

WHO GUARDS THE GUARDIANS? PROTECTING A LATERAL CONTROL REGIME FROM ITS OWN OLIGARCHS

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ABSTRACT

The purpose of this paper is to combine insights from collective action theory and from a structural approach to contribute to a theory of control among peers. Drawing on a network study of a medium-sized Northeastern corporate law firm, I show that partners – all formally equal and locked in a cooperative situation – have developed an informal pattern of “lateral control” to help protect their common interests against free loading due to individual expressive problems. This pattern helps peers exercise early monitoring and sanctioning by providing status-based guidance for choices of “sanctioners” who exercise pressure on behalf of the firm. The analysis identifies partners who are most likely to be chosen as sanctioners, offers structural hypotheses to explain these choices, and outlines the implications of these findings for a theory of cooperation among peers.

INTRODUCTION

This paper is concerned with how members manage their social resources in order to enforce each other's commitment to a broadly understood labor contract. I argue that understanding this process requires using the concept of social capital as a very general one, encompassing any social mechanism characterizing and helping a corporate actor solve problems raised by members' cooperation. Citing Stinchcombe (1991: 367), Hedström and Swedberg (1998) provide the following definition of a social mechanism: "Mechanisms in a theory are defined as bits of theory about entities at a different level (e.g. individuals) than the main entities being theorized about (e.g. groups), which help to make the higher-level theory more supple, more accurate, or more general". A social mechanism is thus intrinsically multilevel. According to Merton (1957) and Hedström and Swedberg, its description must be sufficiently general to be useful in explaining comparable phenomena in very diverse situations and in a simplified way. They characterize theorizing through mechanisms as following four principles: explanation based on actions, explanatory precision, abstraction through selection of relevant factors, and reduction by eliminating black boxes between cause and effect. Following this understanding of the concept, it is possible to consider social capital as a collective asset, one that Leenders and Gabbay (1999) call "corporate" social capital, composed of an undetermined number of generic social mechanisms that enhance organizational performance.

Such mechanisms can be observed through an analysis of social networks of members' ties within organizations. Structural patterns of ties are assumed to be beneficial to collective action because they solve problems of coordination, not only problems of individual action (such as reduce individual transaction costs, or improve chances of getting ahead). This paper identifies one such mechanism that can be considered to represent a form of corporate social capital in a collegial, knowledge-intensive organization (Waters, 1989; Lazega, 1999), in which the production process is difficult to routinize, where professional expertise and advice cannot be easily standardized, and therefore "internal" transaction costs for the firm as a whole can be assumed to be a large part of total costs of collective action. Firm social capital is represented here by a specific social mechanism, a "lateral control regime", with a specific pattern of control ties among members.¹ This pattern was described elsewhere in detail (Lazega, 1995, 2000; Lazega & Vari, 1992; Lazega & Lebeaux, 1995; Lazega & Krackhardt, 2000). It stems from the fact that partners follow specific channels to prod each other into cooperation, before resorting to more formal measures such as well defined court procedures or external intervention. In previous studies, I rely mainly on network analysis and a vignette study to

examine these channels, which can be called channels of *lateral* control. I use the word "lateral" to express two facts: first, that this way of exercising informal control is based on the use of third parties as sanctioners (Lazega & Vari, 1992; Gargiulo, 1993), i.e. envoys of the firm in charge of pressuring "deviant" partners back into good conduct;² and, second, that these third parties are not hierarchical superiors, but peers who are all formally equals and expected by their colleagues to intervene. Structural constraints resulting from the convergence of these expectations have the effect of narrowing the choices made by partners when they exercise early monitoring and sanctioning more or less unobtrusively. Behaviors examined here are choices of sanctioners. In that respect, I look at who is selected, by whom, to do the "talking to" (Freidson & Rhea, 1963).

The main characteristics of this lateral control regime are that formal structural dimensions of this type of firm – such as differences in office, division of work, and seniority level (a substitute for hierarchy and formal status according to Black & Baumgartner, 1983), have an effect on the likelihood of selecting specific partners as sanctioners for given infractors. Secondly, these constraints are also based on interdependence in terms of exchange of resources between protagonists of the control process. In particular, partners tend to choose sanctioners with whom they have personal and business ties to deal with infractors with whom they have the same type of ties. However, the choice of personal and business ties to facilitate sanctioners' access suggests that a clique structure underlies such choices, with its advantages in terms of access to infractors, but also its danger of allowing special treatment for some infractors. Thus, thirdly, additional structural characteristics of partners – such as centrality in specific sociometric networks – were shown to have an effect on the likelihood that a partner will be selected as a sanctioner. A great deal of lateral control responsibility is concentrated in the hands of a few partners whom the rest of the partnership often chooses as sanctioners. In other words, partners are not chosen with equal probability to act as sanctioners: their status or "importance" in terms of control of organizational resources is a strong determinant of their selection as sanctioners.

