III. Governance – A Sociological Perspective

IIIa. Governance from a Sociological Perspective

Rafael Wittek[1]

1. Introduction

The goal of this article is to contribute to the theoretical foundations of a theory of governance in organizations.[2] My central argument is that such a foundation needs to be grounded in a theory of action focusing on the question of the conditions under which particular types of governance are likely to elicit the intelligent effort of organizational members.[3]

There is certainly no lack of attempts to systematize sociological theories and typologies of organizational governance and control (Etzioni 1961; Powell 1990; Ouchi 1980; Pennings and Woiceshyn 1987; Bradach and Eccles 1989; Grandori 1997; Reed 1989; Schienstock 1993a, 1993b; Scott 1981: Chapter A Ib). More specifically, two classes of typological efforts can be distinguished. A first line of reasoning conceptualize "hierarchies" as one of various alternative modes of governance, with "market-forms" and "network-forms" being possible other ideal–typical extremes. A second group of researchers emphasizes intra-organizational variations in governance structures and practices. Scholars in this tradition have produced a large variety of organizational typologies (for a still very informative overview, see Scott 1981: Chapter A Ib), with Etzioni's (1961) typology probably being among the most influential.

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[2] Space limitations prohibit an extensive discussion of the debate on the different definitions of the concept of governance.

[3] In this article, I will focus on the effects of organizational governance on performance, cooperativeness and creativity of organizational members. The antecedents of different forms of governance will receive less attention.

I contend that all of these efforts suffer from two major shortcomings. First, they exhibit considerable imprecisions with regard to the notion of "informal governance" and its interrelationship with "formal governance". This holds both for typologies inspired by the distinction between market, network and hierarchy – which is also increasingly considered as too coarse grained for the description of the empirically observable forms of governance (Grandori 1997) – and typologies of organizational control. Etzioni's typology distinguishes between nine organizational types of compliance relations based on the type of power (coercive, remunerative and normative) and the type of involvement of organizational members (alienative, calculative and moral) and is particularly instructive in this respect. Etzioni (1961: 5) focuses on "power relations in organizations between those higher and those lower in rank". He points to the distinction between normative power in vertical relationships ("pure normative power") and horizontal relationships ("social power"), and suggests that

> "the power of an 'informal' or primary group over its members [...] becomes organizational power only when the organization can influence the group's powers, as when a teacher uses the class climate to control a deviant child, or a union steward agitates the members to use their informal power to bring the deviant into line" (1961: 6).

However, rather than elaborating on this promising distinction and discussing its implications for the interrelationship between formal and informal control, Etzioni elects to "treat these two powers as belonging to the same category" (1961: 6), because they rest on the same set of means (manipulation of symbolic rewards). As a result, his typology makes it difficult to disentangle the concepts of formal and informal control or governance both theoretically and empirically.

The second shortcoming is related to the inconsistencies with regard to the theories of action that are used to conceptualize and model different forms of governance. More specifically, three general theoretical frameworks seem to guide research on governance. Each of them considers a different aspect of governance to be the most crucial dimension. Rational choice theorists see governance primarily as incentive structures that influence individual interests. Proponents of culturalist explanations conceptualize governance primarily as the socialization and internalization of norms and values, and consequently consider governance practices as the definition of identities, the manipulation of symbols and cognition. Finally, structuralists consider the behavior of individuals to be primarily determined by their position in institutionalized power structures.

All three perspectives have produced numerous theoretical and empirical studies on governance. On the theoretical level, the question of to what degree an integration, or synthesis, of these approaches and their core elements – incentives, norms, structures – into one single model is fruitful and possible (Lichbach 2003), provoked two opposing answers. On the one hand, proponents of synthetic meta-theoretical strategies suggest integrating elements of different paradigms into a single approach. An example for such a synthetic effort in organization studies are the attempts of some rational choice theorists to integrate structuralist (e.g., social

networks) and normative (e.g., framing effects) elements into their explanatory framework (for an overview of such attempts see Wittek and Flache 2002b). On the other hand, critics of synthetic approaches suggest that rivaling paradigms should not be combined, since the underlying assumptions often contradict each other (Lichbach 2003: 141).

With regard to the problems that these theoretical inconsistencies produce for an empirical operationalization of different forms of governance, Etzioni's typology again provides an instructive example. Here, the three forms of "involvement" or action orientations (alienative, calculative and moral) represent one of the two key dimensions of the organizational typology of control. As Scott (1981: Chapter A Ib) has remarked, rather than being independent, both dimensions are highly correlated, because there is a strong reciprocal interrelationship between the type of sanctions and the type of involvement. As a result, the information about the type of involvement offers little additional information once the type of sanction is known. Furthermore, rather than endogenizing the motivational basis for behavior in a theory of action, the typology cannot tackle the question of the conditions under which specific types of motivation will be most salient. One major purpose of typologies of organizational governance and control is to identify the conditions under which a particular type of governance is superior in eliciting intelligent effort and commitment of its members. Theoretical heuristics, which include the outcome dimension into their typology of organizational forms, are therefore not suited for our purposes.

In sum, what is needed is a more fine-grained, theory-guided heuristic for the operationalization and description of different forms of governance allowing for the distinction between formal and informal governance.

In what follows, I will first develop a heuristic that allows for a systematic description of the key elements of the three approaches to governance. I will discuss the action theoretic, micro-foundations of a theory of governance and their conceptualization of informal governance. Based on this discussion, I will then develop a simple heuristic for the description of different types of governance. In the third section, I will analyze the usefulness of the heuristic by applying it to the example of a Dutch research organization.

2. Rationalist approaches to organizations

The theoretical foundation of rationalist approaches has been laid by economic theories, in particular agency theory, transaction cost theory, and property rights theory. These theories prefer a step-wise approach to modeling economic phenomena. They start with highly simplified assumptions about human nature (e.g., full information of all actors or absence of transaction costs). These assumptions are relaxed only at later stages of model building, if the simple model proves to be insufficient.

Baseline Model. Agency-theory (Milgrom and Roberts 1992) provides a baseline heuristic for such a parsimonious model of the effects of organizational governance on the commitment and performance of organizational members. According to this perspective, the performance of an individual can be represented as a linear function of the expected reward for carrying out an action, while holding the expected costs of this action constant.

From an agency theoretic point of view, informal governance becomes a redundant category. Since rational managers are able to design organizations in such a way that the interests of management and employees are aligned, "informal" governance becomes superfluous. As a consequence, rationalist approaches to organizations focus primarily on "formal" governance (for an exception see Baker et al. 1999). Formal governance is based on rational decisions by management, because the implementation of a formal control structure is usually preceded by cost–benefit calculations. The rationality assumption is also at he core of modeling the effects of formal governance on organizational behavior.

Partly triggered by the lack of a rationalist model of informal governance, the parsimonious rationalist baseline model was refined over the years. A number of empirical studies have demonstrated the strong incentive effects of performance contingent pay. Similarly, more recent literature contains explicit efforts to model the phenomenon of "informal authority" and its effects in the context of a rational choice framework (Aghion and Tirole 1997; Baker et al. 1999). However, the baseline model has also received a lot of criticism. With regard to its micro-foundations, this criticism was directed mainly towards the insufficient conceptualization of rewards. It was argued that financial or material rewards are not the only kinds of incentives through which individual behavior can be influenced. The framework would benefit, it was suggested, from incorporating social incentives and intrinsic motivations.

