From a power index perspective each Mediterranean government and governments 4 and 5 have equal power ($PI(1-5) = 1/5$). Assuming the bloc holds, the Mediterranean governments would have 60 percent of the available power resources – not the 25 percent calculated by Lane and Maeland.

This simple example illustrates a perverse consequence of the way Lane and Maeland’s analysis deals with policy preferences. They calculate that by forming a voting bloc, the Mediterranean countries would have less power than they would if they voted independently. There patently would be no reason for them to form such a bloc! We have shown, however, that
there is every reason for such a voting group to be organized – its existence would substantially increase the influence of each bloc member in the Council.

More generally, most power indices (certainly the normalized ones) are not additive. That is, the results of a power index analysis change substantially depending on whether one considers coalitions among actors or only each actor separately. This may be not a major inconvenience when one analyzes the Council alone since each national government is arguably the ‘natural’ unit of analysis. The problems associated with the non-additivity of power indices multiply, however, when one begins to analyze other European institutions, particularly the European Parliament. Power index calculations would differ radically depending upon whether one considers the Parliament as a unified actor, as comprising ten ideological party groups, as an aggregation of some 70 national groups or as the summation of individual actions by over 600 MEPs.

Instead of the coalition analysis that Lane and Maeland engage in, Widgrén (1995) proposes a different way of taking policy preferences into account within a power index framework. He advocates a ‘partial homogeneity’ approach that weights conventional power indices by the probabilities that members of a coalition will vote for a given measure. This is a more reasonable assumption than Lane and Maeland’s because there is no reason to believe that a voting bloc will hold together just because, if it did, this would increase the power of its members.

If one government of the would-be Mediterranean group, say Greece, did not think it had enough power within the coalition, it might threaten to leave. But other governments (perhaps Ireland and Finland) could replace it in the Mediterranean rump. These governments arguably have similar preferences on many issues and might accept less influence in the coalition than Greece. This possibility would lessen the credibility of Greece’s exit threat. It is the complexity of such bargaining games that seems to make Widgrén’s approach attractive. Partial homogeneity holds the promise of generating analytic leverage over coalition formation without requiring the extremely strong assumptions of Lane and Maeland. In the end, however, even this sophisticated approach fails to deliver.

The following simple example illustrates Widgrén’s methodology. Assume governments can be divided into likely ‘supporters’ of a policy proposal, likely ‘opponents’, and governments that are ‘undecided’. The probability that ‘supporters’ will vote for the proposal is 0.8; that for ‘undecideds’ is 0.5; and 0.2 for ‘opponents’. Further assume that governments 1, 2 and 3 in Figure 1 are the opponents (we could think of these, as earlier, as constituting the Mediterranean bloc); governments 4 and 5 are

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6. For an interesting exception see König and Bräuninger (1998).
undecided; and governments 6 and 7 are supporters. Now go back to the basic power index framework, in which non-connected coalitions can form. Widgrén’s approach suggests that coalition 12345 has ‘probability’ 
\((0.2)^4(0.5)^2 = 0.002\) of occurring; 12346 has probability 
\((0.2)^3(0.5)(0.8) = 0.0032\), whereas 34567 has probability 
\((0.2)(0.5)^2(0.8)^2 = 0.032\).

These calculations suggest that coalition 34567 is ten times more likely to occur than is 12346. But as we argued in Section 1, coalition 12346 cannot form because it is not connected. Coalition 34567 is thus infinitely more likely to occur because the (conditional) probability that government 5 will join the coalition 12346 is 1.0 (rather than 0.5 as Widgrén’s approach assumes).

Let us now summarize our critique of the relationship between power index calculations and the policy preferences of governments in the Council of Ministers. We have considered three different applications of power indices. In increasing order of sophistication, these comprise analyses of which policy preferences are ignored (the conventional approach), those with voting blocs and the partial homogeneity approach. All generate erroneous conclusions about the influence of member governments in the Council. The fundamental reason is that most power indices assume non-connected coalitions can and will form. However, such coalitions are impossible in the Council of Ministers because would-be members have neither the incentives nor the capacity to exclude from voting coalitions governments with preferences between those of the extreme members of the group. There is one exception to these statements that we know of. Colomer and Hosli (1997) explicitly incorporate connectedness into their calculations about the power of different groups inside the European Parliament. But even this paper is subject to our second and more important criticism of power index analysis – its inability adequately to address the effects of the institutionalized interactions among the Council, Commission and Parliament in the EU.