Such findings leave at least one question unanswered: Who would guard the guardians? Who will be expected by the members of the firm to exercise control over the main controllers? This question is important to an analysis of social capital in organizations where peers need to cooperate without an efficient formal hierarchy. In effect, a lateral control regime, which is part of the corporate social capital of such firms, is informal, and thus fragile. Its very existence is threatened by the fact that its main sanctioners, who are part of the oligarchy of the firm, could make themselves immune from control, thus

enforcing rules that they themselves would not be forced to respect. In this paper, I argue that the lateral control regime provides a structural solution to this problem. Using the same case study, a network study of a corporate law firm, I look at how members assert that they would keep oligarchs in check. Specifically, I analyze the choices of levers used to influence such oligarchs. This helps in identifying a structure of lateral control that is also part of this firm's social capital. I argue that this structure reflects two types of firm protection strategy. In the first, oligarchs are mainly divided into several subgroups, which are then selected to control each other; theirs is not a cohesive position of enforcers, but a fragmented one. In the second, some members of the firm, with little status but personally close to some of the oligarchs, are also used to monitor the latter's behavior. Evidence of this upward 'divide and rule' strategy is provided by showing that the existence of such channels of lateral control, as perceived by individual partners, reflects a specific network pattern of convergent expectations. In turn, this pattern shows that the lateral control regime also provides a structural answer to the structural problem of guarding the guardians.

LATERAL CONTROL IN COLLEGIAL ORGANIZATIONS

Theories of collective action show that conformance of members to the rules governing the management of common resources requires social control and informal conflict resolution mechanisms (Black, 1984; Coleman, 1990; Ellickson, 1991; Fortado, 1994; Hechter, 1984, 1987; Heckathorn, 1990; Jasay, 1989; Lindenberg, 1993; Lazega, 1995, 2000; Morrill, 1995; Ostrom, 1990; Reynaud, 1989; Taylor, 1987; Wittek, 1999). Compliance to the rules is contingent on the compliance by others, and therefore members spend time and energy monitoring each other. Formal procedures are used against members who violate the rules, but often as a last resort, especially when monitoring and sanctioning are undertaken not by external authorities but by the participants themselves. In such a case, infractors are likely to be assessed *graduated sanctions* (depending on the seriousness and context of the offense) by other members, by officials accountable to these members, or by both. If an individual breaks the rules more systematically, sanctions can escalate until members punish the offender (and sometimes themselves) by breaking previous agreements (Ostrom, 1990).

This issue is of particular importance in formally egalitarian bodies in which partners are all nominal equals and interdependent. Free-rider problems quickly arise in such settings because even a member who did not contribute effectively to the firm's revenues imposes a cost on the partnership as a whole by reaping the benefits of partnership. As a consequence, monitoring and early graduated

sanctions are considered to be particularly important for ensuring that partners' individual commitment to contribute remains credible. A second-order free-rider problem arises as well, i.e. the problem of who will bear the costs of monitoring and enforcement among the formally equal members (Heckathorn, 1989; Oliver, 1980; Yamagishi, 1986). In such contexts, hierarchical control is relatively weak, and there is reluctance, at an early stage, to use formal procedures against colleagues to overcome free-riding and maintain solidarity. Direct command or use of administrative hierarchy are not considered appropriate means for exercising control³ because professionals have many ways of neutralizing formal authority (Gouldner, 1954; Freidson, 1975, 1984). Collegial systems regulate themselves on a day-to-day basis through processes which are connected to, but not identified with, formal power structures (Weber, 1920; Waters, 1989). As part of what Freidson calls "the rule of the collegium", members tend to avoid open face-to-face conflicts, as well as direct and coercive exercises of power. Therefore, graduated sanctions can start with unobtrusive and unsolicited advice and the spread of gossip. In Freidson and Rhea's (1963) words, colleagues "talk to" infractors in order to curb behavior perceived to be unprofessional or opportunistic. Colleagues show infractors that lack of conformity has been detected, must be discussed, and may involve external social costs, such as stopping exchanges at various levels. Because interdependent partners need social resources to perform effectively, they are also more exposed to pressures from partners who control these resources. These processes do not guarantee by themselves that peers will be able to maintain an enduring institution, but any complex system of rules needs them to survive over time.