Extended Models. Thus, rationalist approaches started to embrace the phenomenon of informal governance by extending their conceptualization of rewards and incentives. Three alternative suggestions extending the baseline model have been particularly influential: *Crowding-Theories* (Deci 1971; Frey 1997), *Gift-Exchange Theories* (Akerlof 1982; Lindenberg 2001) and *Reward Theories* (Kandel and Lazear 1992; Flache and Macy 1996; Holländer 1990; Spagnolo 1999; Wittek and Flache 2002b: 79f).

Crowding theories criticize the baseline model for its insufficient consideration of different types of rewards, and the interrelationships between these rewards. One of the core assumptions of crowding theories is that previous modeling attempts are limited to material rewards that are allocated by an external sanctioning party. Crowding theory argues that rewards can also be immaterial. Furthermore, rewards can have intrinsic sources, as might be the case when a stimulating and interesting activity or task is carried out. The main hypothesis is that the allocation of extrinsic material rewards to individuals who are already intrinsically motivated will result in the extinction of the intrinsic motivation. Empirical studies show that the willingness to perform in such situations is even lower than in conditions

where individuals do not receive any extrinsic rewards at all (Frey 1997). From a crowding theoretical perspective, the scope of the baseline model should be restricted in such a way that extrinsic material rewards will only cause higher performance if the affected individuals are not already intrinsically motivated.

Gift-Exchange theories emphasize the relational aspect of rewards. They assume that the employer can increase commitment and performance of employees if the rewards are part of a functioning social relationship governed by solidarity rules (Akerlof 1982). Empirical studies have shown that employees in firms that pay efficiency wages exhibit a stronger commitment to their company than employees in firms that do not pay efficiency wages (Mühlau 2000: Chapter A IIIa). From the perspective of gift-exchange theories, employees view wage levels that exceed those of other companies as relational signals. These efficiency wages, in turn, mobilize a normative orientation in which reciprocity, cooperation and fairness are salient motives. They thereby trigger the employee's willingness to contribute more effort than would be required by the employment contract. Thus, the theory of relational signals also limits the scope of the baseline model: higher rewards increase individual effort only if the employer complies with the normative principles of gift exchange, and the reward is perceived as a credible relational signal.

All *Reward Theories* share the assumption that individuals use the allocation of social approval to influence the behavior of other actors (Flache and Macy 1996). They consider social incentives as one major instrument for exerting social control. The necessary assumption that individuals are interested in social approval by others can be integrated into the core assumptions of egoism and the full rationality of the rationalist approach (Flache 2002). Specifically when combined with structuralist assumptions (see below), these models produce interesting predictions about the effect of informal networks on cooperation.

All three extensions of the baseline model also share an emphasis on different types of rewards. None of them puts much emphasis on a further differentiation of expected costs, the second element in the baseline model. Nevertheless, there is reason to expect that the type of expected effort would play a significant role in the motivation function. Different predictions would follow from agency theory, on the one hand, and crowding or gift-exchange theories, on the other hand. For example, from a *gift-exchange* perspective, supervisors requesting additional effort, in the sense of extra-role behavior, are likely to prompt lower levels of effort from subordinates with high commitment: the explicit request of a gift equates to a violation of the fundamental principle of gift-exchange; namely, the principle that gifts have to be given voluntarily. Subordinates who are asked to give more than they are formally expected to give will interpret this request as a signal for a supervisor's decreasing orientation toward solidarity. From the perspective of crowding theory, the explicit request for additional effort by an external agen – the boss – might result in the crowding out of intrinsic motivation. The degree to which explication of expected effort actually affects the performance of organizational members would be an important issue for further empirical investigation.

In sum, the type and explication of expected effort by supervisors or management is likely to have an impact on the effectiveness of a governance structure. The difference between formal requirements (in the sense of legitimate and legally enforceable rules and expectations), and informal requirements (in the sense of extra-role behaviors that go beyond the effort level specified in the contract) is likely to play an important role in this context.

3. Culturalist approaches

The common denominator of culturalist approaches is the assumption that (material) incentives are insufficient in explaining individual action. They emphasize the "cognitive side" of governance (Stinchcombe 2003): subjective interpretations, symbols, and legitimacy. Culturalist theories of action consider culture – in the sense of shared knowledge and norms – as the major action generating factor (Sackman 1991; Smircich 1983). Individual interests are closely tied to identities, and not necessarily directed towards the maximization of self-interest. Shared meanings, group identities, internalized norms, as well as the acceptance and legitimacy of governance practices are seen as the major elements of control. The most influential culturalist approach to governance and its effects is Weberian bureaucracy theory. Its core element is the formal authority of management – a form of power that is considered as legitimate and accepted by subordinates. Formal, bureaucratic or rational-legal authority is based on the application of formal rules and procedures. Management – the bearer of bureaucratic authority – has to prove its right to assert power by correctly applying the procedures. Formal authority is related to positions, which, in turn, are defined by rights and duties. A functioning bureaucracy in which the position holders comply with the rules is superior to other forms of governance.

Whereas rationalist approaches define away informal governance, almost the opposite seems to hold for culturalist approaches. Due to the strong emphasis on the importance of norms, cultural meanings and symbolic legitimization, informal and formal governance can hardly be separated, because ultimately all types of governance are culturally mediated. However, from a culturalist perspective, organizations can be distinguished according to the content of their cultures (e.g., "professional", "bureaucratic", "entrepreneurial", etc.), on the one hand, and the degree of normative consensus with regard to core domains of the cultural meaning system, on the other hand. Where consensus is high, an organizational culture is defined as "strong". What comes closest to the notion of informal governance, in this context, is the pressure that peers exert on the individual in order to comply with informal group norms. However, since informal norms can also be directed against the goals of management, the analytical value of this conceptualization of informal governance is limited.

Within the culturalist approach, two influential lines of reasoning explicitly address the problem of informal governance: *neo-institutional theories* (Meyer and

Rowan 1977; Scott 1995; Powell and DiMaggio 1991) and *hegemony theories* (Vallas 2003).

Neo-institutional organization theories emphasize that an organization will only survive if its practices are considered to be legitimate by its environment. Three mechanisms of legitimization are distinguished (Scott 1995: 35): legal enforcement, normative pressure, or imitation. In order to acquire legitimacy, organizations will embrace those governance practices that are accepted in their environment. An essential element is the legitimacy of the practice, not its rationally determined use. Forms of governance that lack legitimacy are doomed to failure, even if they would provide better solutions according to a given objective criterion.

Many hegemony theories are influenced by ideas on strategies of control as they were developed in the context of the so-called labor-process debate (Reed 1989). Hegemony theories see organizational cultures as the result of a deliberate manipulation by management ("management of meaning"), with the intention to foster the internalization of the goals set by management, and to impede the development of oppositional solidarity (Axtell-Ray 1986; Thompson 2002; Pina e Cunha 2002; Jones 2000; Grugulis et al. 2000; Wilson 1999; Hendry 1999; Finlay 1993). More subtle normative and ideological forms of control gradually replace traditional forms of governance based on coercion and formal hierarchy. Fundamental changes can be observed particularly in the legitimization of the expectations towards organizational members. In the classical bureaucratic model of formal governance, superiors legitimate their expectations by referring to their formal authority and power position. In modern organizations, one increasingly encounters strategies of functional legitimization of orders and expectations, e.g., backed by the necessity to respect "deadlines" (Lindenberg 1993). Where these strategies are successfully implemented remarkable increases in effort, cooperation and performance can be observed (Barker 1993; Kunda 1992; Perlow 1999).

