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**DECISION RULES AND INTERGOVERNMENTALISM  
IN THE EUROPEAN UNION**

Institutional design influences policy outcomes. As researchers applying the spatial theory of voting and extensive-form games to European Union (EU) decision-making have shown, the preferences of EU member states, in combination with the particularities of legislative procedures, crucially influence policy results (e.g. Tsebelis 1994, Steunenberg 1994, Garrett, McLean and Machover 1995, Crombez 1996, Garrett and Tsebelis 1996, Moser 1996, Scully 1997, Tsebelis and Garrett 2000, 2001). But similarly, institutional structures are considered to be important for policy outcomes in the framework of voting power analysis, based on n-person cooperative game theory: qualified majority voting (QMV) in the Council, on the basis of a weighted vote system, influences members' relative voting leverage and indirectly, policy outcomes (e.g. Brams 1985, Hosli 1993, Widgrén 1994, Johnston 1995a, Lane and Maeland 1995, Peters 1996a, Holler and Widgrén 1999, Laruelle and Valenciano 2002, 2004, Leech 2002, Felsenthal and Machover 1998, 2004).<sup>1</sup> Likewise, the quota and the constellation of Political Groups in the framework of the European Parliament (EP) are considered to be important (e.g. Lane and Maeland 1995, Peters 1996a, Raunio 1997, Hosli 1997).

The main goal of this paper is to show that EU members' representation in the Council, the decision quota and the size of membership not only matter for the

distribution of *a priori* voting power (e.g. Felsenthal and Machover 2004) among the member states, but that they may also affect the distribution of power among the EU's institutions. A simple uni-dimensional graphical illustration and extended versions of the Penrose-Banzhaf (Penrose 1946, Banzhaf 1965) and the Coleman (1971) indices will be applied. Hence, insights based on n-person cooperative game theory and coalition theory are not only important in the framework of approaches such as voting power analysis, but may also generate relevant insights for studies focusing on inter-institutional dynamics in EU decision-making, including those using the spatial theory of voting.

The structure of this paper is as follows. Section I focuses on the distribution of power among EU institutions, drawing on earlier work in the field and demonstrating simple patterns of interaction between the EP and the Council of the EU. Section II discusses EU institutions' capacity to act under different decision rules in the past and present. Section III applies the exploration to an artificial purely bicameral system within the EU and shows effects of decision rules in the EP as compared to the Council of the EU. Finally, section IV summarizes the main results of the paper and concludes.

## **THE DISTRIBUTION OF POWER AMONG EUROPEAN UNION INSTITUTIONS**

In a seminal article, extending the Shapley value (Shapley 1953) to simple voting games, Lloyd Shapley and Martin Shubik make the following statement: "As a general rule, if one component of a committee system (in which approval of all

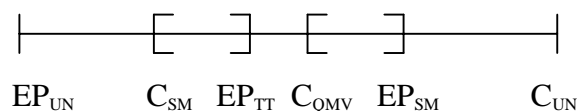
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components is required) is made less ‘efficient’ – i.e., more susceptible to blocking maneuvers – then its share of the total power will increase” (1954: 790).

This statement, contained in a footnote, may be rather crucial with respect to the analysis of the relative power of member states and institutions in the framework of current EU decision-making procedures. The essence of the statement may be captured graphically by a simple representation picturing the relation between the aggregate preferences of the EP and the Council as a bargaining game on an uni-dimensional policy scale. Based on an illustration used by Putnam (1988) in the context of two-level games, requiring both intergovernmental agreement and subsequent domestic ratification, figure 1 shows the effects when the size of the win set<sup>2</sup> changes within either the Council or the EP.

Figure 1: Uni-Dimensional Bargaining Game Between the European Parliament and the Council of the European Union: The Effects of Changing Win Set Size



In a simple representation of a bargaining game between the EP and the Council, assume the preferences of actors within these two institutions regarding a specific policy proposal are aligned on an uni-dimensional policy scale. On this scale, the points accepted by an unanimous EP and an unanimous Council are reflected by  $\text{EP}_{\text{UN}}$  and  $\text{C}_{\text{UN}}$ , respectively. That is, the most extreme points on the scale reflect the position of the most conservative member within each group (such as a given EU member state within the Council, and a given Political Group within the EP).

Bargaining, in this example, occurs on a single policy dimension, with the EP's unanimous position being located on the very left and the Council's on the very right of this spectrum. In Putnam's framework,<sup>3</sup> if the decision quota changes within one of these two institutions, its most extreme members may get outvoted internally and some concessions will need to be made in the inter-institutional bargaining game. Accordingly,  $EP_{SM}$ , in this uni-dimensional setup, indicates the proposal that would still find the support of a simple majority within the EP. If the institutional rules of the EP require a two-thirds majority of the vote total instead of the (more regular) simple majority, however, the set of feasible outcomes in the bargaining game between the Council and the EP may be reduced in favor of the EP (the minimum outcome that would still be accepted by a two-thirds majority is denoted by  $EP_{TT}$ ).<sup>4</sup>

As this simplified illustration of a negotiation game between the Council and the EP demonstrates, a reduction in the size of the win set within the Council, as caused by the application of the QMV rule instead of, for example, a simple majority requirement, tends to reduce the range of feasible outcomes in favor of the Council. Accordingly, as depicted on the uni-dimensional scale, the potential influence of the EP is decreased by this reduction in the size of the Council's win set. Agreement between the EP and the Council is only possible, however, when the win sets of the two institutions overlap. In the example given in figure 1, the unanimity requirement in the Council would lead to 'deadlock' and, within the current EU co-decision procedure, to the installment of a 'conciliation committee' between the EP and the Council.

