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Theorizing Modes of Governance in the  
EU: Institutional Design and Informational  
Complexity

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*Theorizing Modes of Governance in the EU: Institutional Design  
and Informational Complexity*

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## Abstract

This article aims to provide a better understanding as to why different institutional arrangements have the particular structural properties which they are found to have. Drawing on the system theoretical tradition in sociology and on 'complexity theory', this paper presents an analytical framework whose underpinnings are in the idea that the structural characteristics of institutions and organisations are functionally related to the informational complexity which such social systems have to sustain. This paper starts with an account of the EU political system as an 'information processing' system. The 'informational complexity', which such a system has to cope with, is analysed and conceptualised along three different dimensions: density of communication, structurability of information and heterogeneity of beliefs and interests. Next an eight-fold classification of EU modes of governance is developed based on the dimensions of centralization/dispersion (of authority), strict/loose coupling (of system units) and inclusive/exclusive access (to decision making). Linking this classification to the model of informational complexity, it is shown that the dimensions of institutional variation can be interpreted as dimensions of institutional adaptation to informational complexity. Finally, the implications of the model are reflected in terms of the hypotheses it suggests.

**Keywords:** institutions, governance, functionalism, neo-institutionalism, open coordination, centralisation/decentralisation, diversity/homogeneity, sociology, political science

## Table of Contents

<b>1</b>	<b>Introduction .....</b>	<b>5</b>
<b>2</b>	<b>Political systems as information processing systems .....</b>	<b>7</b>
<b>3</b>	<b>Information processing and complexity .....</b>	<b>9</b>
	3.1 Density of communication .....	10
	3.2 Structurability of information .....	11
	3.3 Heterogeneity of interests and beliefs .....	12
<b>4</b>	<b>Informational complexity as a 3-dimensional space.....</b>	<b>13</b>
<b>5</b>	<b>Institutional patterns and modes of EU governance .....</b>	<b>15</b>
	5.1 Inclusive versus exclusive access .....	15
	5.2 Centralisation versus dispersion.....	16
	5.3 Strict versus loose coupling.....	17
	5.4 Classificatory matrix .....	18
<b>6</b>	<b>Institutional adaptation to informational complexity .....</b>	<b>19</b>
	6.1 Institutional adaptation by (ex-)inclusion of actors.....	19
	6.2 Institutional adaptation by centralisation/dispersion of authority.....	20
	6.3 Institutional adaptation by strict or loose coupling .....	21
<b>7</b>	<b>Hypotheses.....</b>	<b>23</b>
<b>8</b>	<b>Conclusion.....</b>	<b>24</b>
	<b>List of Figures.....</b>	<b>26</b>
	<b>List of References .....</b>	<b>29</b>

## 1 Introduction

Animated by the emergence and spread of ‘softer’ policy regimes, especially the Open Method of Coordination (OMC), recently much attention has been paid to the ‘modes of governance’ that are employed in the European Union (EU). The provisional result of this interest has been a proliferation of proposals concerning the classification of distinct patterns of policy-making (Treib et al., 2005; Laffan and Shaw, 2005; Rhodes and Citi, 2007). Important as analytically coherent classifications of patterns of policy-making may be, still a theory is lacking that may explain the observed variation among these patterns. This omission appears to be symptomatic of a more general theoretical deficit (Koremenos et al., 2001: 761-770). The basic question: ‘why do the different modes of governance that are in operation in the EU have the particular structural properties which they are found to have?’, is not sufficiently theorised, neither in EU studies, nor in the larger discipline of International Relations. This may seem remarkable as we are dealing, in fact, with an old acquaintance of social science, namely ‘institutions’ and their particularities.

The concept of ‘institution’ has been identified as ‘persistent and connected sets of (formal and informal) rules, specifying more or less clearly roles and competencies (‘how’), possible role incumbents (‘who’) and overall purposes of action and interaction (‘what’)’<sup>1</sup>. On this reading modes of EU governance are clearly examples of institutionalised forms of interaction. As Fritz Scharpf puts it: “Governing modes are defined by institutional arrangements specifying the constellation of actors participating in policy choices and the decision rules through which outcomes are to be determined” (Scharpf 2003, § 2.2).

Notwithstanding the current popularity of the institutionalist credo, it is yet rather modest what the different ‘new’ institutionalisms have on offer when it comes to the question: why do institutions have the structural features they do display? Putting the ‘logic of appropriateness’ centre stage, sociological institutionalism is predominantly interested in the impact of institutions on the behaviour of socialised actors and not so much in the causes of institutional variation (DiMaggio and Powell 1991, March and Olsen 1989 and 1998, and Katzenstein 1996). Historical institutionalists, in turn, may well try to explain institutional inertia as resulting from self-reinforcing mechanisms – like Pierson’s mechanism of ‘increasing returns’ – that ‘lock-in’ the initial selection of an institutional configuration; yet as it becomes an historical approach, historical institutionalism is not interested in a general and systematic explanation of possible variations of institutional design, but in describing and reconstructing the evolution and preservation of specific institutional constellations. Finally, rational choice institutionalism examines the incentives and prohibitions institutions present for actors as variables that ‘intervene’ in the rational-instrumental calculations of those actors. In sum, the existing institutionalist literature generally focuses on the question “Do institutions matter?”, and devotes limited attention to the topic of institutional design.

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<sup>1</sup> Bulmer 1998, Egeberg 2002, Hall 1986, North 1990, Thelen et al. 1992.

It could be countered, however, that the rationalist school has more strings to its bow than just its neo-institutional application. One could point for example to the work of Koremenos and her colleagues (2001 and 2004), at date probably the most far-reaching and influential attempt within the field of International Relations to deal with the issue of institutional variation. Positioning themselves decidedly as rationalists, Koremenos et al. identify five dimensions along which institutions typically vary: membership rules; scope of issues covered; centralization of tasks; rules for control; and flexibility of arrangements. In order to account for the variation in institutional features they subsequently isolate four independent variables that affect the choice of particular institutional design features: distribution problems; enforcement problems; the number of actors and the asymmetries among them; and uncertainty. Finally, they elaborate 16 theoretical conjectures on the relations between the dependent and the independent variables.

The analysis and explanation of institutional variation we will offer below halfway resembles the approach of Koremenos et al. Like them we will identify dimensions along which institutions vary and a set of dimensions that might account for this variation. Furthermore, as will be revealed in the article, our dimensions correspond to a large extent with those of Koremenos et al. although our approach allows for a contraction of the number of independent and dependent variables. It also provides a classificatory matrix, and incorporates in a single model all conjectures about the possible relations between the variables.

However, contrary to Koremenos et al. we do not start from the strong rationalist assumption that inter- or supra-national institutions are the 'self-conscious creations of states' and that 'states use these institutions to further their own goals, and design institutions accordingly' (Koremenos et al., 2001: 762). Instead of a priori treating the institutionalised practices of EU policy-making as 'rational, negotiated responses' (Idem: 768) to the policy-problems which member states face, we accept the observation that "changing EU governance is not just a product of 'history-making' decisions", and that "much of it is evolutionary takes place between such step-changes" (Bulmer 1998: 376; Christiansen and Reh, 2009 forthcoming). More in general, the model we will explore below is not geared to 'intentional' or 'actor centred' explanations. We may well share with rational choice/principal-agent approaches, for example, a concern with 'informational uncertainty' (in our vocabulary termed 'substantial complexity' or 'low structurability'). In contrast to individualistic/actor centred approaches, however, we do not reconstruct the problem of 'informational uncertainty' as only a problem of choice for individual actors, but as one of the dimensions of the complexity that processes of collectivised decision-making have to adapt to. This is not to say that individual actors behave without specific intentions or that their behaviour is void of any moral, practical or instrumental rationality; the point is just to recognize that institutional experimentation, selection and stabilization is a much too intricate process to be satisfactorily explained by the intentions of actors. Instead we attempt to develop a model that relates institutional variation to the complexity of the informational environment that collective forms of purposive action have

to deal with – and this with a view to our overarching concern, which is understanding the institutional peculiarities of EU policy-making.