4. Structuralist approaches

In structuralist theories of governance, interdependencies and their resulting structures, positions, and power relations play a central role. Important predecessors of structuralist approaches in organization research are contingency theories (Mohr 1971; Thompson 1967) and the theory of managerial strategies (Braverman 1974; for an overview see Reed 1989: 33–49). In the more recent organizational literature, network approaches are receiving increased attention (Jansen 2002), with social capital theory (Burt 1992; Coleman 1990; Lin 2001) playing a particularly important role. Contrary to contingency theory and the theory of managerial strategies, proponents of social capital and network theories increasingly are working towards a better micro-foundation of their models (Buskens 2002). Social networks play a role in two respects (Buskens and Raub 2002): as a major element

in the process of social control, and as an instrument for processes of learning and the exchange of information.

Both rationalist and culturalist micro-foundations assume a positive relationship between the level of rewards and the level of efforts, with crowding, gift-exchange, and reward models limiting the scope of this general claim to situations in which the actors are not intrinsically motivated: the employer respects solidarity norms, and the interest in social rewards is not stronger than the willingness to sanction free-riders. For structuralist approaches, a more complex picture emerges on the link between reward and effort.

On the one hand, dense networks can increase the cooperativeness of group members, since the potential loss of social relationships represents a strong sanction for potential free riders (e.g., Barker 1993). On the other hand, the exchange of behavioral confirmation in dense networks can also have negative effects for the production of collective goods (Flache 1996, 2002). This is particularly likely if free riders have many strong relationships in the group. Since criticism of uncooperative behavior in such situations is seen as a violation of friendship norms, individuals will often refrain from sanctioning free riders that they consider to be their friends.

The aspect of information and learning is central to *brokerage models* (Burt 1992). As a recent empirical study shows (Burt 2004), organizational members occupying a broker position in the informal network – i.e., they have many contacts to others in the firm who are not linked among each other – are considerably more creative in the production of good new ideas. The reason for their creativity is that persons who are embedded in different social contexts will be confronted with more and diverse opinions, which in turn provides them with the opportunity to synthesize new ideas.

Structuralist approaches often equate informal governance with "flat" organizational structures, self-managing teams and dense informal social networks. Differences in informal governance, therefore, are based on variations in the social and formal structure of organizations.

To summarize, there are considerable differences in the way previous research approached the phenomenon of "governance". Whereas the theories pertaining to a particular paradigm share similar assumptions, considerable differences exist between the three paradigms of rationalist, structuralist, and culturalist approaches. Rationalist explanations center around the notion of incentives and rewards, whereas structuralist and culturalist approaches emphasize the importance of legitimacy. Furthermore, each of the three approaches has its own conceptualization of informal governance. This partly explains the conceptual confusion around this issue in the literature, in which informal governance is equated, respectively, with dense informal networks, strong organizational cultures, peer pressure or subtle strategies of legitimizing control.

Based on the above-mentioned conclusions, two ideal–typical descriptions of formal and informal governance can be derived, each of which contains elements from all three paradigms.

Formal Governance has the following characteristics: (1) The major determinant of individual action is material incentives, and it is the supervisor or management who decides about positive or negative sanctioning of organization members. The decisive element of a sanction is material gains or losses (e.g., career opportunities or pay raises). (2) Management defines interdependencies and specifies the obligations associated with each formal position in the hierarchy. The resulting structures are defined by a clear web of power relationships and mainly serve the purpose of information flow and control. Compliance with the rules is ultimately monitored and sanctioned by management. (3) Compliance with the rules defined by management is legally enforceable, because they are based on legitimate power.

Informal governance combines the following elements: (1) The major determinant of individual action is social incentives, as they are realized in social exchange processes and through the allocation of esteem and behavioral confirmation. *Peers* – i.e., other organizational members occupying formally similar positions in the hierarchy – are at least as important as a source of social incentives as are supervisors or management. (2) Positions and roles in informal social networks determine access to information, and form the starting point for the emergence of norms. The power to define rules and expectations does not rest primarily with management or superiors, but depends on the structure of the network and an individual's position in the informal structure. (3) Legitimacy of rules is not grounded in a formal-legal basis. Non-compliance, therefore, also cannot be legally enforced.

Table 1 presents a schematic summary of the different approaches for the description and explanation of formal and informal governance. The two descriptions provide a rough sketch of two possible extremes on a continuum of different types of governance, as they emerge in the current literature.[4] They do not take into consideration mixed or hybrid types. The degree to which this heuristic is also fruitful for a more accurate description of such hybrid forms of governance will be addressed in the following section.

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[4] To avoid potential misunderstandings, it should be noted that the presented ideal-types serve the purpose of identifying possible empirical indicators. Space limitations prohibit a discussion of the theoretical problems related to such a synthesis (see Lichbach 2003: 115-167).

Table 1: Ideal types of formal and informal governance according to three different sociological paradigms

	Type of Governance	
Paradigm	Formal	Informal
Rationalism	Institutional Economic Theories 1. Financial incentives 2. Sanctions by superior	Gift-Exchange Theories, Reward models, Crowding-Theories 1. Social incentives 2. Sanctions by peers
Structuralism	Contingency Theory, Theories of Managerial Strategies 1. Control through formal interdependence and power structures 2. Rules and expectations defined and monitored by management	Social Capital Theory, Brokerage Models 1. Learning through informal social network structures 2. Rules and expectations defined and monitored by peers
Culturalism	Bureaucracy Theories 1. Authoritarian legitimization of expectations 2. Formally enforceable expectations	Neo-Institutional Theories, Hegemony Theories 1. Functional legitimization of expectations 2. Formally non-enforceable expectations

1. = Central theoretical construct; 2. = Possible empirical indicator

5. Formal and informal governance: a heuristic

Based on the insights highlighted in the previous sections, I will now sketch the key elements of a heuristic for the conceptualization of different types of governance. Such an endeavor has to address three major questions (see Wittek and Flache 2002a).

The first question is related to the above mentioned legitimacy of the effort expected from organizational members: is the expectation, or rule, a *formally* legitimate one that can – at least de jure – be legally enforced, or is it an *informal*, not legally sanctioned one? The second question asks who defines a specific rule or expectation: the principal or the agent? The third question asks who monitors and sanctions compliance or non-compliance to the rules, again distinguishing between the principal and the agent. These three dimensions allow a first rough typology of different forms of governance (see Table 2). I will describe and illustrate each of the resulting forms in turn.

Table 2: Heuristic for the description of different forms of governance and social control

Who defined the rule?	Who monitors and/or sanctions?	Legitimacy/Enforceability	
		high	low
Principal	Principal	Direct Governance	
		A. Formal Governance Principal defines and sanctions compliance of legally enforceable expectations	*B. Informal Governance* Principal defines and sanctions compliance to legally non-enforceable expectations
Principal	Agents	Indirect Governance	
		C. Formal indirect Governance Agents sanction compliance to legally enforceable expectations defined by the principal	*D. Informal indirect Governance* Agents sanction compliance to legally non-enforceable expectations defined by the principal
Agents	Principal	Indirect Social Control	
		E. Principal sanctions compliance to legally enforceable expectations defined by agents.	F. Principal sanctions compliance to legally non-enforceable expectations defined by agents
Agents	Agents	Direct Social Control	
		G. Agents sanction compliance to legally enforceable expectations, defined by agents.	H. Agents sanction compliance to legally non-enforceable expectations, defined by agents.