Beyond this general understanding of early monitoring and sanctioning, the way in which a formally egalitarian organization gains "quasi-voluntary compliance" (Levi, 1988)⁴ with its rules and agreements is not easily explained using current theories of collective action (Kandel & Lazear, 1992), particularly because the graduated and unobtrusive ways through which such pressures are exercised are not systematically described and analyzed at the structural level. In structural explanations in sociology, individuals are portrayed as being subject to particular sets of constraints and opportunities defined by their social context, such as a specific stratification or status system, or a particular social network (White et al., 1976). In particular, status can be regarded as a characterization of an actor's position in the formal structure of the collective actor as well as in the social networks linking its members. It is therefore understood as equivalent to formal and informal control of various kinds of resources needed to further collective action. In this perspective, constraints and opportunities are viewed as having a more pronounced and measurable effect on human behavior than do cultural norms or factors attributed to the subjective makeup of actors.

Objective and contextual factors have the effect of narrowing the individual choices, and, hence, actions.

Of particular importance to the argument of this paper, social relations are part of the contextual conditions influencing behavior. As noted by Reynaud (1989) and Ostrom (1990), sanctions are usually not automatic. They are not independent of the person who applies them and of the person to whom they are applied, their characteristics and relationships. Any process of early monitoring and sanctioning must therefore help select sanctioners and build access to infractors. According to the structural approach, this selection should therefore be influenced by factors such as formal dimensions of structure, status, interdependence, and control over resources among members. Elsewhere, I have shown that control among peers in a collegial organization is a situation that is amenable to structural analyses, with the above-mentioned results.

HYPOTHESES

In this paper, I attempt to enhance understanding of quasi-voluntary compliance by highlighting the relationship between the structural factors mentioned above and choices of sanctioners. I describe the role and characteristics of these main sanctioners, the social "territory" in which each of them is expected to exercise control, and how they are expected to control each other and solve the issue of "who will guard the guardians". In particular, I show that, in such an institutional context, important sanctioners are also less controversial: they can speak on behalf of the firm without raising controversies, without triggering additional and escalating conflicts, or being suspected of representing specific coalitions, or individually benefiting from exercising pressure. Thus structural constraints reinforce a norm of conflict avoidance among peers and help dealing with a clique structure underlying the choices of sanctioners.

Finally, I discuss the limitations of this approach, and briefly sketch possible implications of these results for a theory of collective action and cooperative institutions, particularly collegial bodies. Specifically, knowledge of these structural constraints helps understand how members try to keep early monitoring costs low, and therefore try to keep themselves motivated to carry on monitoring and sanctioning each other. It can thus help members find an early solution to the so-called second-order free-rider problem in formally egalitarian interdependent groups, i.e. the problem of who should bear the costs of enforcing previous agreements. Because it offers a specific organization of early enforcement of rules and decisions, the lateral control pattern can indirectly help in ensuring that cooperation remains possible. In that respect, I will argue that it is an important component of the governance system of this type of organization.

I propose two hypotheses regarding the content of this structural constraint. First I contend that, by extending the analysis of choices of sanctioners to the overall pattern of network ties among partners, we can look at a structural solution that this firm has found for this substantive problem. As already shown (Lazega, 1995, 2000), in the absence of efficient formal hierarchy, one can expect the organization to deal with the danger of special treatment by informally concentrating a large proportion of leverage in the hands of a few "important" and widely trusted sanctioners who appear to be more specialized in early monitoring and sanctioning than other partners. In effect, if partners are not chosen – at the overall level – with equal probability to act as sanctioners, it means that some are perceived to be in a better position to intervene on behalf of the common good. As seen in the introduction, a structural approach derives their "importance" from their status and defines it in terms of control of various resources. Status can thus be expected to be an important determinant of their selection as early sanctioners. In addition, members with ties to many others are more likely to cut across clique boundaries, and therefore to rise above subgroup interests. However, that is not to say that important early sanctioners are all interchangeable: under the established structural constraints, one may also expect main sanctioners to be specialized in specific infractors with whom they feel less uncomfortable and have influence, or with whom exercising lateral control should prove less costly. A few important sanctioners can thus be expected to "cover" the partnership by each specializing in a certain type or group of infractors. This provides the basis for our first hypothesis:

Hypothesis I: The more partners are chosen to exercise lateral control in a collegial organization, the more likely they are to be chosen as specialized sanctioners.