In order to substantiate this idea we will proceed as follows: taking the system theoretical tradition in sociology (Parsons, Luhmann, and Willke) as a general starting point, first an account will be given of the EU political system in terms of an ‘information processing’ system (section 2). Next, drawing on ‘complexity theory’ (Gell-Mann, Kauffman, and Rosen), especially as it has been applied in organization theory (Mitleton-Kelly, and Boisot), a three-dimensional model will be developed of the informational complexity political systems have to deal with (sections 3 and 4). Third, a general scheme of institutional variation in EU policy-making is constructed based on three distinctions: namely, public v/s public-private, strictly v/s loosely coupled systems and centralisation v/s dispersion (section 5). Linking our model of informational complexity with this classification of EU modes of governance, we will argue that the dimensions of institutional variation can be understood as dimensions of institutional adaptation to informational complexity (section 6). Finally, we will reflect on the implications of our model in terms of the hypotheses it suggests (section 7).

Two caveats: Firstly, it should be emphasized that the scope of this paper is restricted to the theoretical exploration of an analytical model that attempts to capture the factors and functional relations involved in the explanation of institutional variation as exhibited by the different ‘modes of EU-governance.’ Secondly, in terms of a distinction between the polity, policy and politics aspects of processes of public steering, the focus of our model is primarily on the polity dimension. Nevertheless, since the three dimensions of informational complexity discussed below are obviously also related to the policy and politics aspects, within the limitations of this article, wherever possible, next to the polity aspects we will pay attention to the aspects of policy and politics as well.

## **2 Political systems as information processing systems**

The EU system of governance is often depicted as a distinct political system (Marks 1993, Hooghe and Marks 2001, Kohler-Koch and Eising 1999, Hix 1998 and 1999). Furthermore, it has often been observed that ‘Brussels’ – the central junction of the EU political system – is a veritable hot-house of information processing, where massive streams of politically relevant communications of a most varied origin come together, fuse and condense (e.g. Wessels 1996, Marks et al. 1996; Sandholtz 1996; Schaefer 1996). Emphasizing the role of the Commission in this respect, Alberta Sbragia remarks that “it is difficult to think of any institution in any traditional state which has access to the diversity of information gathered by the Commission” (Sbragia 2000: 229). Quite a bit of scholarly work is available which examines how the Commission strategically uses its informational ‘surplus’ in order to act as an “agenda-setter” (Pollack 1994; 2003) and “broker of interests” (Mazey and Richardson 1994; Beach 2005) aiming to initiate legislation. The Commission, however, is not the only supranational organization where streams of information condense. As Thomas Christiansen has shown, the

remarkable increase during the last 10 years of the political influence of the Secretariat of the Council is of a similar origin (Christiansen 2002). To summarise, the burgeoning literature on EU studies has often regarded the EU as a political system in its own right, and moreover as an information processing system.

As will be revealed below, we find this interpretation of the EU as an information processing system a particularly fruitful one. We first need to make clear, however, that in this paper, the term 'political system' denotes two particular assumptions, both derived from Luhmann's theory of social systems. First, we assume the basic elements of political systems to be constituted by communications, more specifically by 'political' communications<sup>2</sup>. Communications qualify as 'political' whenever they contribute to the societal process of producing collectively binding decisions, whether these communications use the formal channels of organized politics or the informal corridors of opinion-making and consensus-building (Luhmann 2000: 254). Accordingly, as a political system in its own right, the EU includes all those communications that seek to contribute in formal and informal ways to the process of EU decision making, and this at the supranational, as well as at the national or sub-national levels. The second assumption concerns the distinctiveness of political systems. In the following the political system is perceived as that functional subsystem of modern society that is geared towards producing decisions that are collectively binding<sup>3</sup>. As such, the political system can be distinguished from other functional subsystems of society (like the economy, the juridical system, the educational or the scientific system) which form its external environment. From the interaction between the political system with other social systems informational complexity emerges (see section 3).

The two assumptions outlined above form a particular ontological stance that in turn implies an epistemological consequence: since the political system is constituted of political communications a political study should concentrate on how information is initiated, transmitted, interpreted etc., and not on actors and their intentions or preferences. To summarise, to study the EU from a Luhmanian perspective, as will be done below, means to be bound to examine a highly complex process of digesting and assimilating politically relevant information – the process, that is, of producing politically relevant information out of politically relevant information. Naturally, the question of how to handle the enormous complexity of such an enterprise arises. The next section is devoted to this issue and to a way to deal with it.

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<sup>2</sup> In this we follow Luhmann, whose primary unit of analysis is not the individual or groups of people but social systems. In turn, these systems consist not of people, but of communications. As pointed out by King: "Luhmann's steadfast refusal to see people, their actions or their beliefs as the foci of attention for his particular version of sociology has to do with the fact that for him, sociology should be concerned with what is observable: the thoughts of people are not, whereas (most) communications are" (King, 2003: 2-7).

<sup>3</sup> Perhaps more precisely: which is functionally oriented to guaranteeing the societal capacity for producing collectively binding decisions (Luhmann, 2000: 84).



### 3 Information processing and complexity

The most fundamental problem that informs and inspires system theory is the problem of complexity. Consequently, any system theoretical approach to the political system of the EU cannot but confront the complexity involved in the processing of politically relevant information on such a scale.

Generally speaking, the complexity political systems have to deal with, originates from the interplay of two different environments, the external and the internal environment. The *external environment* of a political system is made up, predominantly, of all the societal subsystems it seeks to steer by its decisions and of which it is at the same time dependent with regard to material as well as informational resources. This external environment confronts a political system (like the EU) with the problem that the 'logic' of other functional subsystems of society differs from its own. A classical example is the often observed misfit between political concerns with environmental problems, leading for example to laws on maximum levels of permitted carbon dioxide emissions, and the cost/benefit calculations that may well convince economic actors to go for the eventual fines instead of reducing emissions. Put more generally, political systems have to deal with societal spheres which remain structurally opaque and resistant against attempts to dictate the course of their internal processes and structural development according to the principles, objectives and exigencies of political governance (Willke 1983; Teubner and Willke 1984; Willke 1992).

As stipulated above, the constitutive elements of a political system are (political) communications, not concrete individuals/actors and their properties. In as far as individuals and/or corporate actors contribute to the production of collectively binding decisions their properties constitute the *internal environment* of a political system. An often noticed property of human actors and organizations is that they are 'bounded' information processors, constrained by their own cognitive as well as energetic limitations. Another 'structural' property is their capacity to dissent, 'to say no', to disagree with cognitive and/or normative accounts of the world. Just as a political system cannot be sure of the efficacy of its societal interventions, it can neither take for granted its capacity to manage consensus and political support for specific policy proposals.

In order to 'simplify' the complexity that arises out of the interplay between the external and internal environment we will analyse it along 3 dimensions: density (of communication), structurability (of information) and heterogeneity (of actors' beliefs and interests). These three dimensions mirror the general dimensions of 'temporality', 'substantiality' and 'sociality' that within Luhmann's work function as universal coordinates for the (analytical) decomposition of any social system (Luhmann 1985). The identification of exactly these three dimensions is founded, firstly, on the already mentioned assumption that communications form the constitutive elements of social systems; and

secondly, on the assumption that communications have a tripartite structure<sup>4</sup>, a view that Luhmann derived from the lingo-pragmatic works of Karl Bühler but which can also be found in the writings of philosophers of language such as John Austin and John Searle (Heidenescher 1992).