3. The EU’s Legislative Procedures

Decision-making authority in the contemporary EU is not limited to the Council of Ministers. The Commission and the European Parliament also play important roles. The specific roles of these actors differ according to the legislative procedures that have applied over time to discrete policy areas. Several power index studies seek to incorporate the institutional complexities of the EU into their calculations. Widgrén and his collaborators (Widgrén and Kirman, 1995; Laruelle and Widgrén, 1998) and Lane and Berg (1997) are the pioneers in this area. This section demonstrates that their attempts to take into account the EU’s institutional
structure have failed because power indices cannot effectively incorporate the information contained in the spatial location of government preferences nor the strategic nature of legislative dynamics in the EU.

Widgrén and Kirman (W&K) base their analysis on the foundational relationship between the Council of Ministers and the Commission on which the more complex procedures that include the European Parliament are built – the ‘consultation’ procedure. Only the Commission can introduce new legislative proposals. Under consultation, a qualified majority in the Council can accept Commission proposals, but Council amendments require unanimous support for passage into law. W&K thus reason that legislation can be adopted in two ways: either by agreement of the Commission and a qualified majority of the Council; or, by unanimity in the Council. It is then a straightforward matter to recalculate power index scores, based on coalitions of the form C12345 (any QMV coalition in the Council plus C, the Commission) or a unanimous Council (1234567).

Lane and Berg (L&B) extend this line of inquiry by including the European Parliament in the calculation of power indices. This is a very important step because under the two legislative procedures that were created in the Single European Act and at Maastricht (TEU Articles 189b, ‘codecision’ and 189c, ‘cooperation’), significant roles were assigned to the Parliament. Moreover, in discussions of future institutional reforms to reduce the ‘democratic deficit’ in the EU, it is often suggested that the policy purview of these procedures should be extended and that the procedures should be reformed to give the Parliament even more power. Thus, L&B represents the state of the art in power index analysis of the EU.

One can discern the thrust of L&B’s approach to the EU’s legislative procedures from the following quotation:

The basic articles 189a, 189b and 189c seem like a jungle … any chart showing the many steps involved in the cooperation procedure and the conciliation (what we and others call codecision) procedure portrays a decision tree so complex that one can discuss endlessly which player has power. … we suggest that a formal analysis based upon the power index method may resolve some puzzles in the debate’. (Lane and Berg, 1997: 11).

Such is the siren song of the power index approach. In a world of complicated procedures linking different institutions, the calculation of power indices purports to clarify and simplify, to distill the essence of decision-making dynamics.

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7. For a critique of W&K’s analysis, see Tsebelis and Garrett (1996).
8. The codecision procedure was amended in the Amsterdam treaty, with significant implications for the legislative process (Tsebelis and Garrett, 1998). Since no power index study of which we know analyzes the amended procedure, all references to Article 189b pertain solely to the original version agreed to at Maastricht.
L&B use the consultation procedure as a benchmark against which to analyze the more complicated cooperation and codecision procedures. Following W&K, they contend that the terrain of winning QMV coalition is now richer than if one simply assumes the Council votes by qualified majority. The 21 minimal winning QMV coalitions of the form 12345 should be recalculated as six actor coalitions of the form C12345. There is an additional winning coalition comprising a unanimous Council – 1234567. The Commission is a member of all winning coalitions under consultation except the unanimous Council (i.e. 21), while all the governments are members of an equal and smaller number of coalitions (15 QMV, plus the unanimous Council). It is thus easy to see that, on this reasoning, the Commission is more powerful than any member of the Council is.

If our general argument about preferences is accepted, however, only the three connected qualified majority coalitions in the Council should be included in the analysis of the consultation procedure. That is, the only plausible winning coalitions under consultation are C12345, C23456, C34567 and 1234567. The Commission is a member of three of these coalitions but governments 3, 4 and 5 are members of all four. On this interpretation, the Commission is less powerful than these governments. This is the opposite of L&B’s claim.

At this point, however, it is important to note that just as the governments in the Council have policy preferences over different pieces of legislation, so too does the Commission. Consider the preference configuration presented in Figure 2, where the Commission (C) is to the right of the last country (that is, the Commission is in favor of more European integration than is any member state). A coalition of 12345 and the Commission is not possible because it excludes members 6 and 7 who have intermediate preferences. Similarly, a coalition of 23456 and C is impossible – because 7 will join. Thus, only one of the three possible qualified majority coalitions in the Council can form if the agreement of the Commission is required for passage of legislation: 34567C. The unanimous Council, however, is still possible. While the Commission is pivotal only to

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9. We discuss below why this is a representative example of actual decision-making in the EU.
the QMV coalition, governments 3, 4, 5, 6 and 7 are pivotal both to this coalition and to the unanimous Council. They are thus more powerful from a connected power index perspective.