If Hypothesis I is verified, a second hypothesis can be derived from it. Given the status of a small set of specialized main sanctioners, one may hypothesize that the same principle also applies to the main sanctioners. That is: the reasoning leading to the formulation of Hypothesis I can be extended to the specific case of main sanctioners as potential infractors. If partners with status and resources are more likely to be chosen as early and specialized sanctioners in general, they are also more likely to be chosen as early sanctioners specialized in each other. In effect, one can argue that only important partners carry enough weight (control enough resources and attract enough deference) to impress other important partners, and that peers will choose segments of this elite to control each other in a circular way. This would help ensure the protection of the lateral control regime from the threat of lenient treatment for the oligarchy of peers

and sanctioners. In other words, Hypothesis II is a corollary of Hypothesis I. It can be expressed as follows:

Hypothesis II: On average, partners receiving the most nominations overall (as sanctioners) also receive relatively more nominations as sanctioners for one another.

Hypothesis II, if confirmed, supports to the idea that the lateral control regime as a form of corporate social capital contributes to solving the classical problem of “who guards the guardians?”. The analysis presented below provides analyses of choices of sanctioners that help in testing these hypotheses. Fieldwork and data collected for these tests are presented next. I describe the firm and provide an illustration of lateral control in it. I then describe the research design and the method used to elicit choices of early sanctioners among partners.

LATERAL CONTROL IN A CORPORATE LAW FIRM

A Traditional Corporate Law Firm

Fieldwork was conducted in a Northeastern law firm, (71 lawyers in three offices located in three different cities, comprising 36 partners and 35 associates), in 1991. All the lawyers in the firm were interviewed, but the question of lateral control is mainly of interest regarding partners, and thus limited to them. In Nelson’s (1988) terminology, this firm is a “traditional” one, without formally defined departments, as opposed to a more “bureaucratic” type. Interdependence among attorneys working together on a file may be strong for a few weeks, and then weak for months. As a client-oriented, knowledge-intensive organization, it tries to protect its human capital and social resources, such as its network of clients, through the usual policies of co-mingling partners’ assets (clients, experience, innovations) (Gilson & Mnookin, 1985) and the maintenance of an ideology of collegiality. Informal networks of collaboration, advice, and “friendship” (socializing outside), are key to the integration of the firm (Lazega, 1992).

It is a relatively decentralized organization, which grew out of a merger, but without formal and acknowledged distinctions between profit centers. Although not departmentalized, the firm breaks down into two general areas of practice: the litigation area (half the lawyers of the firm) and the “corporate” area (anything other than litigation). Sharing work and cross-selling among partners is done mostly on an informal basis. Given the classical stratification of such

firms, work is supposed to be channelled to associates through specific partners, but this rule is only partly respected.

A weak administration provides information, but does not have many formal rules to enforce. The firm has an executive committee made up of a managing partner (who is elected for one year, renewable once) and two deputy-managing partners (also elected each year, renewable once), among partners prepared to perform administrative tasks and temporarily transfer some of their clients to other partners. In this structure, everyone can (and indeed is expected to) become managing partner once. It was adopted during the 1980s for more efficient day-to-day management and decision making, but also to prevent too much concentration of power. The current managing partner is not a “rainmaker” and does not concentrate strong powers in his hands. He is a day-to-day manager who makes recommendations to functional standing committees (finance, associate, marketing, recruitment, etc.) and to the partnership:

In the role of managing partner, basically it’s a question of what it is that they don’t have authority to do as opposed to spelling out what they can do. There are some grey areas where I get to decide whether an issue falls in my jurisdiction or goes to the partnership. The primary things that clearly aren’t my decisions are making partners, certainly terminating partners or associates; actually associates’ salaries, studying partnership compensation, these are things that aren’t mine. I can’t close or open new offices. But other than that I can do most things, which generally means the day-to-day operations, ultimately being responsible for the non-lawyer staff, hirings and firings and salaries, budgetary work, and financial planning. (The managing partner at the time of the study.)

Partners’ compensation is based exclusively on a seniority lockstep system without any direct link between contribution and returns. The firm goes to great lengths – when selecting associates to become partners – to take as few risks as possible that they will not “pull their weight”. Partners may argue informally about what contribution might “fairly” match one’s benefits, but the seniority system mechanically distributes the benefits to each once a year. Great managerial resources are devoted to measurement of each partner’s performance (time-sheets, billing, collecting, expenses, etc), and this information is available to the whole partnership. A low performance cannot be hidden for long. However, such firms usually make considerable profits, which may help partners overlook the fact that some voluntary contributions to shared benefits may not always be consistent with the successful pursuit of narrow self-interest. This confirms the existence of the prerequisites for a self-regulating company of equals: the collection of information, although here not supervisory, but based on billings and accounts paid. But this firm is characterized by open performance measures.⁵ Partners do watch one another closely, even though they have only limited tools to do so.