### 3.1 Density of communication

A political system like the EU structures itself in the form of subsequent episodes marked by those specific communications which embody official formal political decisions<sup>5</sup>. Some decisions, such as the choice of a President of the Commission or the selection of Members of the European Parliament via European elections, may have the appearance of a one shot event. In most cases, however, the making of a collectively binding decision is an intricate affair, the complexity of which is tackled by organizing it as a succession of decisional 'events': decisions on problem definitions, on agenda setting, on proposing policies, on policy proposals, on modes of implementation and enforcement.<sup>6</sup> The time-management of this sequential order is apparent in e.g. the working program proposed by the President of the Commission (Endo 1999, Nugent 1994, Ross 1994, and Vahl 1992), the agenda of the Council Presidency (Kollman 2003, Svensson 2000, Tallberg 2004), the planning of Inter Governmental Conferences and, eventually, by the term of office of Commission and Parliament. Accordingly, the EU political system develops a certain temporal rhythm. This temporal rhythm cannot be purely arbitrary, however, as it has to fit, somehow, the temporal rhythms/structures of relevant systems in its societal environments: the pace of economic developments and cycles, the volatility of international politics, demographic dynamics, the rate of scientific and technological inventions, and so on. Put differently, to be effective as a system that produces collectively binding decisions with a view to intervening in the processes that constitute its societal environment, the EU-political system has to adapt to the temporal structures and dynamics of the societal systems it seeks to steer.

There is however a practical limit to the 'temporal' adaptation of a political system to its environment. If the volatility of the societal environment is sought to be matched by speeding up the internal processes of decision-making, the system creates an ever more acute scarcity of time. The result of this is the problem often taken to be at the core of informational complexity, commonly referred to as 'informational overload'. There is a sheer quantitative limit to the

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<sup>4</sup> Communications are realized by 1) utterances (Mitteilungen) that encode 2) informational contents, while a singular communication is only completed ('rounded off') by 3) an act of understanding (Verstehen) on the side of the addressee(s) of the information-bearing-utterance. Put simply, communication is typically a process (temporal aspect) of conveying information (substantial aspect) via spoken or written words and sentences, with the proviso that it takes at least two actors to realize a communication (social aspect).

<sup>5</sup> Following Niklas Luhmann we can think of decisions as caesuras, punctuating the ongoing stream of political communications, with the effect "that communication before the decision is different from what happens afterwards, yet in such a way that each communication is performed before a next decision and after an already realized decision" (Luhmann 2000: 166).

<sup>6</sup> For the importance of the multi-stage process see Arnold 2002, König and Hug 2006.

amount of information bearing messages actors can react upon during a certain time span, i.e. read or listen to, understand the meaning of, evaluate in terms of appropriate ensuing actions, etc. Past a certain point, the burden becomes too high, laming in the end the information processor – for example by an acute uncertainty concerning the attribution of priority to the incoming information.

The political system of the EU came near to a severe informational overload when the implementation of the Single Market programme began in the late 1980s. As Dinan observes (2004: 219):

*“Despite the euphoria surrounding the program, the work of enacting and implementing the necessary legislation was arduous, time consuming and unglamorous. [...] Draft legislation worked its way through dozens of committee meetings in national capitals, Commission and Parliament offices, the Council chambers before emerging in the pages of the Official Journal as full-fledged directives. Implementing the single market program was a Herculean bureaucratic task.”*

The eventual solution for this informational overload was the ‘New Approach’, which advanced ‘mutual recognition’ of equivalent national rules and restricted much of harmonization to agreeing only ‘essential requirements’ (Young, 2005: 98).

With a view to our theoretical concerns we label this temporal dimension of informational complexity as density of communications. ‘*Density of communication*’ refers to the number of communicative exchanges between certain actors, during a certain time span. In the case of the EU these (sets of) actors can be identified as members of the political and bureaucratic organizations and sub-units thereof, including the formal and informal networks they engage in, which, one way or the other, are in the business of preparing (collectively binding) decisions. Relevant ‘communications’ can take the form of official documents (White Papers and Green Papers), statistic reports, letters/mails, telephone calls, questions during Parliamentary sessions, comments during meetings, and so on, as long as they contribute to the preparation of (official) decisions.

### **3.2 Structurability of information**

‘Density of communication’ refers to only one dimension of informational complexity, highlighting its temporal aspect. To introduce a second, ‘substantial’ dimension we may point to the common experience, that the time needed to deal with a certain amount of information depends, among others, on the apparent content of the information to be processed – or more precisely: on the availability of cognitive strategies and problem solving routines which are able to structure, more or less easily, the incoming data into meaningful configurations, extract their relevant informational content and almost automatically suggest an appropriate reaction or course of actions. A lot of daily information processing is, indeed, based on modes of categorising information and linking it to existing knowledge which seem evident and

'natural'. Surely, this is not always the case. It may well be difficult to define and construct societal phenomena as political problems. It took countries like Germany and the Netherlands for example a long time to recognise the shortage of child-care provisions as a potentially political issue and to put it on the policy agenda, instead of leaving it to the intimate sphere of the family or to the market. Moreover, policy makers may only have a dim idea about the causal or functional structures of the social phenomena perceived to be 'problematic' and consequently may be highly uncertain about the appropriateness of the available policy instruments.

Taking a cue from the work of Max Boisot (1995; 2003) we refer to the (differential) availability of knowledge relevant to information processors in terms of the structurability of information. Low structurability, then, is associated with problems of 'overloading' cognitive repertoires, with cognitive scarcity. High structurability, on the other hand, will typically find expression in habitual behaviour and routines, often available to individual actors in the taken for granted form of 'tacit knowledge'. In general we may define '*structurability*' as the availability of well established cognitive and evaluative 'frames', i.e. of codes, concepts and interpretative models of the 'outer world' as well as of the actual context of information processing, which enable 1) to identify/categorise incoming information smoothly, 2) to evaluate its relevance, 3) to relate them – whether logically, causally, functionally, mathematically, or which way ever – to other data, while 4) providing a context which lends a pragmatic meaning to the newly extracted information in terms of ensuing (courses of) actions. In the context of politics, structurability also encompasses perceptions of political feasibility. Politicians and policy-makers usually take into account not only their ideological preferences, but also the expected un/popularity of decisions or policies, whether with a view to problems of implementation and enforcement, or with a view to the coming elections.

### **3.3 Heterogeneity of interests and beliefs**

The dimensions of 'density' and 'structurability' may suffice, perhaps, for an analysis of isolated, individual acts of information processing. The analysis of the informational complexity faced by political systems cannot evade, however, the problem of heterogeneity. It may well be the case that the information that enters the system is highly 'structurable', but it may also be the case that different, in itself coherent, but mutually exclusive cognitive frames are available and applied by different actors. For example, certain politicians and civil servants may approach political-economic problems from a Keynesian point of view while others stick to Neo-Liberal interpretations. Or, given different interests and expectations, the 'pragmatic context of meaning' may be interpreted differently by the actors involved. With a view to the EU it is clear that highly influential actors, like Mitterand and Thatcher, may have rather explicit, but often opposed perceptions of what European politics is, or should be, about (Bulmer and Lequesne 2005; Moravcsik 1998).

To refer to this potentially problematic dimension of information processing by social systems we use the term heterogeneity. '*Heterogeneity*' refers to the extent to which cognitive and normative frames are not shared by different

actors. This includes the extent to which a common adherence to, or 'solidarity' with the purposes and pragmatic conditions of the specific context of information processing as such is lacking. High heterogeneity would make time more scarce for a political system as it takes much more bargaining/negotiating to come up with decisions, albeit in the form of 'lowest denominator' compromises. The 1996-97 Intergovernmental Conference, for example, was supposed to deal with the contentious issues of QMV reweighing and the composition of the European Commission after Enlargement, but failed to do so due to a high heterogeneity of interests (Best et al., 2000: 2-6). As a result the political system of the EU was forced to convene a new IGC in February 2000 in order to tackle the 'leftovers' of the Amsterdam summit.

#### **4 Informational complexity as a 3-dimensional space**

Although the three dimensions of informational complexity – density, structurability and heterogeneity – are analytically distinct, they are of course inseparable in the actual processing of information by (the different units of) a political system. It cannot be assumed therefore that a decrease or increase in one dimension automatically implies a sharpening/relaxation of the scarcity-problem it represents. High structurability for example allows for a relatively high density of communication by diminishing the time needed for information. As such, high density is not per se an indicator of a serious problem.