But is the shift, e.g. from the QMV to the unanimity rule, the only factor reducing the size of the Council's win set? This article argues that this is not the case. Certainly, in practice, the distribution of actors' preferences will matter. But another crucial factor is the capacity of actors to form blocking coalitions. This ability,

however, is influenced not only by the threshold (quota) of the relevant voting game, such as the applicable QMV rule within the Council, or the spatial location of member states' preferences, but also by the distribution of (weighted) votes among the members, and the total size of EU membership. For purposes of tractability, this article will limit the subsequent analysis to the interaction between the Council and the EP.<sup>5</sup> The investigation will be based on both earlier decision rules and distributions of voting weights in the Council, notably those applicable before the Treaty of Nice,<sup>6</sup> and more recent provisions as incorporated into the Constitutional and the Reform treaties.

In a historical overview, the percentage requirement to form a blocking minority in the framework of QMV in the Council -- expressed as the share of votes in the weighed vote total -- gradually decreased from 35.3 percent for the first constellation of European Community (EC) membership to 29.9 percent after the 1995 EU enlargement. By comparison, the percentage of votes required for forming a qualified majority remained stable at about 71 percent of the total (e.g. see Hosli 1993). Table 1 shows the respective requirements for the attainment of either a qualified majority or a blocking minority in the Council, from the inception of the EC up to the 2004 enlargement.

Table 1: Distribution of Voting Weights, Qualified Majority and Blocking Minority Thresholds in the Council, 1958-2004

	Sum of Weighed Votes	Number of Votes Required for QMV	QMV Threshold as Percentage of Vote Total	Number of Votes Required for Blocking Minority	Blocking Minority Threshold as Percentage of Vote Total
Original Constellation of Members (1958-72)	17	12	70.6	6	35.3
First Enlargement (1973-80)	58	41	70.7	18	31.0
Second Enlargement (1981-85)	63	45	71.4	19	30.2
Third Enlargement (1986-94)	76	54	71.1	23	30.3
Fourth Enlargement (1995-2004)	87	62	71.3	26	29.9

As table 1 shows, expressed as simple thresholds, whereas the percentage requirement for forming a qualified majority remained rather stable over time, the corresponding hurdle for forming a blocking minority, between the first and the fifth constellations of membership, gradually decreased as a percentage of total weighed votes. Generally, when the QMV decision rule is 71 percent of the vote total, the share of votes required for a blocking minority gradually approaches 29 percent with successive enlargements. Although the decrease is largely due to ‘indivisibilities of numbers’, these figures provide a first indication that the Council, between 1958 and 2004, may gradually have become more susceptible to blocking maneuvers among member states.

Without doubt, the capacity of an actor to participate in a blocking coalition is crucial regarding its relative ‘voting power’ within a committee (on this aspect, e.g. see Johnston 1995a). Respective calculations, in accordance with Coleman’s measure of the capacity of an actor to block decisions (Coleman 1971), provide information on actors’ capacity to block decisions, i.e. to prevent a given majority of committee members – such as EU states as represented in the Council -- from passing a new legislative act. This aspect has certainly been rather crucial in more recent EU negotiations regarding the distribution of voting weights in the Council, as was demonstrated, for example, in the December 2004 EU Summit meeting, and discussions on the EU Constitutional and the Reform Treaty. The topic may, however, also be explored from a different angle.

## **HOW EASILY ARE DECISIONS MADE?**

What do the changes over time regarding total EU membership and the distribution of votes imply in terms of the relative efficiency of decision-making<sup>7</sup> in

the Council and more specifically, the capacity of the Council to act?<sup>8</sup> Based on Hosli (1998), table 2 provides an overview of the relative ease with which decisions have been made in the Council between 1958 and the introduction of the Nice treaty provisions, on the basis of figures showing the share of winning coalitions among all possible coalitions in the Council (i.e. Coleman's measure of the 'power of a collectivity to act').<sup>9</sup> The approach, evidently, ignores the potential influence of the distribution of actors' priorities, as preferences are not generally known 'a priori'.<sup>10</sup> Note that the estimates given in table 2 are quite conservative, since they are not restricted to the analysis of minimal winning coalitions (MWCs),<sup>11</sup> but take all possible winning coalitions into account, including, for example, the 'grand coalition' encompassing all EU states. The focus on all possible winning coalitions, in accordance with the assumption of Impartial Coalition Culture (ICC), allows to abstract from specific preference alignments among actors: as coalitions among EU member states are likely to be different regarding issue areas such as agriculture, environmental affairs, services or trade -- topics on which different constellations of the Council of the EU decide in practice -- taking all winning coalitions into account provides a helpful 'proxy' to reality.<sup>12</sup> Even within broad policy fields, sectoral interests tend to diverge and in practice, members advocate different positions as compared to their fellow governments depending on the specific issue area at hand.<sup>13</sup> For example, in trade policy, members may hold a protectionist stance in one domain and a rather 'liberal' one in another (on issues as diverse as the EU's car import policy, textile trade or agriculture). As an average measure over all relevant sectors and over time, it is thus assumed that coalitions are basically formed randomly among EU member states in the Council of the EU. Generally, enlargement leads to even more potential coalitions that can be formed in practice. Accordingly, Table 2 shows figures

regarding the Council's capacity to act under the QMV and unanimity rules for 1958 through 2004.