The firm does not have a formal peer review system which could provide intermediate steps between lateral control and formal court procedures. Before expulsion, partners have the power to “punish” each other seriously by preventing a partner from reaching the next seniority level in the compensation system. As mentioned above, a partner can be expelled only if there is near-unanimity against him/her. Buying out a partner is very difficult and costly. Therefore, despite the existence of direct financial controls, the firm does not have many formal ways of dealing with free-loading. The harm that a single partner can inflict on others might become very substantial in the long run. Conversely, partners can try to insulate one of their own informally by four means, at the very least:

- (1) Not referring clients,
- (2) Not “lending” associates,
- (3) Not providing information,
- (4) Not providing advice.

Data

Based on this ethnographic information on control among partners, three types of data were collected: three-way network data based on a vignette designed for the study of lateral control, standard sociometric data, and information on individual characteristics of partners.

First, I used a vignette to conduct a network study derived from Krackhardt’s (1987, 1990) technique to elicit three-dimensional data on manipulation of relationships among partners. It turned out during ethnographic fieldwork that the firm had been confronted with situations of free-riding by some partners. A vignette was designed to use such events as an analyzer for the description of channels for lateral control. This vignette was used due to limited access (in time and possibility to follow the 36 partners systematically) provided by the firm. It confronted partners with socio-emotional problems having repercussions on productivity, mainly because partners found it inappropriate to discuss tougher issues of “deviance” involving other partners. It asked each partner to match sanctioners and infractors in the firm for lateral control purposes, and to justify their choices of sanctioners. These justifications are used here to illustrate how partners presume that lateral control operates for a given infractor. The vignette used was the following:

Here is the list of all the partners in the firm. I would like you to imagine that you are the managing partner. You notice that X is having personal problems. It could be anything, from alcohol to depression, or divorce. But it has repercussions on his/her performance. As

a managing partner, it is your job to do something about it. You are looking for colleagues of his/hers among the other partners of the firm to intercede on a discreet and confidential basis, to go and talk to him/her, see what’s going on, what the firm can do to help, and give unsolicited advice. You don’t want to do this yourself because you want to keep it informal, and your position would be in the way. My question is: who are the persons among all the other partners whom you would ask to approach X, and why would you delegate this task to them? What if this person were Y, or Z, etc.?

Each partner (or “respondent”) is thus asked to freely choose one or a set of colleagues (or “sanctioners”) who would be in charge of handling, at this early stage, the problem created by a specific partner (or “infractor”). As with Krackhardt’s type of data, I collected one “sanctioner by infractor” matrix per partner. These matrices can be viewed as representing “delegation networks” (White, 1992) centered around targets for social control. This design provides information on each partner observed as a respondent, as an infractor, and as a sanctioner. Each partner was asked about all the other partners as infractors. All partners performed the task. Respondents were not restricted to a fixed number of choices. They were free to delegate this task to one or to several sanctioners simultaneously, thus often building teams of social control. The result is a set of 36 networks of lateral control relationships, one per partner. One knows therefore who would delegate this control task and collegial responsibility to whom, and why.

The design of the research also used the fact that the position of managing partner does not imply a special status in this particular firm, for instance in terms of controlling large clients, making long-term decisions, or having a particularly strong professional reputation – while still representing partners’ preoccupation for the common good (but ultimately their individual interest) and willingness to participate and act on behalf of the firm. In other words, given that the position of managing partner is a short-term administrative job, it is used to help partners focus on the common good.⁶ The task relies on each partner’s capacity to think of the common good and to design a relational strategy to protect it. What pressures partners to act as levers is not the authority of the managing partner, but the convergence of their peers’ expectations – as well as the underlying resource dependencies. In effect, this assumption is based on the fact that partners have an interest in monitoring the situation (and might easily one day themselves serve as managing partner). Lawyers are used to performing such tasks: for instance, it bears similarities with staffing a case when opening a file, and with representing the whole partnership when writing an opinion.

Second, information on individual characteristics of partners (such as specialty, office membership, centrality scores in the sociometric networks,

performance measurements) was used to describe early monitoring and sanctioning in its relation to specific dimensions of formal structure. This provided additional measures of proximity between actors and grounded the phenomenon observed here in established organizational characteristics of this type of firm.

ANALYSES

The hypotheses were tested in various statistical analyses which are presented below.