Direct formal governance is given in situations where an expectation, or rule, is formally legitimate (i.e., legally enforceable), and defined as well as monitored and sanctioned by the principal. An example for a legitimate expectation would be rules specifying the working time of employees, non-compliance to which is monitored and sanctioned by the boss, who makes use of an automated time registration system.

Indirect formal governance is given in situations where a formally legitimate rule that was defined by the principal is monitored and sanctioned by the agents,

e.g., peers making negative remarks about this behavior can sanction compliance to the formal working time schedule.

Direct informal governance is realized in situations where a rule that is defined, monitored, and sanctioned by a principal is not legally enforceable. For example, think of supervisors who suggest that their subordinates not use up all of their holidays to which they would be entitled.

Indirect informal governance is present if a rule that was defined by the principal, but that is not legally enforceable, is monitored and sanctioned by the agents. For example, ones colleagues, who also communicate their disapproval in case of deviation from this rule, may consider the bosses" expectation that the members of the organization do not use their holidays to be legitimate.

With regard to the remaining four dimensions, rules and the agents define expectations. All of them represent forms of direct and indirect social control. *Direct social control* represents situations in which rules and expectations are defined, monitored and sanctioned by peers. Usually, the rules defined here will have a low level of legal enforceability, because they are not based on formal authority. The introduction of "self managing teams" is likely to create a gray area in this respect, giving rise to a form of governance that can be described as *indirect social control*. Here, the agents define expectations and rules, whereas compliance to these rules is monitored and sanctioned by management. For example, many teams have considerable autonomy in the definition of rules (e.g., Barker 1993). Many of these rules might then be codified and approved by management later on, thereby acquiring the status of a legally enforceable rule, with all the consequences attached to it (e.g., the right to fire team members).

Based on this heuristic for the description of different types of governance, it is possible to develop measurement instruments to assess the relative frequency with which each of the different types of governance occurs inside an organization.[5] For example, one would expect that "modern" organizations that deliberately seek to replace hierarchical decision making through "horizontal" structures of consensus building exhibit a higher proportion of incidents associated with informal governance than organizations with a more traditional bureaucracy. Particularly useful in this respect seems to be the possibility of describing organizations according to the empirically determined *mix* of different forms of governance.

Apart from serving the objective of describing different forms of governance, the heuristic offers a basis for the elaboration and refinement of theories on the effects of the many different forms of governance, e.g., on the cooperativeness, performance, and creativity of organizational members. In the next section, I will use the example of governance in a Dutch research school in order to discuss some possible theoretical implications of the heuristic.

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[5] Note that the smallest unit of observation in such an effort is not the organization as a whole, but rules and/or events in which they are sanctioned.

6. The governance of research organizations: a case study from the Netherlands

Formal and informal governance are instruments that the management of an organization uses to secure the intelligent efforts of its members and to realize goals that it considers to be important. Governance practices are implemented to provide the necessary incentives for organizational members to strive for the achievement of management's goals, but also in order to provide the conditions and resources that are necessary for carrying out these tasks. In a research organization, an important goal is the productivity of individuals and research groups (e.g., number of publications, patents), where quality and relative impact in the field constitute crucial scope conditions (e.g., impact factors of the journal where the results are published). In order to illustrate the heuristic developed above, I will analyze some aspects of governance in the Dutch research system. The Netherlands provides an interesting case for this purpose, in particular when compared to Germany. Unlike Germany, The Netherlands scores relatively high in international comparisons of research productivity. With 39 "highly cited publications per million population", The Netherlands occupies the third position – after Sweden (45) and Denmark (40), and before the United States (38).[6] Germany (19) occupies a middle position (see Table 3). Also, with regard to the number of "scientific publications per million population" (see Table 4, data for the year 2000), the Netherlands (1095) score in the upper range, scoring higher than the USA (909) and Germany (771).

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[6] http://www.cordis.lu/indicators/ind_hcpublication.htm.

Table 3: Number of frequently cited publications in different nations
        (million inhabitants)

Country	1996–99, 1997–2000, 1998–2001
Sweden	45
Denmark	40
Netherlands	39
US	38
Finland	31
UK	31
Belgium	25
Germany	19
France	19
EU-15	19
Ireland	16
Austria	15
Italy	10
Japan	9
Spain	6
Greece	3
Portugal	2
Luxembourg	0

Source: http://www.cordis.lu/indicators/ind_hcpublication.htm.

Table 4: Number of scientific publications per million inhabitants

Country	1996	1997	1998	1999	2000
Sweden	1427	1434	1506	1551	1598
Denmark	1183	1218	1307	1331	1285
Finland	1094	1125	1167	1250	1270
UK	1006	968	1017	1040	1171
Netherlands	1027	1056	1068	1058	1095
US	785	764	770	770	909
Belgium	800	804	860	896	833
EU-15	682	692	739	755	803
Austria	657	710	760	788	777
France	689	700	743	750	774
Germany	635	661	724	727	771
Japan	476	476	519	535	629
Ireland	489	510	570	589	580
Spain	416	453	491	521	579
Italy	455	458	492	503	541
Greece	315	327	376	384	435
Portugal	170	195	218	274	289
Luxembourg	126	177	172	147	163

Source: http://www.cordis.lu/indicators/ind_hcpublication.htm

Figures like these are certainly only rough and incomplete indicators of the productivity and quality of research in a country. They nevertheless form the basis for the elaboration of research policies, political interventions into the system, and the evaluation of these interventions. The discussion about how to improve the productivity and quality of research focuses both on the macro-level (e.g., size of the budget for research allocated to universities, regulation of cooperation between universities and industry), and on the micro-level (e.g., policies to re-hire "top" scientists who have left the country, improvement of career-perspectives of promising junior scholars).

The meso-level is often neglected in these discussions: in other words, the governance of the research organizations themselves. In what follows, I would like to defend the claim that the quality and productivity of individual researchers strongly depends on the governance practices of the research organizations in

which they are embedded. I further contend that the best results in terms of quality and quantity of research output will be produced by those research organizations in which formal governance is supported by a complementary set of informal governance practices.

In the Netherlands, a large part of research activities and the Ph.D.-education is organized in so-called research schools.[7] There is no German equivalent to the Dutch research school. Research schools are in some ways comparable to the German Graduiertenkollegs, but they also have elements of a so-called Sonderforschungsbereiche.[8] The following description of formal and informal governance and control focuses on one relatively successful Dutch research school in the social sciences, the Interuniversity Center for Social Science Theory and Methodology (ICS). The school emerged from an informal collaborative network of social scientists, and was officially recognized in 1985. Examples are drawn from the author's experiences during more than 11 years of membership in this organization [for details on ICS, see the yearly reports; a more general description of the two sociological research schools in the Netherlands can be found in van El (2002); see de Haan 1994 for an overview of the development of research groups in Dutch sociology].