Table 2: The Capacity of the Council to Act: Share of Winning Coalitions in all Possible Coalitions Among Member States, 1958 to 2004

	1958-72	1973-80	1981-85	1986-94	1995-2004
Number of member states	6	9	10	12	15
Total number of possible coalitions among member states ( $2^n - 1$ )	63	511	1023	4095	32767
<i>Unanimity rule:</i>					
Share of winning coalitions in all coalitions	1.5873	0.1957	0.0978	0.0244	0.0031
<i>QMV rule:</i>					
Share of winning coalitions in all coalitions	22.22	14.68	13.69	9.82	7.78

Source: Hosli (1998: 19)

While it is generally known that enlargement renders unanimous voting more difficult, the figures shown in table 2 clearly illustrate that - assuming ICC - this effect also materialized, although to a lesser extent, with respect to the 71 percent QMV requirement. Whereas in the time span from 1958 to 1972 more than one-fifth of all coalitions among EC member states could be 'winning' under the QMV rule, this proportion dropped to 7.78 percent in the aftermath of the 1995 enlargement.<sup>14</sup> This trend continued, and even sharpened, with the introduction of the Nice treaty rules and

the triple-majority clause (e.g. see Felsenthal and Machover 2001, Hosli and Machover 2004).

What can this insight reveal regarding the distribution of power between the Council and the EP? Linking up with the analysis as presented above, the Council's win set size is likely to be influenced not only by the decision quota as expressed, for example, as a percentage of the weighted vote total required to reach QMV - such as the 5/7th rule in the framework of a simple symmetric game in which all actors have one vote<sup>15</sup> - or the specific distribution of member states' preferences, but also by the distribution of (weighted) votes among EU states in the Council, and the overall size of EU membership. Similarly, the unanimity requirement in the Council is likely to have a different effect on the balance of power among the institutions within an EU with ten, twelve, fifteen, twenty-five or twenty-seven members.

Clearly, *ceteris paribus*, expanding the EU while maintaining the QMV decision threshold leads to a decrease in the capacity of the Council to act: expanding the EU reduces the share of potential winning coalitions in the Council when the decision quota is higher than 50 percent, regardless of whether a (simple) weighted voting system, a double-majority clause or a triple-majority rule is in effect.

## **LEVERAGE AND 'CAPACITY TO ACT' IN A DOUBLE-MAJORITY OR A BICAMERAL SETTING**

The issue may be illustrated further for a hypothetical bicameral parliamentary structure involving the EP and the Council as separate chambers of an EU legislature. A member state's overall voting strength will here be expressed in terms of the size of its representation in the Council and EP respectively, again utilizing the pre-Nice voting weights for purposes of illustration. For simplicity, it is thus assumed that

representatives of one EU state vote identically in the Council and in the EP. This simplifying assumption will later be relaxed.

A formula used for the assessment of effects within a double majority system<sup>16</sup> can be used to assess repercussions in the case of a pure EU bicameral system. Clearly, the allocation of voting weights and the decision quota influence the distribution of relative voting power among actors as represented within one part of the bicameral parliamentary setting. But they also influence the relative power that members hold within the overall bicameral structure. The effect can be assessed, for example, on the basis of an extension of the (normalized) Banzhaf power index. Generally, the characteristic function of a simple voting game, here for the case of the Council, assigns a value of 1 to player  $i$  when an actor (here a member state) is able to turn a losing coalition into a winning one and 0 when its vote does not matter for the fate of the coalition. As usual, the regular, normalized Banzhaf index may be calculated as<sup>17</sup>

$$B(i) = \frac{\sum_{S \in V} v_i(S)}{\sum_{j=1}^n \sum_{S \in V} v_j(S)} \quad (1)$$

where  $v_i$  denotes the number of 'critical defections' by player  $i$  and  $v_j$  the number of 'critical defections' (or 'pivotal votes') by any player. Clearly, more than one player within a coalition  $S$  may be able to make such a critical defection. Hence, the coalitions taken into account are not actually minimal winning, but rather *vulnerable*<sup>18</sup> (here denoted by  $S \in V$ ).