What changes when one moves to Article 189b (the codecision procedure, which L&B call conciliation)?10 First, the Parliament can amend Commission proposals. Second, the Parliament can unconditionally veto any proposal of which it disapproves. It is easy to see that from a power index perspective, the Parliament is a very powerful actor under codecision. Indeed, L&B assert that the European Parliament is even more powerful than the Commission, which remains more powerful than any member government. This mirrors the conventional wisdom about the introduction of codecision that it was an important step in reducing the democratic deficit in the EU (since the Parliament is the Union’s only directly elected institution).11

L&B then compare Article 189c (the cooperation procedure) to 189b. For them, the salient difference is that the Parliament does not have an unconditional veto under cooperation. Therefore, the only types of coalition that can form are either those containing C, P and a qualified majority in the Council (e.g. CP12345) or a unanimous Council. These cannot be vetoed by the Parliament. Hence, there are fewer coalitions over which the Parliament exercises power under cooperation than codecision. L&B thus conclude that the power of the Parliament is the same as that of the Commission under cooperation, while both are more powerful than any individual government.

4. Agenda-Setting, Vetoes and Legislative Influence in the EU

The previous section demonstrated the impact of policy preferences on the calculation of power indices. We now elaborate the second fundamental element of our critique – the effects of agenda-setting and vetoes in the contemporary EU. Let us begin with the simplest case, the consultation procedure. The Commission is not just one potential member of QMV legislative coalitions under this procedure. Rather, the Commission has a monopoly over introducing legislative proposals around which coalitions in the Council form. Given the preference distribution depicted in Figure 2, it is clear that the Commission will try to avoid the situation where all

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10. Given that the codecision procedure was only created at Maastricht whereas the cooperation procedure (subsequently codified as 189c at Maastricht) was initiated under the Single European Act, and because the codecision procedures adds a stage to cooperation, it seems logical to analyze cooperation before codecision. Nonetheless, we follow L&B, who discuss codecision first.

Council members will reject its proposals (that is, where unanimous coalitions will form).

If the status quo is to the right of C, the Commission can propose its own ideal point and have it adopted by the coalition 34567. If the status quo is between 7 and C, the best that the Commission can do is leave it alone (and hope the Council will not try to change it). If the status quo is anywhere between 3 and 7, however, there is no coalition that can defeat it. Finally, if the status quo is to the left of 3, the Commission can propose a point to the right of 3 – in fact the point at which government 3 is indifferent between the proposal and the status quo – and this will be adopted by the coalition 34567. Thus, acknowledging that the Commission makes proposals to the Council – the most basic institutional facet of EU decision-making – focuses attention on strategic behavior by the Commission and Council members that simply cannot be explored from a power index perspective.

Now consider two complications to this simple story. The first is to analyze actors other than the Council as collective decision-makers. The second complication is moving to a more realistic multi-dimensional policy space (our example will be two-dimensional, but the logic applies regardless of the number of dimensions). We have already noted that the first complication (considering the Commission or the EP as collective actors) significantly alters the results of most power index analyses (although it is not clear precisely how).

The second complication (multi-dimensional space) greatly increases coalitional possibilities, which is perhaps why power indices are so attractive (they attach probabilities to different coalitions). There is, however, nothing probabilistic about policy outcomes in a multidimensional space. This is because the agenda-setter decides which coalition will form. We will restrict analysis to the consultation procedure in order to make the argument as simple as possible. In other pieces of our work individually and jointly we have analyzed the cooperation and codecision procedures.

First, consider a one-dimensional space in which one can array not only the different members of the Council, but also different Commissioners. We analyze the simplest possible case – a three-member Council and a three-member Commission, each deciding by majority rule, where the agreement of both institutions is required for the passage of legislation. But the logic of the argument is generalizable to any configuration and decision

12. The Commission is not a gatekeeper. It must make proposals on a given issue area when requested by the Council (and since Maastricht, by the Parliament).
14. This is not unrealistic since decisions taken by the Commission are formally subject to a majority vote in the College of Commissioners.
rule. Suppose the status quo (SQ) is located outside the line as in Figure 3, with indifference curves with respect to it for the members of the Council (the circles around the points 1, 2 and 3) and the Commission (the circles around the points A, B and C).

Given the configuration of Figure 3, governments 2 and 3 from the Council and commissioners A and B will be part of the winning coalition with probability 1. If one focuses on the straight line that connects points 123 and ABC, A and B from the Commission will support anything that is to the right of point Q in the figure. If it happens that the selected outcome is even further to the right, C may also join them. But whether or not commissioner C participates in the winning coalition does not alter the fact that anything to the right of Q commands a majority inside the Commission. Similarly, anything to the left of P commands a majority of members 2 and 3 in the Council. Consequently, the winning Council coalition includes members 2 and 3, with probability 1.