Formal direct governance. Like many other Dutch research schools, the ICS is the result of a cooperation between different universities. The allocation of funds by the three universities participating in the research school depends on formal accreditation by the Dutch Royal Academy of Sciences (KNAW). Research schools have to re-apply for accreditation every five years. Accreditation is based on a formal evaluation of the quality and quantity of research as well as the training program for Ph.D.-students. The formal evaluation has the character of a peer review and is carried out by an international committee of social scientists. Another source of internal funding is provided by successfully completed

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[7] In 2004, 109 of these research schools were formally recognized by the Dutch Royal Academy of Sciences. The mean number of Ph.D. students per school was 75 (ranging from 14 to 191; it should be noted that the majority of Ph.D.-students have an employment contract at their university and have the status of an employee, with all of the rights associated with this position): Seventy five of the schools consist of inter-university collaborations. The mean duration of a Ph.D.-project is five years. Mean "rendement" (i.e. successful completion of a Ph.D.-project) is 75% (ranging from 30% to 97%). For these and related quantitative details on the system of research schools, see Oost and Sonneveld (2004).

[8] In 2001, the German Research Foundation (DFG) subsidized 286 Graduiertenkollegs. From April 2000 until March 2001, 1194 dissertations were produced inside a Graduiertenkolleg, representing 8% of all German dissertations written in this period. In 1997 there were 256 Sonderforschungsbereiche at 58 universities. Most of them (45) received funding for 12 or 15 years (31). The nominal subsidy remained the same from 1980 to 1997 (2.1 million German Marks), which equals a *de facto* decrease to 1.5 million German Marks when corrected for inflation (reference year 1980). In 1997, 27% of all expenditures of DFG for Sonderforschungsbereiche mounted to 556 Million German Marks (Source: http://www.dfg.de/forschungsfoerderung/koordinierte_programme/graduiertenkollegs/download/GKErhebung2001.pdf+Anzahl+graduiertenkollegs+&hl=nl&ie=UTF-8.)

Ph.D.-dissertations: for each dissertation, the local branches of the research school receive a fixed amount of money from its home university. The *board* of the research school decides on the membership applications of individual researchers. For the latter, membership in a research school is often required in order to be able to participate in competitions for research money from the National Science Foundation (NWO), and be allocated "research time" from their home university.[9] Whoever is not a member of the research school often has to accept a higher teaching load. The board of the research school defines the publication norms (at least three publications in international journals of high standing, published in the course of three years). Compliance to this rule is monitored on an annual basis by the board itself. Whoever fails to comply receives a formal warning by the board. Researchers, who fail to comply for two consecutive years, may lose their membership in the research school. In almost twenty years since its foundation, several warnings have been issued; however, none of them resulted in the formal exclusion of a researcher.

In sum, this system of formal governance creates very strong incentives to be productive and publish in international journals, and is backed by a system of sanctions for non-compliance that have direct consequences for the individual researchers.

Indirect formal governance. In a situation of indirect formal governance, it is the agents who monitor and sanction legally enforceable rules that have been defined by the principal. In the research school, one example for this type of governance is the annual questionnaire based evaluation of the quality of Ph.D.-supervision that was developed and is carried out by the Ph.D.-students of the three locations in the ICS. Every year, all Ph.D.-students fill out a detailed questionnaire containing indicators for the quality of support and supervision, as well as questions on the general working conditions: frequency of meetings with supervisors, quality of the comments received by supervisors, satisfaction with the infrastructure (printers, computers etc.). The yearly evaluation is the result of an initiative by Ph.D.-students, which was immediately welcomed by the board as part of the system of quality assurance. The survey is one-sidedly anonymous, i.e., the identity of the respondents is unknown, but the identity of the supervisors is made public. The results of the survey, including a listing of each individual supervisor and the evaluation scores he or she received – are sent to all members of the research schools, and discussed in the board. As far as the formal enforceability is concerned, the indicators in the questionnaire are boundary cases. There are no formal rules concerning the frequency of meetings with supervisors. However,

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[9] Labor contracts for scientific personnel in Dutch universities usually specify the proportion of time to be devoted to research, teaching, and administrative tasks. The percentages are subject to yearly review and can be changed. Though the exact proportion of teaching vs. research time may vary from researcher to researcher, a convention is that full professors and associate professors have 60% of their time for research, and 40% for teaching. For assistant professors, the proportion is 40% research, 60% teaching. Post-docs and Ph.D.-students are supposed to devote not more than 15%–20% of their time to teaching obligations.

since one of the most important unwritten rules is that Ph.D.-students should always have access to their supervisors, even on short notice, severe deviations from this rule would result in sanctions by the board.

Direct informal governance. Informal governance was defined as a situation in which a principal defines, monitors and sanctions rules that are not legally enforceable. In the research school, this type of governance can be illustrated by the fact that all members are expected to actively contribute to the internal peer review system. For this purpose, internal symposia where Ph.D.-students and staff present their work are organized approximately five times a year. During the majority of these symposia, each presenter has to send his or her paper to two reviewers allocated to him or her. The reviewers comment on the paper during the symposium, and usually also provide a written version of their comments. The board encourages participation in these symposia. It represents a considerable extra investment of time; partially because a reviewer may have to comment on an article that is not directly related to his or her area of specialization. However, non-participation in this system cannot lead to official or formal sanctions. Thus, it represents an extra effort, that is desired by the board as part of the collective system of quality control, but which cannot be enforced formally.

A second example for direct informal governance is related to how the board deals with non-compliance with publication norms. It occasionally happens that individual researchers publish less than the required three articles in three years in internationally peer-reviewed journals. In the board's yearly discussion of each staff member's publication record, the context conditions that might affect the deviation from the norm are considered. For example, in one case the researcher in question had worked on a sizeable research proposal. In another case, the researcher worked on a topic that was relevant mainly for the Dutch context, and therefore published in Dutch (publications in Dutch journals do not count for the publication norms). In these cases, where deviations from the publication norms can be justified with legitimate reasons and special circumstances, no formal warning is issued, as long as the board is convinced that the researcher in question will soon meet the publication norm again. As this practice shows, informal governance need not only work toward an increase of expectations compared to what is formally enforceable, but can also soften, or reduce, the requirements specified by the formal rules. In the examples mentioned, this kind of "calibration" has had positive effects on the fairness-perceptions of those affected, but it could of course also lead to negative spill-over effects on other members of the organization.

Indirect informal governance represents situations in which the agents monitor and sanction non-enforceable rules defined by the principal. An example from the research school is the initiation and participation in local, topic specific discussion groups, in which Ph.D.-students and staff present and discuss their work. Focus, recruitment and participation vary in these groups. They are usually organized by Ph.D.-students. The groups provide a forum for specialists in a certain area of research (e.g., sociology of education, sociology of organizations), and have an

important function for the intellectual stimulation and discussion of specific problems.

Direct social control represents situations in which the definition, monitoring, and sanctioning of rules is realized by the agents themselves. For example, the majority of the Ph.D.-projects have a team of supervisors. Discussions of the project, therefore, often take place with more than one supervisor being present, and drafts of chapters or articles by the Ph.D.-student are commented on by more than one supervisor. This kind of embeddedness in project teams creates functional interdependencies among the supervisors, and the need for coordination and mutual adjustment. Moreover, it raises the pressure to keep promises, e.g., being prepared for the next meeting of the team. Social control is facilitated by relatively frequent contact among supervisors, but also among Ph.D.-students.

Indirect social control. The local staff as well as the board of the research school regularly collectively discusses the progress of individual Ph.D.-projects. These discussions are based on short progress reports produced by the Ph.D.-students. They serve to detect problems in the projects (e.g., delay, quality issues). Because at least one board member is represented in the team in each Ph.D. project, peers (i.e., other members of the board and the staff) give direct feedback on how the supervisors manage and supervise their Ph.D.-projects. During these meetings, possible solutions are discussed. They can also result in the formal decision to change the composition of the team, i.e. replace one or more supervisors. It is the director of research who makes the final decision about this move.