As in the case of a double-majority rule within the Council, a power index applied to an EU bicameral setting needs to take into account that a member's *de facto* influence is not enhanced when it can cast a 'double pivotal vote' (i.e. when it can make

a winning coalition lose with respect to the decision quota applicable within either the first or second chamber of parliament).<sup>19</sup> Hence, if  $v_i(S_1)$  represents the cases in which player  $i$  can make a critical defection within a winning coalition in the first chamber (e.g. the EP) and  $v_i(S_2)$  within the second chamber (e.g. the Council), and  $v_i(S_D)$  the number of 'double pivotal votes,' the normalized Banzhaf power index for the bicameral parliamentary structure can be represented by

$$B_{BIC}(i) = \frac{\sum_{S_1 \in V} v_i(S_1) + \sum_{S_2 \in V} v_i(S_2) - \sum_{S_3 \in V} v_i(S_3)}{\sum_{j=1}^n \sum_{S_1 \in V} v_j(S_1) + \sum_{j=1}^n \sum_{S_2 \in V} v_j(S_2) - \sum_{j=1}^n \sum_{S_3 \in V} v_j(S_3)} \quad (2)$$

Hence, the 'double majority voting power index' deducts the number of 'double pivotal votes' from the sum of critical defections for player  $i$  within both chambers. In order to normalize the index, this sum, as in the case of the simpler index, is subsequently divided by the sum of critical defections for all players (corrected again by the number of double pivotal votes). Similar calculations apply as regards the share of winning coalitions in the total.

Generally, the larger the percentage of double pivotal votes for a member state as compared to its critical defections with respect to reaching a majority in either one of the two chambers, the smaller is its overall voting power. For example, when the second chamber attributes an equal number of votes to each representative, whereas votes in the first chamber are weighed according to population size, larger states are likely to hold a comparatively larger proportion of 'double pivotal votes' and overall, the voting system then favors smaller states.

Table 3 provides information on population size, seats in the EP and votes in the Council in the mid-1990s, and the respective effects on voting power in the framework of a bicameral parliamentary system for the EU when different decision quotas would have applied (i.e., different thresholds to reach a majority in either one of the two hypothetical EU chambers). A member's relative power, for the example below, is calculated on the basis of both the number of seats it held in the EP in 1995, and its 1995 voting weight in the Council. Column five shows members' voting power in the framework of the 71 percent QMV rule in the Council, whereas columns six and seven show results for two scenarios: (a) a simple majority rule in both chambers, based on the post-1995 distribution of weights in the Council and seats in the EP (column six); and (b) a 71 percent QMV rule in the Council combined with a simple majority rule in the EP (column seven).

Table 3: Overview of Population Size, Voting Weights in the Council, Seats in the European Parliament and Voting Power in the Framework of a Hypothetical EU Bicameral Parliamentary System, Mid-1990s

Member State	Population Size (in millions, 1993)	Voting Weights in the Council (since 1995)	Number of Seats in the EP (since 1994/95)	Voting Power in the Council (normalized Banzhaf index)	Voting Power in a Hypothetical Bicameral Parliamentary EU System	
					Simple majority in both the EP and the Council	71 percent rule in Council, simple majority in EP
Austria	7.9	4	21	4.79	5.43	4.07
Belgium	10.1	5	25	5.87	5.68	4.52
Denmark	5.2	3	16	3.59	5.18	3.56
Finland	5.1	3	16	3.59	5.18	3.56
France	57.5	10	87	11.16	9.34	12.24
Germany	80.6	10	99	11.16	10.18	13.82
Greece	10.3	5	25	5.87	5.68	4.52
Ireland	3.6	3	15	3.59	5.11	3.42
Italy	56.9	10	87	11.16	9.34	12.24
Luxembourg	0.4	2	6	2.26	4.67	2.47
Netherlands	15.2	5	31	5.87	5.96	5.05
Portugal	9.9	5	25	5.87	5.68	4.52
Spain	39.1	8	64	9.24	7.70	9.58
Sweden	8.7	4	22	4.79	5.50	4.19
United Kingdom	58.0	10	87	11.16	9.34	12.24
Total	427	87	626	99.97	99.97	100.00

Clearly, the introduction of a bicameral system based on simple majority rules to be applied in both EU chambers would have enhanced the relative voting power of smaller EU members compared to that of larger states. By comparison, the 71 percent quota in the Council, combined with a simple majority rule in the EP, would have increased the voting leverage of the larger members. Similar effects can be found when assessing the effects of a double-majority clause - based on the number of EU states and on population - within the Council.

However, the structure of a bicameral system - similar to the effects of a double-majority clause - also influences the likelihood that winning coalitions can form. Table 4 provides calculations regarding the proportion of winning coalitions - both minimal winning and 'surplus coalitions' - that can be formed among EU states in the framework of a bicameral parliamentary system, here again demonstrated on the basis of figures for the 1995 to 2004 EU membership.