This being recognised, the dimensions of 'density', 'structurability' and 'heterogeneity' can be taken to constitute the informational environment social forms of information processing have to cope with. If the combination of actual scores (in terms of a 'low'/'high' scale) on each distinct dimension can be said to constitute a 'complexity configuration' then the totality of hypothetically possible complexity configurations can be visualised as the three dimensional space or 'box' presented as Fig.1:

*Fig. 1: The three dimensions of informational complexity*

It may be assumed that at the extremes of the three dimensions, in the corners of the box that is, complexity configurations will assume more and more a purely hypothetical character<sup>7</sup>. Put differently, it may be taken as a fact

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<sup>7</sup> For example, Fig. 1 visually singles out two 'extreme' areas, 'hyper-complexity' and 'hypo-complexity'. The area of 'hyper-complexity' (or 'chaos') – very high density, very high heterogeneity and very low structurability – suggests a situation in which a group of completely idiosyncratic actors collectively had to produce new information out of an enormous amount of incomprehensible information. In contrast, 'hypo-complexity' – very low density, very low heterogeneity and very high structurability – would suggest a collective of almost completely socialised actors processing the few bits of information needed to perform their collective task in a rigidly standardised way, without any incentive for learning or innovation. The problem here is not so much to imagine such a 'frozen' pattern of interaction, but to imagine the precondition of its long-term survival: an equally rigid and invariant external environment.

of social life that all its forms and structures are situated in what complexity theorists often label as (the realm of) 'organised complexity'. Yet, given this realm it may well be the case, that the informational complexity that concrete organisations and institutions have to deal with changes over time, for example from complexity configurations close to 'hypo-complexity' to positions closer to 'hyper-complexity'. Different factors may influence such a change, for example the growth of the system in terms of an increase of relevant actors, the adoption of new tasks, changes in the input- or output-relations with external environments, the development (or wearing out) of cognitive frames, etc. For the EU we can identify its successive rounds of enlargement, globalization processes leading to a highly dynamic and volatile economic and financial environment, the recognition of the need for market correcting policies (positive integration), epistemic changes and the decline of permissive consensus/loss of legitimacy as factors which may enact such a shift.

The box of informational complexity can be used to give a preliminary visualisation of the basic thesis of this article, namely that the structural characteristics of organisations and institutions – or of sub-units thereof – are functionally related to the complexity configuration that characterizes their informational environment. For reasons we will clarify and substantiate in the following sections, we assume, for example, that at point "A" ( $d_1, s_1, h_1$ ) of Fig. 2 the organization will reveal a more loosely knitted network-structure, while at point "B" ( $d_2, s_2, h_2$ ) the organizational/institutional structure assumes features of a more hierarchical, bureaucratic organisation. The arrow between A and B suggests that one and the same organisation/institution may evolve from an A-type to a B-type organisation/institution. Intuitively we may expect such a change to be caused by the development over time of proven strategies and routines of information processing and of a grown command of incentives for conformity (whether based on positive or negative sanctions).

*Fig. 2: Complexity configurations and institutional structures*

It might be asked of course, why an institutionalized pattern of communicative interaction emerges in the first place: why is there an institution 'A' (or any other institution 'X'); or: why and under which conditions did a certain policy area become 'Europeanized' in the sense of becoming a matter of intergovernmental or supra-national concern<sup>8</sup>? What figure 2 suggests is only

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<sup>8</sup> Although a satisfactory answer to the question of the 'Europeanization' of policy areas cannot be given within the limits of an analysis that concentrates on the structural and functional aspects of modes of governance we will touch upon it in the reconstruction offered below of the basic dimensions of institutional patterns. We will at least consider that the institutional dimensions we identify and use to build a skeleton for the classification of modes of governance are inherently linked to 'politics' – 'politics' understood here as including the struggles for access to the political channels and arenas of interest representation, the struggles over the distribution of competences within the political system, and 'self-determination politics', i.e, the struggle over the content (and thus limitation) of collective actions, over communal autonomy and diversity versus drifts towards higher levels of

that if a certain policy area/issue becomes Europeanized under the conditions codified as  $d_1, s_1, h_1$ , then it will have the institutional properties of 'A'; under the conditions  $d_x, s_x, h_x$  it will however reveal the institutional properties of 'X'.

## 5 Institutional patterns and modes of EU governance

An inclusive and analytically sound classification of modes of governance is not just an inventory of 'methods' of policy-making as labelled by legal/constitutional documents or as suggested by commonly used divisions like the distinction between 'Community Method', 'Intergovernmental mode' and 'Open Method of Coordination'. Deduced from a theoretically informed understanding of the political system as such, the basic dimensions of classification should minimally enable a grouping of hypothetically possible patterns of 'governance'. This may well result in a matrix with 'blind spots', signalling that certain, analytically possible patterns are not – or not yet – empirically existent. It may also lead to the insight that a commonly used label, like 'Community Method', covers in fact several, analytically distinct patterns of policy-making. The scheme we will elaborate below centres on institutional (or 'polity') dimensions (in contrast to the 'policy' or 'politics' aspects of governance (Treib et al., 2005)).

If we turn to the state-of-the-art literature on institutional design for a clue we will discover that typically institutional variation is depicted as varying along the following dimensions: membership rules; scope of issues covered; centralization of tasks; rules for controlling the institution; and flexibility of arrangements (Koremenos, 2001). In a more general vein it can be stated that the institutionalization of a sphere of interaction bears upon the level of inclusiveness (and exclusiveness), its internal differentiation in terms of distinct structural components and the coordination between these components or 'subunits' of the emerging social system. Against this background and with a view to the classification of 'modes of governance' we re-specify these 3 basic functions of institutionalization in terms of the following dimensions, which we take to be fundamental and primordial in the analytical decomposition of modes of governance: 1) inclusive versus exclusive access to the policy process; 2) centralization versus dispersion of competencies; 3) strict versus loose coupling of system units.

### 5.1 Inclusive versus exclusive access

A genuine function of institutions is to specify access to the very communication processes they order. Political institutions, for example, determine 'who is involved in decision-making', who are the possibly acceptable incumbents of the formal and informal roles that form the building blocks of ordered political interaction. Institutions can be more inclusive or more exclusive, offering opportunities of access to a broad range of actors or,

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unification and more inclusive (but also more general and abstract) forms of collective political identity.

in contrast, only to a highly restricted set of elects. With a view to the analysis of contemporary practices of policy making, this general 'sociological' dimension of 'inclusive versus exclusive access' can be specified in terms of the involvement (or not) of private actors and organizations in public policy making. Against this background, our 'access-dimension' should be formulated as 'public versus public & private actors', or for short: the 'public/private actors'.

From a 'politics' perspective it may be noted that exactly because of their function to specify access to the corridors and arenas of decisional power, political institutions channel *and* provoke an incessant politics of representation, i.e. the struggle of all kinds of interest groups to have a vote, or at least a voice, in the process of policy making. Inevitably this is a struggle against those actors or groups of actors who are already 'within' and reluctant to share power.

## 5.2 Centralisation versus dispersion

At first instance, the content of the dimension 'centralization-versus-dispersion' of loci of decisional competence seems rather clear: whether one, or a very limited set of institutional actors/organizations have the monopoly of deciding on collectively binding decisions or whether such decisions can only result from the co-operation between a broader set of different institutional actors/organisations, each of them disposing of the (factual) capacity to veto specific outcomes. With a view to the multi-level system of the EU, the situation is not that clear, however. Here centralisation may refer either to a prerogative of the supranational level where it in turn may be shared by different supranational institutions, like the Commission, the Council and perhaps the European Parliament; or it may mean the explicit monopoly of decision-making of only one supranational institution, like for example the exclusive competence of the ECB in the field of Euro-monetary politics. In the following we will interpret 'centralisation' to refer to situations where the supranational level of the EU political system has, as the Lisbon Treaty labels it, an 'exclusive' competence of policy-making. 'Dispersed' refers then to arrangements of 'shared' policy-making in which supranational as well as other organisations and institutions, like national parliaments or local government, have an acknowledged 'say'. A rather strong example is the trajectory of 'constitutional' politics in as far as the ratification of an EU Treaty is dependent on the approval of national parliaments. More ordinary examples would be the organisation of the EU development or cohesion policies.