The Concentration of Leverage

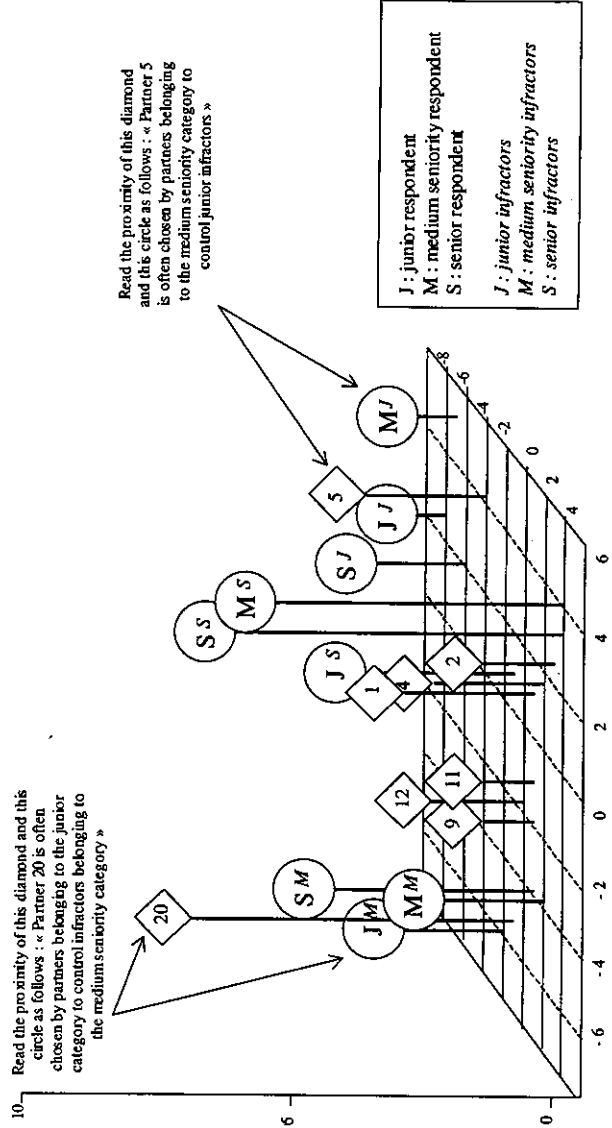
Hypothesis I predicted that the more partners have status, defined here in terms of control over resources in the firm, the more likely they are to be chosen as early and specialized sanctioners. To test it, I resort to techniques often used by network analysts. As mentioned above, I assume that each partner's "sanctioner by infractor" matrix represents a lateral control "network" based on members' convergent expectations. Such matrices can be aggregated to look at the overall lateral control network. Thus, the raw aggregated data show that, for some infractors, consensus as to who should be the sanctioner is very strong. For example, Partner 5 is chosen 30 times to deal with Partner 18; Partners 1 and 2 are chosen 24 times to deal with each other. For other infractors, consensus does not exist as to who should be the appropriate sanctioner: for example, Partners 25 or 29, as infractors, are not matched with "obvious" sanctioners. From the ethnography of the firm, I know that, in these cases as in many others, the absence of high level of consensus concerns potential infractors whose characteristics are atypical (for instance lateral⁷ partners, women partners – there are only three of them in the firm), or difficult to handle (for instance partners married to one another, partners notorious for behaving like a 'prima donna').

Recall that earlier work showed that partners with a specific form of status, i.e. senior and uncontroversial partners with administrative responsibilities, among which managing the organization of work and associate manpower in the firm, are more likely than others to be more central in the control network, i.e. to be selected more often to act as sanctioners. One interpretation of the reason that minders are chosen more often than others as sanctioners to prevent clique-like closures is that these partners are in a better position than others to speak on behalf of the common good. Minders do not necessarily have a form of status based on control of access to important clients, as defined by Nelson (1988), and are therefore not involved in potentially cut-throat power struggles

focusing on the bottom line. Nor do they have a form of status described by Bucher (1970), based on professional recognition and reputation (as the primary dimensions of power in a medical faculty). Instead, they have status as good firm citizens (Blau, 1964). Therefore, these results show that main sanctioners tend to be members who are not heavy billers or rainmakers, and members who do not concentrate in their hands many resources, particularly work, clients, and advice. They are chosen often as sanctioners because they have shown that they can represent common interests without raising controversies. In particular, the sanctioners draw some of their authority from their seniority, from the perception that they are capable of preventing tensions from escalating, especially between partners of different practices and offices. Notice that partners very popular as friends are also not particularly central as sanctioners, probably because they revive the clique-like closure problem and may not carry enough weight to impress infractors.⁸