Table 4: The Power of a Collectivity to Act for an Hypothetical Bicameral EU Parliamentary Structure: Share of Winning Coalitions in all Possible Coalitions Among EU States (1995 to 2004 Allocation of Seats and Votes)

Decision rule in the Council and the EP	Simple majority rule in both the EP and the Council	71 percent rule in the Council, simple majority rule in the EP	71 percent rule in the Council, 60 percent rule in the EP	71 percent rule in both the Council and the EP
<b>Power to Act</b>				
Number of winning coalitions in the Council (Percentage in brackets)	16384 (50.00)	2549 (7.78)	2549 (7.78)	2549 (7.78)
Number of winning coalitions in the EP (Percentage in brackets)	16323 (49.82)	16323 (49.82)	8994 (27.45)	3413 (10.42)
Number of 'overlapping' winning coalitions in both chambers (Percentage in brackets)	15184 (46.34)	2549 (7.78)	2549 (7.78)	2399 (7.32)

As Table 4 illustrates, the capacity of an hypothetical EU bicameral system to act is affected by the choice of decision quotas in both chambers. A simple majority rule in the Council leads to a share of winning coalitions in the total of possible coalitions of 50 percent. Similarly, the share of winning coalitions in the EP (after rounding), is 50 percent. However, the winning coalitions in the two chambers are not

entirely overlapping: some coalitions among member states meet the simple majority requirement in the Council, whereas they are unable to reach the quota in the EP, although the simple majority provision holds in both cases. This is due to the fact that most EU states have a different relative weight in the EP and in the Council, and also did so in the time period under study here. For example, the representation of Germany in the EP in the mid-1990s - with ninety-nine seats - was larger than it was in the Council, where all four large EU states then held ten votes each.

However, a 71 percent quota in the Council in combination with the simple majority rule in the EP implied a drastic reduction in the overall share of winning coalitions. Conversely, this implied that the Council would have been more prone to possible blocking maneuvers. In the example used in table 4, the winning coalitions as a share of all possible coalitions in the Council were a mere 7.78 percent. By comparison, within the EP, the simple majority rule would again have led to a share of winning coalitions of 50 percent. Since all winning coalitions in the Council in this example would also have been winning within the EP - whereas the contrary, evidently, does not hold - the share of 'overlapping winning coalitions' was equal to the respective share within the Council, i.e. 7.78 percent. 'Overlapping winning coalitions' are those coalitions among EU states that could pass the decision hurdles in both chambers.

Finally, column four of table 4 illustrates another example: in this case, the majority hurdle in the EP would have been increased to 60 percent of the total (i.e., a decision threshold close to the current two-thirds provision applicable to some important issues, including decisions on the budget and on EU enlargement). As can be seen, the number of winning coalitions in the EP would have been reduced by a factor of almost two and the share of winning coalitions within the EP to 27.45 percent. As

the decision quota would not be changed in the Council according to this scenario, and since all winning coalitions within the Council also cleared the threshold within the EP, the share of winning coalitions that would have made it in both chambers was again 7.78 percent. By contrast, a more stringent rule in the EP – for instance, at the level of 71 percent – would have further decreased the share of possible winning coalitions within the EP. In addition, several of these coalitions would not have made it in the Council and hence, the share of 'overlapping winning coalitions' would have decreased to 7.32 percent in this case. Clearly, increasing the decision threshold in the EP, while holding constant the decision threshold in the Council, leads to an increase in the 'hurdle' to form winning coalitions in the EP and facilitates the formation of 'blocking coalitions'. In other words, in comparative terms, preferences of given actors within the EP can more easily be blocked with an increase in the decision threshold, while keeping the hurdle to reach decisions within the Council constant, generally strengthening the EP's bargaining leverage as compared to the Council.

Effects on EU institutions' 'capacity to act' can also easily be demonstrated by an earlier constellation of EC membership (the twelve members from 1986 to 1994). The 1994 EP elections were based on a general re-weighting of the number of seats for some EU member states, notably an increase in seats allocated to Germany in order to account for the effects of German reunification. The share of winning coalitions in the total, on the basis of the distribution of votes in the Council and seats in the EP for the twelve EC member states from 1986 to 1994, and under the same assumptions and decision rules as in the calculations for table 4, are shown in table 5.

Table 5: The Power of a Collectivity to Act for an Hypothetical Bicameral EU Parliamentary Structure: Share of Winning Coalitions in all Possible Coalitions Among Member States (1986-1994 Allocation of Seats and Votes)

Decision rule in the Council and the EP	Simple majority rule in both the EP and Council	71 percent rule in the Council, simple majority rule in the EP	71 percent rule in the Council, 60 percent majority rule in the EP	71 percent rule in both the Council and EP
<b>Capacity to Act</b>				
Number of winning coalitions in the Council (Percentage in brackets)	1924 (46.98)	402 (9.82)	402 (9.82)	402 (9.82)
Number of winning coalitions in the EP (Percentage in brackets)	2038 (49.77)	2038 (49.77)	1178 (28.77)	508 (12.41)
Number of 'overlapping' winning coalitions in both chambers (Percentage in brackets)	1822 (44.49)	402 (9.82)	402 (9.82)	382 (9.33)

As the figures in table 5 demonstrate, the overall capacity of the Council to act tended to be moderately higher with a membership of twelve than it was in the 1995 to 2004 constellation of EU membership (table 4). This pattern applies for decision-making in the Council for any constellation of membership when a decision quota higher than the simple majority rule is used, but also for the hypothetical bicameral system as studied above. Percentage shares of winning coalitions are higher with twelve than with fifteen member states, also under the 71 percent rule in the Council and the 60 percent clause in the EP (9.82 as compared to 7.78 percent 'overlapping winning coalitions'), or a 71 percent quota applicable in both institutions (9.33 as compared to 7.32 winning coalitions meeting the decision threshold in both chambers).