It should be clear, however, that the level of centralization that characterizes a certain EU mode of governance doesn't say anything about whether that mode is more *central*, in the sense of political importance, within the EU polity. For example, what we below will label as the mode of *EU corporatism*, exemplified by the Social Dialogue, is certainly a centralized mode of governance, yet in the world of EU politics the Social Dialogue represents a rather marginal form of policy making. EU policy making predominantly has a 'dispersed' character.

From a 'politics' perspective it may be noted that modes of governance not only condition the politics of representation but by 'taking position' on the



centralization/dispersion-dimension also channel *and* provoke what might be called 'constitutional' politics, i.e. the struggle over the distribution of competences and prerogatives within the political system.

### 5.3 Strict versus loose coupling

While centralisation is concerned with the 'geography' of decision-making, strict/loose coupling denotes the level of obligation for behavioural adjustment among the units of the system. A social system (an organization, an institution, etc.) may be called 'strictly coupled' if the behaviour of one of its units has direct and relatively fixed consequences for the behaviour of other units. We talk of 'loosely coupled' systems when "units separated by processes of differentiation are able to secure autonomy and to develop and to stabilize specific logics of and orientations for action, although they are still depending on and interacting with each other" (Heinelt et al. 2003: 139). Within the framework of an analysis of political systems strict coupling implies the competence of an actor (or ensemble of actors) to fix the premises of the future decisions of other actors. In a loosely coupled political system the decision of one actor may well have substantial impact on the 'evidential environment of choice' (Simon 1997) other actors consider when taking decisions, but all actors are accorded a considerable freedom to follow other suggestions and options.

From a 'politics' perspective it may be noted that the 'strict versus loose coupling'-dimension is inherently related to the 'politics of self-determination' i.e. the ability to resist and even disregard claims of unification/transferral of sovereignty.

We clearly avoid a conceptualization in terms of 'hierarchy versus anarchy' or 'hierarchy versus market'. In our view 'hierarchy/non-hierarchy' does not represent a fundamental, analytically independent institutional dimension but can be shown to represent a higher level of aggregation, encompassing the dimensions of centralization/dispersion and strict/loose coupling. In other words, hierarchies combine centralization with strict coupling. By implication, not each and every strictly coupled system represents a hierarchy. Strict coupling can be observed, for example, in highly competitive fields of interaction where the 'move' of one actor will provoke relatively fixed reactions by the other actors involved. These are not necessarily 'anarchical' situations. In fact, the predictability of behaviour in such situations is for an important part created by a common acknowledgement of at least some 'rules of the game'. As a classic example of strict coupling combined with decentralised jurisdiction may serve the international security regime of the Cold War. Within the context of the European Union we may think of the monetary politics of the member states in the early seventies under the regime of the 'snake', thus before the emergence of the European Monetary System (McNamara 2005). Decentralised and loosely coupled patterns of policy making are exemplified by the different instances of what nowadays is often called the mode of 'policy coordination', among which the Open Method of Coordination. Lastly, loose coupling and centralisation are typically exemplified by modes of policy-

making that allow only for non-binding recommendations, declarations and other forms of 'soft law' by supranational actors/institutions.

#### 5.4 Classificatory matrix

If we intersect the three institutional dimensions – coupling, centralisation and access – we arrive at an eightfold matrix (see Fig. 3 and 4).

*Fig. 3: The three dimensions of institutional variation*

For reasons of space, we will shortly inspect only four of the 'mini-cubes' (see Fig.4).

*Fig. 4: Four institutional patterns of EU policy making*

A strictly coupled, centralised and public institutional pattern is identified here as the mode of '*EU-governing*': top-down governing by predominantly public, supranational actors, whose decisions (e.g. regulations and directives) do fix the premises of decision-makers at national or sub-national levels. Examples would be the rulings of the ECB, the decisions of the Commission in EU competition policy and in general all those arrangements that enable supranational actors the use of 'hard law' while private actors and their organizations have only a marginal say (areas of exclusive EU competence).

A strictly coupled, centralised mode of governance with both public and private (or predominantly private) actors can be identified as '*EU corporatism*': policy-making centred at the supranational level where institutionally entrusted corporate actors like the Union of Industrial and Employers' Confederations of Europe (UNICE) and the European Trade Union Confederation (ETUC) have a substantial say in the formulation of binding decisions. A strong instance thereof would be represented by the Social Dialogue in the EU. It is perhaps the classic case of interplay between European legislation and private negotiation. In this case the social partners may end up agreeing between themselves a text which can be transformed, without change – and without discussion by the European (or any other) Parliament – into European law (Best, 2003: 5).

Loosely coupled, dispersed modes of governance with both public and private actors are represented by the various 'policy coordination' mechanisms that thrive in the EU in the last decade. As an ideal-typical example of *EU-coordination* we take the Open Method of Coordination (OMC) as defined by the Lisbon Presidency Conclusions (European Council, 2000, §37 and 38).

A loosely coupled, dispersed and public mode of governance is the institutional configuration we will label here as *EU-intergovernmentalism*. So far it has been the dominant pattern of most of the foreign and security politics of the EU.

## 6 Institutional adaptation to informational complexity

We may now go one step further in visualising our main thesis about the non-accidental relations between institutional characteristics and complexity structures, simply by projecting our three-dimensional typology of modes of governance on the box of informational complexity (see Fig. 5).

*Fig. 5: Dimensions of informational complexity and institutional structures*

The plausibility of this projection has, of course, to be argued for independently. To provide such a justification, we start with Boisot's suggestion that, in principle, there are two basic ways of dealing with complexity: '*complexity reduction*' and '*absorption of complexity*' (Boisot 2003). The crucial insight is that both these 'mechanisms' operate also on an institutional level, involving the three dimensions that constitute the skeleton of our classification of modes of governance. In the following sections we will argue that movements along the three dimensions of institutional variation can be perceived as institutional adaptations to changing patterns of informational complexity. We will start with the 'public/private'-dimension, then move on to the 'centralisation/dispersion'-dimension and finally to the 'strictly/loosely coupled'-dimension.

### 6.1 Institutional adaptation by (ex-)inclusion of actors

Social systems of information processing may succeed in reducing informational complexity, simply by strengthening their boundaries, i.e. by limiting the exchange of information between themselves and their environment. A rather crude way to accomplish that is to limit as much as possible the communication between the 'in-group' and the 'outer world'. Religious sects, certain Messianistic movements or highly dogmatic political-ideological communities may serve as extreme examples of that 'strategy'. Formal organisations may well use less crude means, but they often do subsume their members to a plight of secrecy and may, more or less rigidly, control the internal diffusion of information, while, like the ideal-typical 'Weberian' bureaucracies, trying to uphold a rigorous public/private divide. As the Staff Regulations of Officials of the European Commission makes clear, "an official shall refrain from any unauthorised disclosure of information received in the line of duty, unless that information has already been made public or is accessible to the public" (European Commission, 2004, Article 17 (96)). Moreover, all correspondence of civil servants working for one of the Commission's directorates must officially be signed by superiors, even correspondence between equals (Shore 2000, Ch. 7). But to state the general point: complexity reduction may be attained by moving in the direction of exclusive access to the channels and arenas of policy-making. The public/private-dimension of our typology of modes of governance can be interpreted as a useful specification of this more general dimension of inclusive/exclusive access.

Strengthening the boundaries of informational exchange obviously diminishes problems of density. But it will eventually lead to a loss of sensitivity concerning processes and developments in relevant societal environments. For systems which are strongly dependent on resources from, and output to highly volatile environments, strengthening the boundaries of informational exchange may not be an option. Instead they may well react to such an environment by allowing for an intensive exchange of information between themselves and systems in their environment i.e. by adopting the reverse strategy of 'absorption' of informational complexity. Regarding political-administrative systems this may take the form of encouraging all kinds of lobbying, of giving rather heterogeneous actors and civil society organisations a chance to bring in their concerns and expertise, by accepting the development of policy networks that defy the public/private divide, etc. In the EU this trend is observed in areas such as environmental and social policy (Lenschow, 2005: 318-319; Rhodes, 2005: 295). At the price of increasing informational complexity, permeable boundaries tend to make the organisation or institution more sensitive to the requirements and possibilities of their operational environments, exposing the organisation to enduring pressures of innovation and learning.