Thus, to test Hypothesis I, I look at whether or not each of the main sanctioners is chosen in a discriminant or "specialized" way. To identify these main sanctioners in this aggregated "sanctioner by infractor" matrix, I use measurements of centrality⁹ of sanctioners which show that concentration of leverage is a key feature of lateral control in this firm. Overall, some partners – mostly senior ones – are chosen as sanctioners much more often than others. Partners 1, 2, 4, 5, 9, 11, 12, 13, 17, 20, and 26 are the most popular sanctioners. The control network is thus stratified and less than a third of the partners emerge as key players in lateral sanctioning. Within this "elite", additional distinctions are of interest. Some are "single-infractor sanctioners", others are "multiple-infractor sanctioners". As an example of the first type, Partners 8 and 21 are not very popular sanctioners, but they are locally specialized and their role can be crucial: for example, Partner 21 is the partner who is most often chosen to control Partner 20, the most central and universal sanctioner of all. Then several partners, such as Partners 1, 2, 4, 5, 9, 20 or 26 are boundary spanning partners chosen to perform this role for many (up to ten) infractors.

Second, to test Hypothesis I completely and look at whether or not each of the main sanctioners is chosen in a "specialized" way, I examine the extent to which they are chosen to exercise control on a specific set of infractors. Seniority – as seen above – is a strongly discriminant factor for respondents when they match sanctioners and infractors. It was therefore chosen as a criterion for illustration of main sanctioners' specialization in a specific "territory". Figure 1 provides such an illustration of the specialization of the main sanctioners. It contains two kinds of objects: the main sanctioners and groups to which they are close. The method for locating these objects and their significance is the following.



This figure contains two kinds of objects: important sanctioners (represented by a diamond) and groups of respondents and infractors (represented by a circle) collapsed together based on their respective level of seniority. The way in which sanctioners and groups are located in this space is explained in Appendix A. The figure shows that the main sanctioners (in diamond), or 'protectors of the common good', were chosen in a very discriminant way by their partners, i.e. they were chosen most often to exercise control on a specific set of infractors. For example, Partner 20 was often chosen by senior partners to go and 'talk to' medium seniority infractors. Partner 5 was often chosen by junior partners to go and 'talk to' junior infractors. In this figure, the three axes locate the main sanctioners in a way that shows these contrasted specializations. A great distance between sanctioners (diamonds) means that they were rarely chosen together by the same respondents to go and 'talk to' the same infractors. Axis 1 expresses the contrast between sanctioners (diamonds) means that they were rarely chosen together as sanctioners (i.e. by the same respondents and to control the same infractors). Axis 2 expresses the same kind of contrast, this time between choosing Partner 1 and choosing Partner 5 as sanctioners. Finally, Axis 3 displays the contrast between choosing any one of the main sanctioners represented in the picture versus all the other partners who were not chosen often enough to qualify as a 'protector of the common good'. When a group is close to a sanctioner in that space, it means that respondents in this group chose this sanctioner very often to go and 'talk to' infractors in that same group. Interpret this result as an indication that, according to the respondents, this important sanctioner was 'specialized' in a specific category of infractors and thus had his/her 'territory' of social control.

Fig. 1. Specialization of main sanctioners.

This figure is based on a principal component analysis, a technique that makes it possible to represent respondents, sanctioners, and infractors in the same space, while stressing the differences between the ways in which the main sanctioners are chosen (for a detailed description of the procedure used, and the reason for which it is used as opposed to other possible procedures, see Appendix A). It demonstrates that partners who are most likely to be chosen as sanctioners are also highly likely to be chosen in a discriminant and specialized way, i.e. by all levels of seniority and to deal with infractors of different seniority levels.

In effect, this figure stresses the contrasts between the ways in which important sanctioners (Partners 1, 2, 4, 5, 9, 11, 12, and 20, represented by diamonds) are selected. Axis 1 mainly contrasts the selection of Partner 20 and that of Partner 5. This contrast means that it is important in respondents' minds not to choose them together, i.e. to respect the office and seniority boundaries when exercising lateral control. Axis 2 mainly contrasts the selection of Partner 5 and the selection of all the other sanctioners, especially Partners 1, 2 and 4. This means that Partner 5 is a top senior partner with a specific role that differs from that of the other top senior partners who find themselves on the same side with regard to Axis 1. Finally, Axis 3 contrasts the choice of all these 'protectors of the common good', or important sanctioners in diamonds, particularly Partner 20, and the choices of all the sanctioners who were not selected often enough to be shown on the picture.