As this short description shows, many elements of formal and informal governance are realized in the research school under investigation. From the perspective of modeling the effects of governance, particularly those theories dealing with processes of informal governance seem to be particularly useful (see Table 1). However, it is also necessary to take the interrelationship between formal and informal forms of governance into consideration.

From the perspective of rationalist theories, social incentives are a crucial element for the work process. In the exchange of advice and help, the reciprocity mechanism, as it is specified in gift-exchange theories, is particularly important. This holds both for the interaction among Ph.D.-students, as for the exchanges between supervisors and Ph.D.-students, or among supervisors. At least as important is the institutional context, with e.g. material incentives in the form of grant money and the allocation of research time. These incentives are related both to the level of individual professors, as to the collective level of the research school as a whole. For example, accreditation of the school is a collective good. Losing it would have severe consequences for all participating scientists. Hence, the relationship between the board of the research school with their faculties, the board of the university, and the system of accreditation represent a system of very salient material incentives. Moreover, since the labor contract of Ph.D.-students expires after four years and they are entitled to receive unemployment money, which partly has to be financed by the university itself if the project is not finished in time, the research school as an employer has a very strong interest in seeing that

projects do not exceed the scheduled time. In sum, seen from the angle of rationalist theories of governance, the members of the research school face a large variety of very strong material and social incentives to work hard and participate in the system of informal social exchanges of sanctions, help and advice.

From a structuralist perspective, the case study shows that formal power structures are defined, but hardly used. Within the most powerful decision making unit in the school, the board, the procedure of a formal vote was used only once – although this is the legitimate way to reach board decisions according to the statutes of the school. Since the director of the school is formally entitled with far reaching decision-making power, all important decisions – despite being preceded by considerable debate and conflict – were ultimately based on consensus and carried by the board as a whole. The de-emphasis of formal power can also be seen in the formal dependency relationship of Ph.D.-students to their supervisors. Here, an exit option is built into the system: in situations where the relationships in the team and with the Ph.D.-student were troubled, the board may decide to change the composition of the team, which in rare cases resulted in the replacement of the main promoter. An important institution in this context is the "mentor": a staff member with whom Ph.D.-students can talk about their problems. The mentor can mediate in conflicts, or suggest other solutions.

The most visible structural manifestation of formal hierarchy in the research school is found in the rule that at least one member of the board has to be represented in each Ph.D.-project team. One objective behind this rule is for the board to secure first hand information on each project. Furthermore, it is the board, which ultimately makes the selection decision in the yearly application procedures for new Ph.D.-students. Another important structural element is the formal evaluation that takes place in the first year of the Ph.D.-project. The evaluation is done by the board in cooperation with the team of supervisors, based on a peer-review of written documents produced by the student, and results in a "go" or "no go" decision. In the latter case, the labor contract of the Ph.D.-student will be terminated.

As far as informal networks are concerned, the research school is characterized by locally (i.e., at the three sites of the school) very dense networks that are linked by weak inter-local ties. Cooperation between the three sites occur regularly, e.g., in the form of integrated research projects in which three to four Ph.D.-projects, a post-doc and their supervisors work on a specific topic. The board defines thematic research clusters which stimulate inter-local collaboration. Between the sites there is also some competition for excellent new Ph.D.-students. Another aspect of the informal structure is the maintenance of external relationships, in particular to scholars abroad. Since each Ph.D.-student is required to have an internship outside the research school, there are many opportunities to activate the social networks of the supervisors and initiate new contacts. The internship, thus, reinforces the strong international orientation of the research school.

From a culturalist perspective, it can be noted that status differences based on formal position are downplayed, whereas the quality of substantive contributions stands in the forefront. One of the most important organizing principles is the

functional legitimization of expectations through deadlines. The importance of deadlines is underlined by a number of measures, like the timely provision of papers for the internal review procedures, or the preparation of a realistic annual plan for the project. From a culturalist perspective, another important element of governance consists in the obligatory participation of Ph.D.-students in the three courses on theory and methods of the social sciences. The courses are developed and taught by the professors of the research school, and take place during the first 18 months of the Ph.D.-training. During this phase, Ph.D.-students receive an overview in state-of-the art developments in sociological theory, statistical methods, and their application. At the same time, they are socialized into the overarching research paradigm of the research school. The acquisition of this common ground facilitates communication between Ph.D.-students who often have different disciplinary backgrounds, and helps create a common language.

In sum, from all three theoretical perspectives, the research school shows strong traces of informal governance. These informal practices are embedded into a broader national institutional context of research policies, which provides strong material incentives. More specifically, in the organization under study, there seems to be a high degree of congruence between the system of informal governance and the broader national system of incentives. The informal practices function as a catalyst for these formal incentives and provide an essential social environment for individual researchers.

In the research school under investigation, the described model of governance has produced good results up till now, as the number of successfully completed Ph.D.-projects (112 at the moment of writing), as well as national and international formal reviews have repeatedly confirmed. Although many aspects of this case study certainly represent unique, idiosyncratic and "local" variants of governance, the case study also shows the strong influence of the national research policies. To what degree the described practices of informal governance and their interaction with the institutional research policies in a country have the postulated positive effects on the quantity and quality of scientific production would have to be assessed, of course, in a systematic comparative study. Nevertheless, the case study showed the crucial role that the meso-level of research organizations plays for the provision of productive and qualitatively good research.

7. Discussion and conclusion

Despite its central role for the functioning of organizations, the notion of governance is still insufficiently developed. The present article offered some suggestions to resolve this deficiency. First, an attempt was made to systematize available theories of governance by relating them to three more general paradigms of social scientific theorizing: rational choice theories, structuralist theories and culturalist theories. Particular attention was devoted to their concepts of formal and informal governance and the differences and interrelations between these two

phenomena. Second, based on this effort, a general heuristic for the distinction and empirical identification of different forms of governance and social control was developed. Central elements of this heuristic are the type of rewards and the types and sources of legitimacy of expectations. In a third step, the usefulness of this systematization and the heuristic was investigated by analyzing the case study of a Dutch research organization. By and large, the theoretical instruments proved useful as a tool for the diagnosis of different governance practices. The case study further showed that the interplay between formal and informal forms of governance should receive special attention in future analyses of organizational governance.

The suggestions elaborated in this article were primarily directed towards the conceptualization of a theoretical construct and the implications for its measurement. To what degree these suggestions are useful for systematic empirical research has yet to be shown. Likewise, this article did not discuss problems of modeling the potential effects of different forms of governance on performance, cooperation and productivity of organizational members. In addition to addressing the question of under which conditions which types of (informal) governance will yield the best results, governance research also has to tackle the problem of integrating different theoretical approaches. Although at first sight, an integration of the three paradigms seems to make sense due to the higher degree of empirical accuracy that this produces, one should not neglect the numerous incompatibilities between the different approaches (Lichbach 2003). Seen from this angle, it might be more fruitful for future modeling efforts to focus on a consistent derivation of hypotheses within a single paradigm, rather than starting immediately with synthesizing efforts.