## **6.2 Institutional adaptation by centralisation/dispersion of authority**

Next, informational complexity may be addressed by differentiation of the overall system of information processing into unequal units/subsystems – for example in the form of a horizontal division into specialised ministries, agencies, departments, directorates, etc. As such it enables a parallel processing of information, resulting in a speeding up of the overall information processing of the system, while diminishing the density of communication per division. Combined with functional differentiation it allows for specialisation and the development of expertise which may positively influence the structurability of information, while it may diminish the problem of heterogeneity per unit as the number of relevant actors decreases sharply and in-groups may develop characterised by a strong identification with the unit's tasks and procedures.

Almost per definition the centralisation of policy competences means a differentiation of a political system into unequal units. This inequality concerns not only power differentials but also the role and position in the encompassing system of information processing. As Rokkan and Urwin observe, "the centre controls a disproportionately greater share of the total communication flow in the system than any alternative location" (Rokkan and Urwin, 1983: 7; Luhmann, 2000: 244). Within the context of the EU this observation correlates nicely with Sbragia's characterization of the Commission "as an institution [that] is at the very heart of a vast web of information sources; information from member-states flows to Brussels rather than to other member-states" (Sbragia, 2000: 229). In a more general vein: the 'central' units of a centralised political system can be perceived as functionally specialised on producing

collectively binding decisions based on a highly developed capacity of information processing.

Functional and sectoral specialisation supports the development of expertise and professionalism, thereby positively influencing the structurability of information. However, the emergence of functionally specialised units presupposes, in turn, a relatively high level of structurability i.e. of cognitive strategies that can be standardised and routine applied. The same holds for the centralisation of an administrative system. For all kinds of reasons however a sufficient level of structurability may not be given. Once reliable paradigms and 'frames' may have worn out, disproved themselves in the face of new or changed environments – or they may never have existed to begin with. Moreover, functional 'compartmentalisation' and specialisation give easily cause to incoherence seen from the perspective of the overall objectives and programs of the organisation, risk overloading the level of supervision and coordination, while it may lead to an 'under-load' of information in the case problems dealt with by different units are in fact interdependent (Simon 1997; Peters 2001).

As a reaction to the prerequisites and problems of functional differentiation and centralisation, organizations may well move into the opposite direction of a differentiation into equal units/subsystems. In general this would mean a loss of capacity to develop specialisation and expert professionalism. Under the condition however that the level of structurability required for functional specialisation is not given or has been lost, such a shift makes sense as it increases the overall capacity of the system for experimentation and innovation. The failure of an innovation in one of its units may endanger that specific unit, but not the system as such. The multi-functionality and similarity of the different units assures the possibility of a takeover of a specific sub-unit's tasks and functions by other units.

### **6.3 Institutional adaptation by strict or loose coupling**

Thirdly, informational complexity may be reduced by a 'strict coupling' between the different units of the system. As noted earlier, a system may be called 'strictly coupled' if the behaviour of one of its units has direct and relatively fixed consequences for the behaviour of other units. With regard to encompassing systems of information processing a strict coupling of the different units thereof would mean that the informational content of a communication/decision by a certain unit/actor is accepted by other units and actors of the system, as a premise of ensuing events of information processing/decision-making. If this is the case, the information communicated is transformed in a 'datum', treated as something 'given', while the communication process may consequently concentrate, not on the reasons a 'sender' may have had for selecting this specific information, but on its implications. From a slightly different perspective we may say that the transformation of information into data is a process of 'uncertainty absorption', in the sense of March and Simon (1993) and observe that it ameliorates problems of structurability and heterogeneity.

Whatever the advantages of strict coupling, one of its disadvantages is that it tends to generate a 'one-size-fits-all' approach. This may become highly problematic for an organization in case it has to confront rather heterogeneous environments and problem constellations. In reaction, organisations and institutions may start to absorb environmental complexity by moving into the direction of a more 'loosely coupled' system. As Boisot puts it: "The looser the coupling between agents the larger the degrees of freedom they enjoy in what they think and how they behave" (Boisot, 2003: 198). By 'loosening up', one might say, systems of information processing may acquire the 'requisite variety' or 'internal flexibility' needed to cope with the volatility and multiformity of their informational environment.

In practice, different mechanisms of complexity reduction and/or absorption will be 'in action' at the same time. Classic bureaucracies may serve as a well-known example of organisations characterised by the dominance of complexity reducing mechanisms, combining plights of secrecy and a public/private divide with horizontal differentiation of specialised units while being based on a strict coupling of vertically differentiated levels into an overall hierarchy. Above we hinted already at some of the problems inherent to mechanisms of complexity reduction. We may add to these that if hierarchic organisation is to serve a command and control style of running the operations of the system, it presupposes a high level of structurability at the lower levels of the hierarchy, i.e. well defined tasks and routine practices of information processing. The latter presupposes, in turn, a relatively stable and quiet environment, a prerequisite that may not be satisfied.

If complexity turns out to be irreducible, organizations may react by absorbing complexity. Again, the mechanisms of complexity absorption may combine, resulting eventually in loosely organised, network-type of social structures. Of course, there is a clear limit to the dominance of strategies of complexity absorption too. As it 'institutionalizes' heterogeneity it puts the unity of the system under severe strain. While rigid hierarchic bureaucracies may become obsolete by strictly sticking to their ironclad tasks and programs, at the other extreme, network type of structures may eventually represent an 'autological' concern with their own subsistence and reproduction only.

Let us once again return to the question of the emergence of European modes of governance, interpreted as the emergence of particular institutions. As observed above, political institutions, modes of governance being no exceptions, structure *and* provoke political struggles: about opportunities of interest representation, about the distribution of power and prerogatives over the different actors/organisations within the system and about the level of unification, transfer of sovereignty, inclusiveness of the political collective, etc. The coming into existence of a mode of governance may well be analysed as the (temporary) outcome of these complex political struggles. The heterogeneity-dimension of informational complexity can then be interpreted as mirroring time and again the state of these struggles at a given moment of time (yet without causally *explaining* the emergence of modes of governance as such; it would only (partly) explain the nature of a particular mode of governance that is coming into existence). The analytical and methodological

problems of a ‘political’ explanation of the ‘Europeanization’ of a policy area and the development of an associated institutional structure reside however in the fact that these different struggles are linked as to their eventual outcomes and effects, but this in mutual reinforcing as well as in antagonistic forms. To give just one example – the struggle for interest representation, i.e. for voice at the supranational level and the ‘exit’-options that go with it may well be antagonistic to a struggle for political identity that strives to tighten the boundaries between the supranational and sub/national levels in order to rescue the particularities and autonomy of the national political community (Rokkan and Urwin 1983; Bartolini 2005).

## 7 Hypotheses

By demonstrating the basic dimensions of our institutional typology to represent the co-ordinates of institutional strategies of adapting to informational complexity we have created a direct link between our concept of ‘complexity configuration’ and the 8-fold classification of EU modes of governance. The essence of our analysis can be presented in the form of some hypotheses with regard to the structure and dynamics of EU modes of governance.

The ‘structural’ hypotheses could be summed up visually in Fig. 6.

*Fig. 6: Institutional patterns of EU policy making*

Figure 6 illustrates predictions concerning the occurrence of eight ideal-typical modes of governance based on the assertion of the complexity configurations that characterise certain policy fields/issues. Translated into written statements it is ascertained for example that

- if the informational environment of policy area P is characterised by a relatively ‘low density’, relatively ‘low heterogeneity’ and relatively ‘high structurability’ then the institutional structure will resemble that of ‘EU governing’ (centralised, strictly coupled and public);
- if the informational environment of policy area Q is characterised by ‘low density’, ‘low heterogeneity’ and ‘low structurability’, then the institutional structure will resemble that of ‘intensive intergovernmentalism’ (dispersed, strictly coupled and public);
- if the informational environment of policy area R is characterised by relatively ‘high density’, relatively ‘high heterogeneity’ and relatively ‘low structurability’, then the institutional structure will resemble that of ‘EU-coordination’ (dispersed, loosely coupled and public/private);
- Etc.