We now demonstrate that decomposing institutional actors (in this case, the Commission) into component elements restricts the possible coalitions even further. Power indices consider the three minimum winning coalitions in the Council (12, 23 and 13) equally plausible. In the first part of this article we demonstrated coalition 13 cannot form because it is not connected. The introduction of a multi-member Commission restricts the coalitional possibilities even further. Because of the constellation of preferences within the Commission, Council coalition 12 cannot form either – there is no proposal that 12 and the Commission (by majority) will support that 3 would not. Consequently there is only one possible majority
coalition in the Council, 23. Of course, the unanimity coalition 123 may also form, but members 1 and 2 of the Council will still participate in all coalitions. Similarly, inside the Commission the only winning coalitions are AB and ABC. A and B participate in the winning coalition with probability 1.

Thus, any winning coalition comprising both the Council and the Commission will include governments 2 and 3 and commissioners A and B. But what will be the outcome on which the two institutions will settle? The answer depends on who controls the agenda. Under the EU’s consultation procedure, the Commission makes a proposal to the Council. As a result, a unanimous Commission will propose a bill at P and a majority in the Council will support it. In contrast, if the Council were granted agenda-setting power, it would propose Q unanimously and a majority in the Commission would support this.

This analysis demonstrates that the final legislative outcome depends not only on the preferences of the actors that make the final decision (in the case of consultation, the members of the Council), but also on the preferences of the actors that make the proposal (the commissioners). Indeed, the institution that makes the proposal selects (with probability 1) the coalition that will support its proposal. Contra the power index approach, there is nothing probabilistic about this process. On the contrary, winning proposals are outcomes of strategic calculations by the actors, and particularly the agenda-setters.

Let us develop this point using a multi-dimensional example (two-dimensional in Figure 4). Consider a seven-member Council, a unitary Commission and a policy status quo as located in the figure. How many proposals can defeat the status quo by qualified majority (5/7)? Recall that according to a power index perspective, there are 21 such coalitions. We showed that in a one-dimensional space only three of these – the connected coalitions 12345, 23456 and 34567 – could realistically form in the Council.

In the two-dimensional space of Figure 4 there are also three possible coalitions for the Commission to choose. Their petal-shaped win sets are shaded in the figure. Among these three, the Commission (under complete information) will select with probability 1 the coalition 23456. This coali-

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15. The outcome is more complicated if one considers all the rules specified by the consultation procedure (the fact that the Council can modify the Commission proposal by unanimity). The debate between Moser (1996) and Tsebelis (1997) makes this point in detail.

16. Some time ago, Tsebelis (1989) made this point more generally. Substituting strategic actors with probability distributions reduces game theoretic problems to decision theoretic problems in ways that are often very misleading. Assuming that your opponent will serve to your backhand may work well for much of a tennis match, until your opponent serves to your by now rusty forehand side on match point!

17. We revert to the unitary Commission to simplify the analysis.
tion prefers all points in the heavily shaded area in the figure to the status quo. But the Commission can select its most preferred point within this area — a proposal at point P. This example demonstrates that agenda-setters, in this case the Commission, do more than choose choice among potential winning coalitions.¹⁸ They can also choose the specifics of the proposals that winning coalitions support. Such a conclusion is far removed from the world of power index calculations.

Conclusion

Some time ago we criticized power index analysis of decision-making in the EU for not taking into account the preferences of actors and the institutional structure of legislative processes. Proponents of power indices have

¹⁸ This argument can also be applied to the case of a collective agenda-setter (e.g. considering Commission decisions as made by a majority vote among Commissioners) (Tsebelis, 1995a). If the members of the agenda-setting institution can make enforceable agreements, the outcome may not be the unique point P (as in Figure 4). But it will be located in the area immediately surrounding P.
responded with ingenious efforts to include substitutes for institutions and preferences. But these innovations do not solve the problems they are designed to address. First, most power index calculations are extremely sensitive to the way in which voting bodies are partitioned into coalitions, hence they do not produce reliable results when trying to take policy preferences into account. Second, adding the Commission and the Parliament to power index calculations cannot overcome the inability of this methodology to take into account the strategic properties of legislative interactions, particularly the importance of the location of agenda-setting power.

The reactions of power index scholars to our criticisms are reminiscent of the epicycles generated by Ptolemaic astronomers in response to anomalies in their charts. They were forced to assume more and more complicated geocentric trajectories in order to account for empirical observations. Their mistake, however, was not insufficiently complicated calculations. Rather, it was their assumption that the earth was the center of the universe.

The same is true for power index approaches to the EU. Their fundamental problem is not that they ignore preferences; nor is that that they overlook institutions other than the Council of Ministers. The real deficiency with power indices is that they reduce actors’ preferences and institutional rules of the game to mere probability distributions. The result is that they do not take into account the strategic nature of legislative dynamics. Consequently, their results are devoid of the politics that take place inside the EU.

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