As far as the Dutch research system is concerned, policy changes such as those made during the past months are likely to result in a significant transformation of the system. The new policies – inspired by the Anglo-Saxon model – put a much stronger emphasis on local graduate schools, and explicitly discourage interuniversity cooperation for the purpose of Ph.D.-training. Funding for the research school described here will stop in 2008. This will be complemented by local social science faculties receiving considerably more power in determining the policies for the training of Ph.D.-students. Whether or not this will lead to a further im provement of Ph.D.-training remains to be seen.

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IIIb. Governance and Compliance –A Comment on Rafael Wittek

Uwe Schimank

Rafael Wittek provides us with a competent overview of major theoretical perspectives on "governance in organizations" (Wittek 2007: 73); from this overview, he distills an interesting heuristic framework based on the distinction of formal and informal governance; and finally, he demonstrates the usefulness of this framework by applying it to so-called "research schools" in the Dutch university system. There is no doubt that his contribution is a good example of a sociological perspective on governance; I would particularly like to accentuate the close interplay of theoreticcal concepts and empirical work. Nevertheless, some remarks must be made, on the one hand, about points where his arguments still show a certain vagueness, and, on the other hand, on points where he seems to over-simplify a complex reality.

To begin with, I must raise the issue that a sociological perspective on governance is not restricted to having organizations as objects of study. Since Wittek from the first sentence of his paper – titled: "Governance from a sociological perspective"! – devotes his attention to nothing but organizations, readers unfamiliar with sociology might come to two wrong conclusions: First, that sociology deals only with organizations, at least with respect to governance, and second, that no other social science pays any attention to organizations in general, and governance in organizations, in particular. Both impressions are clearly wrong. Indeed, there are perhaps more sociological studies of governance in some societal sub-systems such as the economy or mass media, and on the level of society at large, for instance reflections on "global governance" of the "world society".

But of course, it is legitimate for a sociologist to contribute to the analysis of governance in organizations. However, in doing so, one should be especially careful to avoid an equation of governance with the production of compliance. Wittek states: "Formal and informal governance are instruments that the management of an organization uses to secure the intelligent efforts of its members, and to realize goals that it considers to be important". (Wittek 2007: 85) This is a much too narrow con-cepttion of governance, which is reduced here to top-down control or even dominance of subordinated units by a supervisory unit. Understood in this way, the concept adopts the perspective of an organizational leader who has to come to terms with his – potentially troublesome and lazy – workers. This is certainly Wittek's view and is underlined by his use of the principal-agent concept (which, incidentally,

originates from institutional economics) in his own analytical framework. It is also the traditional political science view on steering and guidance of society by the state. However, political scientists long ago abandoned this perspective on the role of the state and political decision-making. Experiences with ambitious planning efforts in the 1970s, at the latest, showed that politics is better understood as a continuous interplay of top-down and bottom-up actions, state actors and societal interest groups, politicians and citizens. And the same is true for organizations – we need only refer to the literature on "micro-politics" in organizations or the general theoretical perspective developed by Michel Crozier and Erhard Friedberg (1977).

To be sure, Wittek knows about these phenomena, and every good organizational leader has always known. Still, Wittek sticks to an identification of his analytical view with the practical view and, even more, the preferences of just one actor – the hierarchical leader – within a complex constellation. Instead, I would suggest defining governance, from a sociological point of view, very generally as mechanisms and patterns of mastering interdependencies among actors (Lange and Schimank 2004: 18f). First, this leaves open whether actors are related in a hierarchical or horizontal way to each other. Organizations, in this respect, are a rather special case. Second, the mastering of interdependencies can be an intentional accomplishment of all or at least some of the actors; but it can also be an "invisible-hand" effect intended by no one involved. Third, the criteria for judging some practice of governance as successful must not necessarily be the goals of particular actors, such as leaders, but could also be defined by other actors in the constellation, or independently by a sociological observer who might emphasize the functional prerequisites of the constellation's long-term stability.

In these three respects, Wittek has a very restricted understanding of governance. However, assuming this view for the sake of the argument, I would like to draw attention to an earlier theoretical concept of compliance in organizations, which might offer either an alternative to or an enrichment of Wittek's framework. He himself alludes briefly to Amitai Etzioni's (1961) typology of principal kinds of compliance: "coercive", "remunerative" and "normative" compliance. Cross-tabulating this with a typology of "involvement" of organizational members ("alienative", "calculative" and "moral"), Etzioni (1961: 12-14) distinguishes nine analytical types of "compliance relations". Three are "congruent" in the sense that the mechanisms used to achieve compliance and the motivational mood of "involvement" fit to each other: "alienative"–"coercive" (as in prisons and other "total institutions"), "calculative"–"remunerative" (as in business firms), and "moral"–"normative" (as in voluntary associations or political parties). The other six combinations are "incongruent", and Etzioni states that they cannot exist for long before changing to one of the "congruent" types.

It is surely important to compare Wittek's typology of eight kinds of informal and formal governance with Etzioni's nine "compliance relations" to see more clearly where Wittek extends Etzioni's state-of-the-art; and this might lead to the fruitful integration of some of Etzioni's dimensions into Wittek's framework.

Here, I can only illustrate this by somewhat re-interpreting Wittek's highly interesting empirical case of the Dutch "research schools".

Wittek emphasizes, on the one hand, the increased competitive pressure introduced to the Dutch university system by the establishment of stronger formal links between the amount of financial resources allocated to a research unit and this unit's ongoing productivity measured by publications and other indicators. Accordingly, the accreditation of a "research school", and delineation of the universities allowed to participate in it, depend on an evaluation of research performance, which is repeated every five years. On the other hand, these new formal procedures overlay but do not eliminate traditional informal mechanisms of local and supra-local academic communities; and Wittek supposes, in the generalization of this case, that it may be exactly this combination of "community" and "networks" framed by "market" – to use well-known labels – which explains the high performance of Dutch university research. Despite his rather dubious empirical performance indicators, his hypothesis seems plausible. Academic communities put under increased competitive pressure, or competitive pressure restrained by academic communities: These are two complementary readings of the same pattern of governance. In other words, there can be too much competitive pressure. The relationship between competitive pressure and performance is not simply linear but shaped like an inverted U: Up to a certain point performance increases with increased competitive pressure, but beyond that turning point any further increase of competitive pressure leads to decreasing performance.

With Etzioni's typology of "compliance relations" it is easy to see why we should expect such a non-linear effect of increased competitive pressure. Academics, as professionals in general (Freidson 2001), understand their organizational membership not as a "calculative" but as a "moral involvement". They certainly have to and want to earn money, just as every other employee, but this is not their top priority with regard to their work. Instead, most of all they want to do an excellent job, which secures them a high reputation among their academic colleagues. To this kind of organizational involvement "normative" mechanisms of compliance fit, as they are used within academic communities; and universities as organizations traditionally have "borrowed" these mechanisms from the academic profession by giving academic self-management an important role within their governance regime. However, if an increase of competitive pressure on and within universities goes beyond the mentioned turning point, this means that academics shift from their "moral" to a "calculative involvement" because "moral"-"remunerative" is an "incongruent compliance relation". As a consequence, gradually but irresistibly universities change from "normative" to "utilitarian organizations". But whether scientific productivity prospers within an organization functioning just like a business firm seems doubtful (see also Etzioni 1961: 114f).