As these are empirical hypotheses which are not analytically 'true' a substantiation of any of them requires 1) an empirical operationalization of the dimensions 'density', 'heterogeneity' and 'structurability' that are constitutive of complexity configurations and, based upon that, an assessment of the actual informational environment of the policy area in question; 2) an independent operationalization of the institutional dimensions (access, coupling, centralization) and, based upon that, an assessment of the factual institutional structure of policy making in this area.

At a more general level our theoretical framework raises interesting questions concerning the overall institutional dynamics of policy making in the EU. Should we expect policy areas to reveal in the long run a kind of institutional 'life cycle', to cover a, more or less extensive, cyclic drift through the space of informational complexity, as Boisot's analysis of institutional evolution suggests (Boisot 1995)? Or should we expect in the long run a general drift towards the more open, network type of institutional structures which are congenial to very high levels of informational complexity, as some general theories of society suggest (Luhmann 1985; Willke 1992). Indicative for the cyclic perspective would be the never ending succession of the emergence, and wearing out, and emergence, and so on of cognitive paradigms/policy frames and, perhaps, the restless 'pendulum' (Wallace 2005) of support for and resistance to the political integration of Europe. Suggestive for the second option is the ever increasing societal complexity that political systems have to cope with under the condition of a time/space-compression brought about by the unstoppable development of transport and communication technologies. But now we start to tread the path of speculation.

## **8 Conclusion**

This article set out to present a theoretical model that may contribute to a better understanding of the question "Why do different modes of governance have the structural properties that they have?" The baseline of our answer has been that institutional structure is linked to informational complexity: the institutional arrangements that structure policy making ('modes of governance') reflect the temporal, substantial and social complexity of policy making in a specific area at a certain moment in time. In order to substantiate this model we provided 1) a more precise account of the structure of informational complexity; 2) a systematic classification of different modes of governance; and, 3) a demonstration of the way in which 'informational complexity' and the modes of governance identified in the classification are related. We first introduced the notion of 'complexity configurations' as an expression for the density of communication, the structurability of information and the heterogeneity of beliefs and interests that are characteristic for a policy field at a certain moment in time. Next, we offered a systematic classification of 'modes of governance' based on the dimensions 'access', 'centralization' and 'coupling'. Finally we showed how institutional structures can be understood as specific forms of coping with informational complexity and with the informational complexities of different areas of policy making in



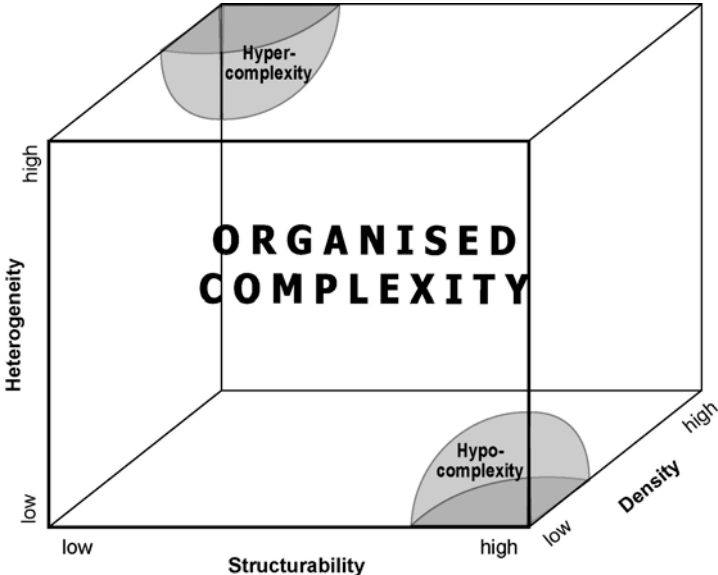
particular. Instead of repeating the (type of) hypotheses which our model suggests (see section 7), we would like to conclude this article by answering from a more general perspective the question of what can be learned from our theoretical exploration.

For a start, we would argue that an interpretation of the EU political system as an 'information processing' system is highly promising. It shows the direction in which an analytical-descriptive framework can be developed that is valuable for identifying and structuring phenomena that are hard to grasp by the conceptual lenses offered by the currently dominant approaches in EU-studies. An example would be the heightened sensitivity of our approach for structures and problems of informational complexity as it confronts EU policy making. Besides, it may open up the field of EU-studies for theoretical approaches and methods from a broader spectre of the social sciences than commonly recognized as being useful. Obviously our own account brought into play insights from the theory of social systems, information- and complexity theory.

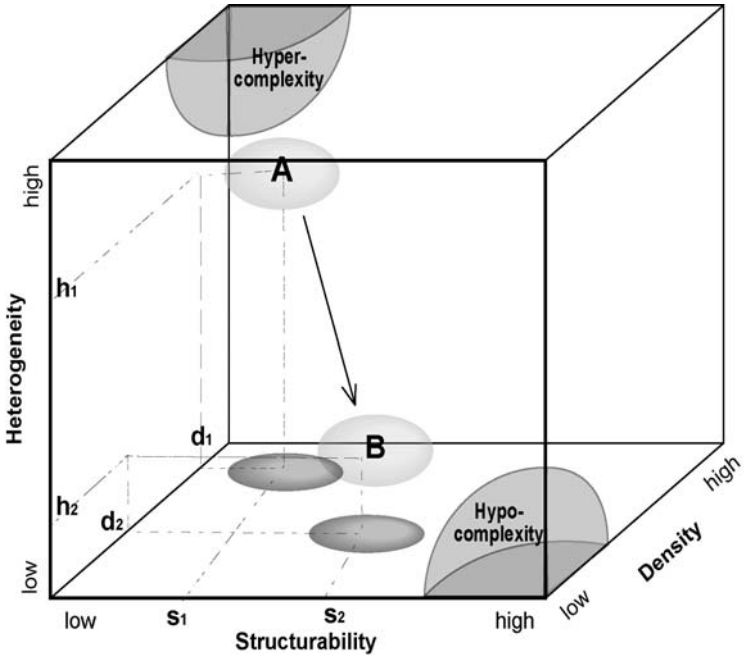
Our theoretical explorations suggest moreover that a functionalist approach may pave the way for a broader and more integrative account of the modes of governance employed in the EU than rationalist and actor centred approaches have on offer. Yet, as the references in this article demonstrate, our framework is able to incorporate many of the empirical findings and theoretical insights that have resulted from existing scholarly research in the field of EU-studies. We are, actually, prone to believe that our analysis of the dynamics of institutional drift may gain in depth and detail by incorporating concepts and viewpoints that are central to the new institutionalisms. In order to do that in a theoretically controlled and systematic way, however, a methodologically sound and robust empirical operationalisation is needed, which is an object of a future research agenda.