Again, however, switching from the simple majority clause in the EP to a more inclusive decision rule clearly decreases this institution's 'capacity to act'.

Further EU enlargement has reinforced the effects regarding a relative decrease in the Council's capacity to act (even more so in combination with the introduction of the triple majority clause as incorporated into the Nice Treaty). Accordingly, it is to be expected that decisions to be taken in the Council, as compared to the EP, were more easily 'blocked' with enlargement, as the EP's decision threshold still remained 50 percent of the total. Likewise, the share of potential winning coalitions in a bicameral structure tends to decrease with the addition of new members, as long as the institutions do not both use the simple majority decision clause. But when the simple majority rule is used in the EP, only the share of winning coalitions in the Council is reduced by enlargement. Hence, the Council is then made relatively more susceptible to blocking maneuvers in the EU's inter-institutional setting, potentially strengthening this institution's bargaining leverage as compare to the EP.

In practice, representatives of EU member states within the Council and the EP will rarely hold similar preferences or even vote identically in the Council and the EP. This situation will generally only occur if representation of a member state within the EP in terms of its political party representation is congruent to the political representation of this state within the Council of the EU. Relaxing the strong assumption about representatives of EU states voting identically in the Council and in the EP – used above for illustrative purposes – obviously leads to other assessments of possible winning coalitions in the EP as compared to the Council. Generally, the share of overlapping coalitions in all winning coalitions may be lower for a member state when its representation within the EP and the Council do not correspond: in the EP, the number of winning coalitions will decrease, for example, when coalitions between

some of the EP's Political Groups are unlikely to form. Hence, in reality, the overall number of winning coalitions in the EP may be more restricted. Exact calculations on this aspects are difficult to provide, however, as there are only more likely patterns of coalition formation, even within the EP, but no restrictions on coalition-building that can be applied with certainty.

However, under the simple majority provision, the share of connected winning coalitions -- in the sense of Robert Axelrod (1970), i.e. coalitions adjacent on an uni-dimensional policy scale -- only decreases to a moderate extent with enlargement. Examples using the 'one member, one vote' rule can illustrate this pattern.<sup>20</sup> Within a committee of four members, the share of connected winning coalitions (CWCs) in all possible connected coalitions, under the simple majority rule, is  $3/10 = 0.3$ . With six members, this ratio is  $6/21 = 0.29$ , with twelve  $21/78 = 0.27$  and with fifteen  $36/120 = 0.3$ . Hence, as long as the simple majority rule applies in the EP, with EU enlargement, the share of connected winning coalitions in all possible connected coalitions in the EP remains rather constant. Moreover, increasing EU membership does not necessarily lead to a higher number of Political Groups in the EP. Hence, with enlargement, there generally appears to be little influence on the share of connected winning coalitions in all connected coalitions in the EP. Clearly, if actor preferences within the Council would be distributed on a simple one-dimensional scale, and only connected coalitions among EU states would form, enlargement might have fewer effects as regards the decrease in the share of (connected) winning coalitions in the total.

Finally, calculations based on the provisions incorporated into the European Constitutional Treaty -- and more recently the Reform Treaty -- can illustrate the decrease in the share of winning coalitions within the Council with changes in the provisions for the double-majority clause. The following assessments depart from the

assumption that the second decision threshold within the Council is the fifty-five percent majority of member states requirement, and remains constant over time. The first decision quota is a population threshold.<sup>21</sup>

Table 6: The Council's Capacity to Act for Different Population Quotas between the Simple Majority Clause and Unanimity, Constitutional and Reform Treaties (27 States)

Population threshold		Capacity to act	
Population quota (in million)	Percentage share in total of population	Number of possible winning coalitions	Share of winning coalitions in total of weighted votes (in percent)
241	50	36994910	27.56
265.1	55	31226510	23.27
289.2	60	24505514	18.26
313.3( <i>current quota</i> )	65	17405425	12.97
	70	11350368	8.46
337.4	75	6345634	4.72
361.5	80	2924002	2.18
385.6	90	296479	0.02
433.8			
482 (unanimity)	100.00	1	7.45 x 10 <sup>-09</sup>

As table 6 illustrates, in accordance with other work on this issue, the capacity of the Council to act increases with the implementation of the double-majority clause incorporated into the revised version of the European Constitutional Treaty<sup>22</sup> and later the Reform Treaty - sixty-five percent of total EU population and fifty-five percent of the member states - as compared to earlier constellations of EU membership (even within the current EU based on twenty-seven members). In fact, this clause places the Council, as regards its 'capacity to act', between the 1981-1985 and 1986-1995 constellations of membership under the QMV provision, as table 2 illustrates.

Accordingly, *ceteris paribus*, implementation of the double-majority clause based on the Reform Treaty can be expected to slightly increase the relative leverage

of the EP as compared to the Council in the current situation as compared to the constellations and decision rules applicable since 1986. However, any further increase in EU membership or - as table 6 shows - an increase in the population threshold to be applied within the Council, clearly renders the Council more susceptible to blocking minorities again. For the time being, however, the Nice Treaty provisions certainly tend to make the Council more apt to blocking maneuvers and with this, may strengthen the Council's leverage as compared to the EP, which usually applies the simple majority clause.