For the political reforms of the governance regime of university systems, this means that a difficult trick has to be performed: Competitive pressure has to be turned up, but then stopped before it becomes dysfunctional. Since the right level of competitive pressure cannot be calculated in advance, the only thing political

decision-makers can do is observe closely the effects of each measure they take to increase competitive pressure and be prepared to reduce it as soon as they detect problematic effects. However, such a cautious mood of reform seems to be counterproductive at the start. To overcome strong forces of immobility within the university system, political actors have to be quite enthusiastic and even dogmatic about the "market approach" as the universal medicine for all kinds of performance problems in universities. Only with this kind of motivational energy do political actors feel strong enough to start fighting against the almost universal resistance at universities. But this "hot" driving force of reform activities does not fit to the necessary "cool" monitoring of the results of these activities, let alone a revision of certain measures. Perhaps the only possibility is a certain division of labor among different types of reform promoters – first comes the hour of the "true believers", and afterwards the "technocrats" take over.

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IIIc. Comment on Rafael Wittek

Thomas Groß

1. The notion of governance

The European Commission has illustrated the problem of defining the term we are discussing with the sentence "The term 'governance' is a very versatile one". (http://www.europa.eu.int/comm/governance/index_en.htm). This versatility is the reason for our difficulties in grasping the object of our reasoning, because we need some kind of common understanding as the basis of an interdisciplinary work. On the other hand, a definition should also not be too static, a danger I see if Wittek identifies governance with power. This is problematic because power is usually connected with hierarchical structures. I refer to the famous definition by Max Weber stating that power is the chance to find obedience to an order (Weber 1972: 28). This understanding of governance is as one-sided as the other definition often found to identify governance with non-hierarchical coordination. This concept referring to horizontal forms of negotiation and network organizations has been developed in contrast to classical models of state control, but it also neglects important aspects.

For me, the new quality of the term governance is characterized by its ability to describe hierarchical as well as non-hierarchical structures (Mayntz 2004). Only by the combination of both aspects will the necessary analytical value be sufficiently developed. Therefore, I prefer the broad definition of governance as the regulation of the coordination of actions by Benz (Benz 2004). On that basis, especially organizations may be analyzed, but also less institutionalized forms of interdependent actions.

2. Formal and informal governance

From a legal point of view, the relation between formal and informal mechanisms of coordination of actions is a special challenge. At first glance, the hypothesis that law by definition regulates formal structures and therefore has to be blind to informal structures is striking, but too simple. Although legal rules are

formal, in the sense that they are usually combined with sanctions, they may be constructed to be open for informal structures. This is done by creating fields of action to be used by the actors according to their preferences not determined by law.

The central mechanism guaranteeing room for informal action is to grant freedom for individual behavior or independence from institutional actors. In both cases, a complete regulation of behavior by legal rules is excluded. Although it is known, from the research on organizations, that perfect determination by formal rules is not possible even in bureaucratic structures, this fact is recognized as a norm by the guarantee of freedom. In the field of scientific research, the relevant provision in the German constitution is the individual fundamental right to freedom of science [art. 5 (3) Basic Law]. The relevance of this right is variable according to the different levels of the research system defined by our research group [see Chapter A IVa, Figure 1]. The highest impact is found on the micro-level, the lowest impact on the macro-level.

The micro-level, i.e., the research action of the individual scientist is almost exempt from legal regulation. Although there is a certain legal framework, e.g., for medical experiments, the protection of animals, or the environment, guidance of research to influence the content or even the results is excluded from the outset. Therefore, research, even if it is done by professors having the status of civil servants in the framework of a state university, can never be understood as the implementation of statutory rules. Freedom is guaranteed by the absence of regulation (Schmidt-Aßmann 1989).

From the perspective of the individual right to freedom of science, the macro-level of the research system is difficult to grasp. The distribution of competences in the field of research promotion on the federal and the state governments coordinated in the framework of the common responsibility (art. 91b Basic Law) is an important obstacle to central control. Therefore, the autonomy of the German research system is furthered by its pluralist organizational structure. This function, nevertheless, does not give certain organizations or procedures of political decision-making a constitutional guarantee of existence (Schmidt-Aßmann 1996: 1624).

The focus of the legal discussion on the organizational protection of freedom of science is on the meso-level, i.e., the individual research organization. One of the core issues of German science law is the guarantee of individual freedom through the legal structure of organization. This idea has been developed in detail for the universities, but what it means for extra-university research institutions must be further explored and is one of the main interests of my research project.

The central arguments on the relevance of organization for the protection of fundamental rights are found in the first important decision of the German Federal Constitutional Court in 1973. The most interesting step of this decision was the choice to depart from the traditional focus on the results of administrative action and to look at the structural framework of decision-making procedures. The main

steps in this landmark judgment, therefore, should be recapped: The first important thesis is that the membership structure of a faculty or university council has a tendency to influence the decisions taken by it. Because different groups working in a university have differing and sometimes contradictory interests, typical for the groups the organs are representing, the members have to coordinate these interests. To strengthen the position of professors, in that case, high qualification is also mentioned. In order to obtain a structure able to guarantee freedom of science, the membership of the councils has to be shaped in a way that promotes the achievement of optimal decisions. The court particularly stresses that a review of decisions *ex post facto*, if they are compatible with the freedom of science of the individual researchers and teachers, would not be sufficient. These premises have been used to argue for a dominance of the group of professors in the main university councils, although this consequence has been controversial from the beginning (Groß 2002). But the basic idea that the shape of an organization may help to guarantee the freedom of the members of the organization is common ground.

A second example where we find a constitutional argument on the relationship between individual rights and the structure of an organization is the decision on the membership of representatives of workers in the board of enterprises taken by the Federal Constitutional Court in 1979. The question was if the German legislation gave half of the seats in the board to the representatives of the labor force, whether this would be compatible with the property rights of stockholders. In this case, the court was very reluctant to go into detail on the relevance of the new structure of the board, and it gave a broad margin of appreciation to the legislator.

It is interesting to see that legal doctrine is very sensitive to the relationship between new structures and the results of decision-making procedures, e.g., for most German universities in the last years, new boards with members mainly from outside the university have been introduced. If they are given only a right to make recommendations, this may be regarded as a danger for the autonomy of the university based on the individual freedom of science (Laqua 2004: 173). On the other hand, the same problem is seen differently if the recommendations of the board are analyzed from the point of view of democratic legitimacy. In that case, they are not seen as problematic because this influence is outside of the formal competences to take binding decisions (Laqua 2004: 214). But if we look at the problem from a governance perspective, we recognize that an analysis of only formal structures is not sufficient. An understanding of the complex power relations in organizations also has to take into account informal influences. The question of how the law can react to this knowledge is nevertheless difficult.

3. The relation with legal forms of organizations

If you accept the thesis that the legal structure of an organization is the basis for a coordination of formal and informal mechanisms, the question arises as to whether there is a relationship between the legal type of an organization and the

governance structure. In the German research system, we find very diverse types of organization, mainly the limited company, the private association, and the foundation. As far as I see now, from the first results of my research, there is no clear correlation between the legal structure and the governance type. All models can be used to develop structures necessary for scientific purposes. A simple hypothesis like "an association is always organized like a network" does not seem to be helpful. It is always necessary to look at the structure of the organs and the other instruments of guidance.

Therefore, I favor the thesis that a type of governance is not found in a pure version, but we always have to look at the combination of several mechanisms of coordination. From a legal point of view, it is important to analyze the combination of vertical and horizontal structures, of hierarchical control and autonomous net works, in order to find a precise picture of the governance of research.

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