### List of Figures

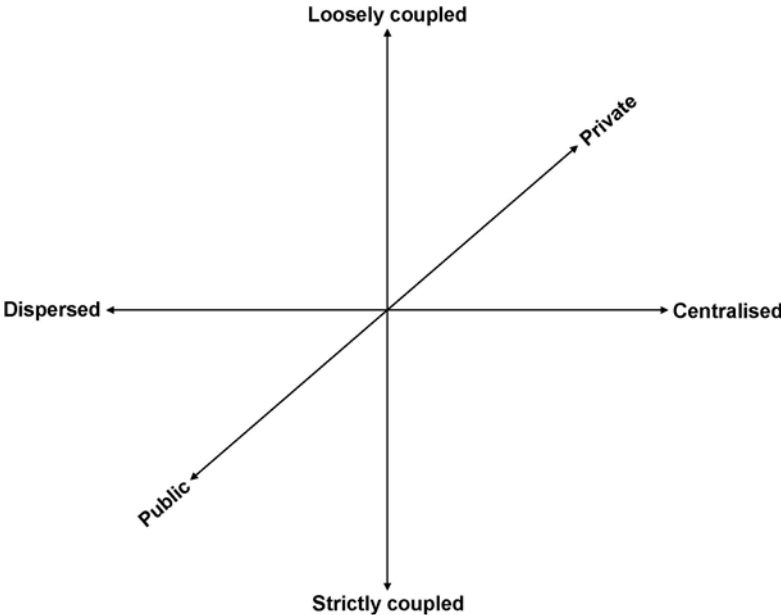
**Fig. 1:** *The three dimensions of informational complexity*



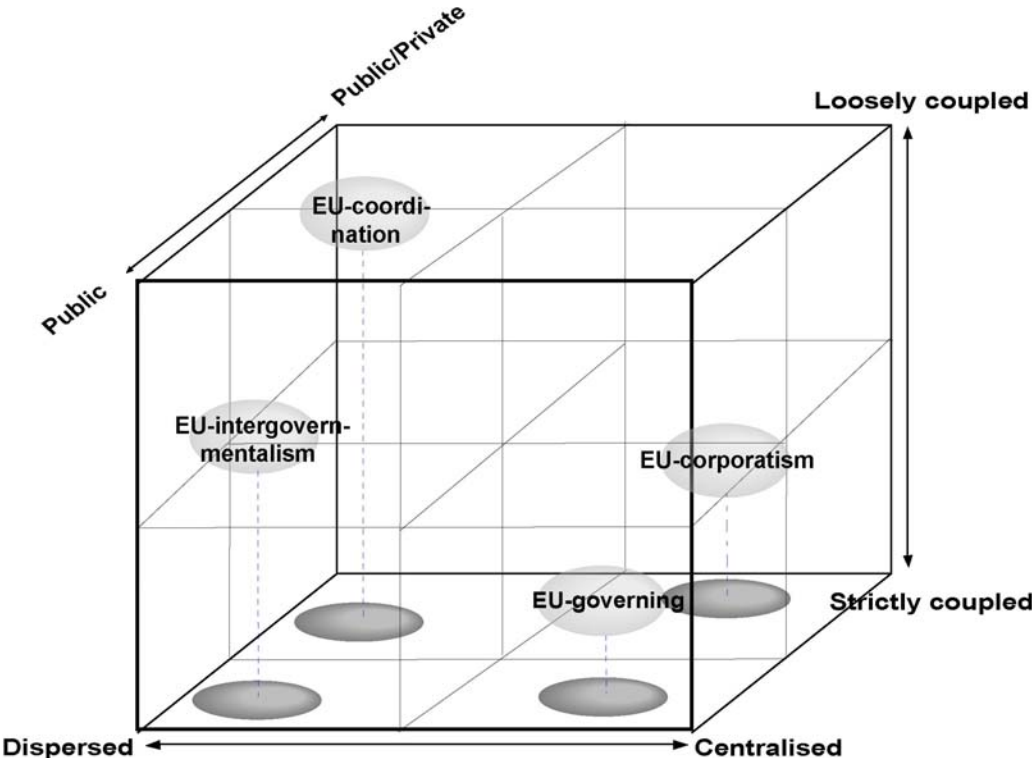
**Fig. 2:** *Complexity configurations and institutional structures*



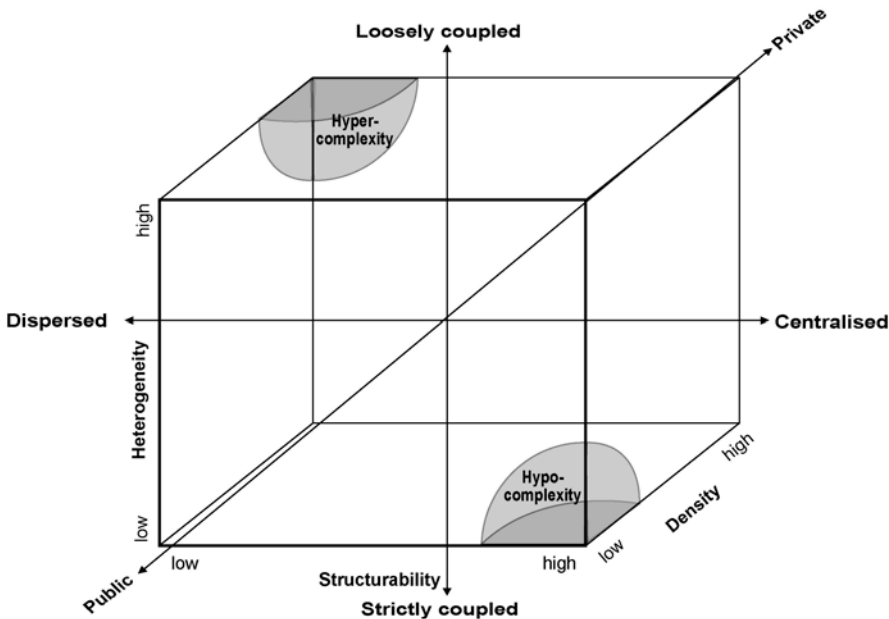
**Fig. 3:** The three dimensions of institutional variation



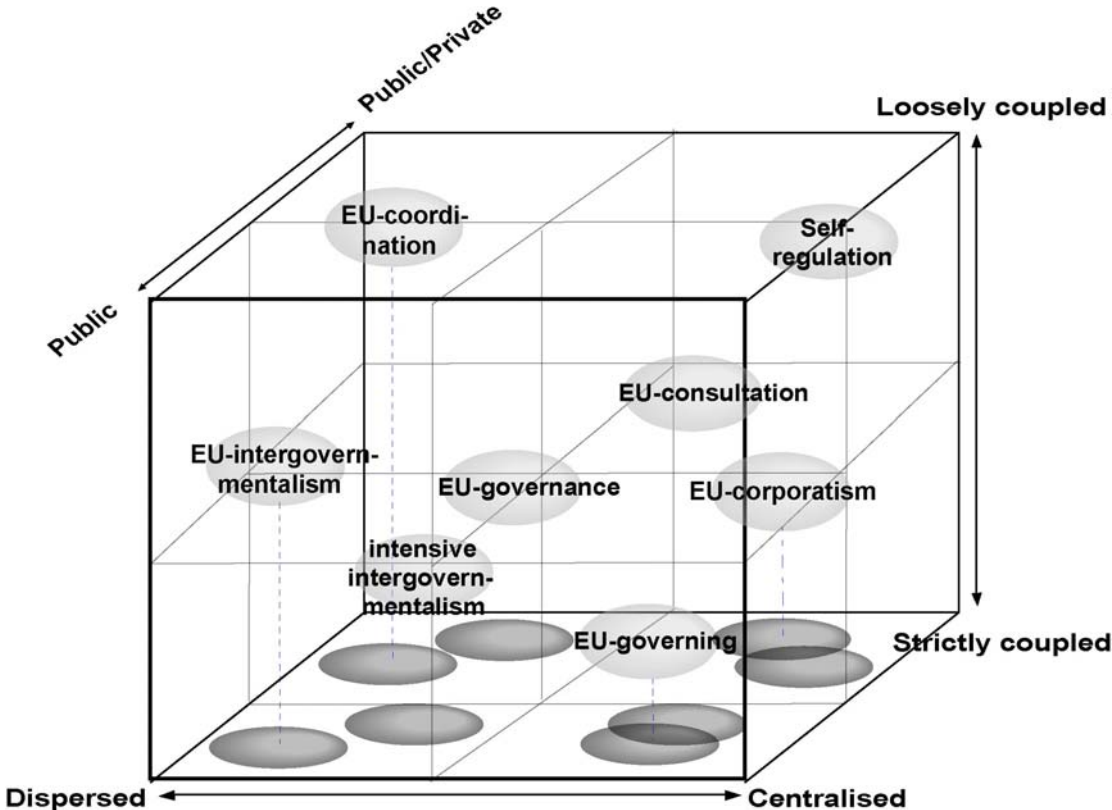
**Fig. 4:** Four institutional patterns of EU policy making



**Fig. 5:** Dimensions of informational complexity and institutional structures



**Fig. 6:** Institutional patterns of EU policy making



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