Generally, an increase in the share of potential blocking minorities in the Council - or a decrease in the overall proportion of possible winning coalitions - is likely to weaken the relative leverage of the EP as compared to the Council in EU decision-making, according to the logic of figure 1. Hence, making the Council more susceptible to blocking maneuvers in general, summed over all relevant issue areas and preference constellations among EU states, most likely weakens the relative influence of the EP within the EU's inter-institutional setup. Therefore, as long as the EP decides on the basis of the simple majority rule and the Council on the basis of a more inclusive decision quota, enlargement can be expected to increase the relative leverage of the Council as compared to the EP and with this, may reinforce intergovernmentalism in the EU.<sup>23</sup> In addition, a highly inclusive decision rule for the Council, such as the one incorporated into the Nice Treaty, will tend to strengthen the bargaining leverage of the Council in the EU's inter-institutional dynamics.

Hence, in agreement with the general assumption by Shapley and Shubik as quoted above, if decision quotas are held stable within the Council and the EP, the relative power of the Council vis-à-vis the EP can be expected to increase with enlargement. Accordingly, on average over all possible issues and policy areas, the

range of feasible agreements (as in Robert Putnam's illustration) will be truncated in favor of the Council. Similarly, increasing the decision threshold in the Council - such as according to the provisions of the Treaty of Nice - while maintaining the decision quota in the EP, will tend to enhance the leverage of actors in the Council as compared to the EP.<sup>24</sup> But in this case, inter-institutional agreement also tends to be more difficult, because the likelihood that the win sets within these institutions overlap is then reduced.<sup>25</sup>

## CONCLUSIONS

In general terms, the weighting of votes and the size of the membership matter not only for the distribution of *a priori* voting power among the members of an institution, but also regarding the distribution of power between institutions. For example, EU enlargement decreases the Council's 'capacity to act' for any decision rule larger than the simple majority threshold. Accordingly, *ceteris paribus*, the higher the hurdle to pass decisions within the Council, and the larger EU membership, the weaker will be the influence of the EP in the EU's overall decision-making process, reinforcing EU intergovernmentalism. The shift in power to the detriment of the EP, caused by enlargement, can be expected to be most extensive when the Council acts under the unanimity clause. But it may also be considerable in the framework of QMV, as this paper demonstrates. Assuming ICC, enlargement decreases the Council's 'capacity to act' for any decision rule larger than the simple majority requirement.

Hence, as this paper shows - using earlier and more recent allocations of voting weights and rules for EU decision-making - the ability of actors to form blocking minorities within one of the institutions, in combination with the decision quota

applied within an EU institution and the distribution of actor preferences, is likely to affect the overall inter-institutional balance of power.

Using a graphical illustration by Robert Putnam and providing calculations as regards the share of winning coalitions within the EP and the Council of the EU, the paper shows that the higher the decision threshold in an EU institution, and the larger its membership, the more prone it is to the influence of 'blocking coalitions'. However, as long as the EP decides on the basis of the simple majority quota, whereas the Council does not, blocking coalitions can be formed more easily in the Council as compared to the EP. In other words, the extent to which the EU is influenced by 'intergovernmentalism' - i.e. the influence of member state governments as represented in the Council - is likely to increase with EU enlargement when decision thresholds remain constant.

The provisions on voting in the Council as incorporated in the Treaty of Nice, introducing a triple-majority clause for the Council, are likely to have favored the preferences of EU governments more strongly as compared to those advocated within the EP (e.g. Tsebelis and Yataganas 2004). However, the introduction of a double-majority clause as suggested by the Convention on the Future of Europe and adopted, in modified form, in the framework of the Reform Treaty, would work to partially mitigate these effects. Nonetheless, the power balance among the EP and the Council in the EU's inter-institutional procedures is also affected with these new provisions by increasing EU membership.

Evidently, for any specific constellation of actor preferences, the choice of a legislative rule – such as the EU's consultation, cooperation or co-decision procedure – matters for agenda-setting, the distribution of power among the EU's institutions and hence, for policy outcomes on individual legislative proposals. However, the size of

the win set within an institution is also affected by other factors. This paper shows how the increase in EU membership has made the Council more susceptible to 'blocking maneuvers' under the QMV rule over time and how the latest provisions and rules affect the Council's capacity to act.

In conclusion, the extent of intergovernmentalism in the EU is most likely not only determined by the choice of inter-institutional decision procedures, but is also affected by the decision quota applied within the EU's institutions, the distribution of voting weights and the size of EU membership. These effects can be demonstrated rather well by the means of n-person cooperative game theory and corresponding tools measuring an institution's capacity to act. Clearly, as this paper aims to show, such approaches may generate insights that can also be of interest to researchers utilizing the spatial theory of voting as an analytical tool to examine the balance of power among institutions in EU decision-making.

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<sup>1</sup> For recent overview of power indices and a possible extension of current power measurements, see Turnovec (2005).

<sup>2</sup> On the notion of win sets, e.g. see Shepsle and Weingast (1987).

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<sup>3</sup> Putnam (1988: 440-41).

<sup>4</sup> Putnam, in his approach, describes intergovernmental negotiations between two governments. He denotes the 'maximum outcomes' for these governments with  $X_M$  and  $Y_M$ , respectively and describes the effects of changing domestic win set size as follows: " $X_M$  and  $Y_M$  represent maximum outcomes for X and Y, respectively, while  $X_1$  and  $Y_1$  represent the minimal outcomes that could be ratified. At this stage any agreement in the range between  $X_1$  and  $Y_1$  could be ratified by both parties. If the win set of Y were contracted to, say  $Y_2$  (perhaps by requiring a larger majority for ratification), outcomes between  $Y_1$  and  $Y_2$  would no longer be feasible, and the range of feasible agreements would thus be truncated in Y's favor. However, if Y, emboldened by this success, were to reduce its win set still further to  $Y_3$  (perhaps by requiring unanimity for ratification), the negotiators would suddenly find themselves deadlocked, for the win sets no longer overlap at all." (Putnam 1988: 440-441).

<sup>5</sup> Inclusion of other institutions -- notably the European Commission -- into this exploration may be possible, but certainly renders the analysis more complex.

<sup>6</sup> For effects of the rules as incorporated into the Nice Treaty, e.g. see Felsenthal and Machover (2001) or Hosli and Machover (2004).

<sup>7</sup> For an early analysis regarding the 'flexibility' of decision-making see Buchanan and Tullock (1962).

<sup>8</sup> For an elaborate application of Coleman's index of an institutions capacity to act to the EU, see Leech (2002).

<sup>9</sup> This approach has been used, for example, by D. Marc Kilgour and Terrence J. Levesque in their analysis on how easily Canada's 1982 Constitution Act can be amended (Kilgour and Levesque, 1984: 462). For an application of the approach to the Council of the EU, e.g. see Peters (1996b), König and Bräuninger (1997b) and Leech (2002).

<sup>10</sup> On this issue, e.g. see Felsenthal and Machover (2004).

<sup>11</sup> Minimal winning coalitions were central, for example, to analyses provided by William Riker (1962).

<sup>12</sup> E.g. see Hosli and Machover (2004).

<sup>13</sup> The absence of stable patterns of coalition formation within the Council of the EU has also been shown, for example, by Thomson et al. (2004), using empirical data regarding preferences of governments and institutional actors in EU decision-making.

<sup>14</sup> Similar results have been presented early on by König and Bräuninger (1997a) who in their paper, however, rather focus on the inclusiveness of a player (as compared to its decisiveness) in the

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framework of different decision rules. However, their article also contains calculations on 'procedural decision probability' of different voting rules in the Council.

<sup>15</sup> This representation is used, for example, in the uni-dimensional spatial analysis of EU decision-making provided by Garrett and Tsebelis (1996).

<sup>16</sup> E.g. see Hosli (1995).

<sup>17</sup> The notation used here follows Brams (1990: 232).

<sup>18</sup> See Brams (1990). Opponents of voting power analysis tend to assume that only MWCs are taken into account by such studies (e.g. see Garrett and Tsebelis 1996: 274).

<sup>19</sup> The logic of this assumption may be illustrated by an explanation given by Michael Nicholson regarding the formula  $P(A \cup B) = P(A) + P(B) - P(A \cap B)$ : "Taking away the last term is necessary as it is contained in both  $P(A)$  and  $P(B)$  and would be otherwise double counted. An example of this is when a gamble is offered in which the prize is paid if a head comes up in either of two separate throws of a coin. The probability of winning is thus  $\frac{1}{2} + \frac{1}{2} - \frac{1}{2} \times \frac{1}{2} = \frac{3}{4}$ , which is the probability of each of the heads coming up separately minus the probability of them both coming up, in which case one of them is redundant as far as contributing towards success." (Nicholson 1989: 57).

<sup>20</sup> The following calculations are based on Hosli (2002).

<sup>21</sup> For simplicity, the following assessment ignores the respective provisions regarding the possibility of a few states to block decisions, or to delay discussions on an issue in the Council (most recent version of the Ioannina compromise).

<sup>22</sup> The Convention on the Future of the European Union had suggested lower decision thresholds for the double majority clause (sixty percent of population, fifty percent of member states), which would clearly have enhanced the Council's capacity to act as compared to the provisions incorporated by governments into the revised Constitutional Treaty.

<sup>23</sup> In practice, due to the influence of the positioning of actor preferences on ideological policy scales -- notably the left-right cleavage -- only specific coalitions will form within the EP (e.g. 'connected coalitions' as discussed by Axelrod 1970). However, increasing membership does not significantly affect the share of (connected) winning coalitions in the total of possible coalitions, as will briefly be shown below.

<sup>24</sup> A similar result, gained on the basis of insights from the spatial theory of voting, is provided by Tsebelis and Yataganas (2004).

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<sup>25</sup> These results correspond to Robert Putnam's (1988) findings regarding the likelihood of reaching international agreement and the distributional consequences resulting from the size of the respective win sets on the domestic and international levels.