The groups (in circles) cluster together respondents and infractors. The latter were collapsed into such groups according to the three levels of seniority used above. The proximity between a group and a sanctioner in this space thus indicates the existence of a specialized channel for the flow of lateral control within the firm. Proximity between sanctioner 1 and the Js group means that Partner 1 tends to be chosen often by junior partners to control senior partners (Js is to be read as "junior respondents control senior infractors"; Ms as "medium-seniority respondents control senior infractors", etc). Proximity between sanctioners in this space reflects the fact that they tend to be chosen together: for instance, sanctioners 2 and 4 are close to sanctioner 1, and thus often chosen together by the same respondents to deal with the same infractors. The large distance between Partner 20 and Partner 5, and the fact that they are located on opposite sides of axis 1, represents the fact that they are rarely chosen simultaneously as sanctioners to control the same type of infractor.

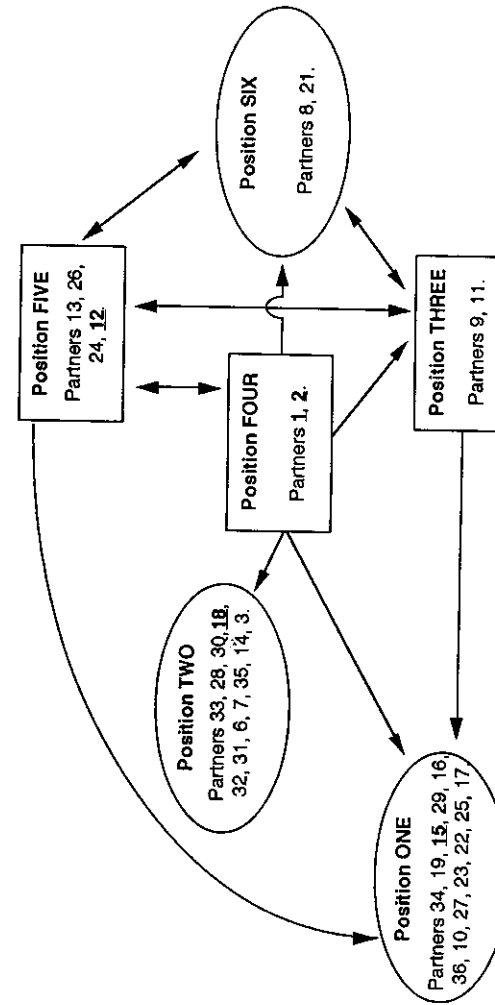
The way in which sanctioners are located in this space (the distances between them) shows that there are strong contrasts in their selection. The way in which the groups are located in this space shows that it is mainly the target of the sanction that is discriminant in the matching of sanctioners and groups. For

example, all medium seniority partners (as targets) are close together; this means that all respondents, regardless of their level of seniority, match these targets with the same sanctioners.

As a result, in this space, the two types of object (sanctioners in diamonds and groups of respondents and infractors) relate to one another in the following way. Given the meaning of the three axis, it becomes obvious that heavy and widely-cited sanctioners are thus specialized in a specific social "territory", i.e. a particular category of infractor. Partners 1, 2, and 4 are chosen more than any other partner by most respondents to control senior partners across the firm. In other words, they are chosen by all partners to control senior partners. Partner 5 is chosen by most respondents to control young partners (mostly in City II). Still another strong preference is revealed in the expectations converging on Partner 20: to pressure medium seniority partners. Especially for Partner 20, the managing partner at the time of the study, this contrast seems very clear in terms of internal politics: in the arguments provided by respondents, he is presented by many as a default option. Choosing him is perceived as an "apolitical" strategy, one that cuts across specialty and office boundaries. In sum, Hypothesis I is confirmed. Main controllers are specialized in specific types of targets.

Who Would Guard the Guardians?

As an extension of Hypothesis I, I have added that partners chosen as main and specialized sanctioners are also more likely than others to be chosen as sanctioners for each other. To illustrate this structural feature of circularity of lateral control among main sanctioners, I used a measurement of approximated structural equivalence¹⁰ in the lateral control "network", i.e. among partners as both sanctioners and infractors. This approach can be facilitated by the fact that main sanctioners do tend to share a similar general role with regard to the rest of the partnership. They cannot be strictly structurally equivalent, i.e. share the same infractors as sanctioners and share the same sanctioners as infractors (especially if they are specialized in different types of infractors), but they can still be perceived to be closer to each other in the lateral control "network" (and thus exercise influence on each other) than to the rest of the partnership. This method also shows how lateral control would operate among the most central sanctioners. Strong levels of approximated structural equivalence among partners in the lateral control "network" create control positions. Figure 2 clusters partners into such positions using a procedure developed by Burt (1982). This procedure identifies six positions, the members of each position, and the



Residual Partners: 4, 5, 20.

This figure represents the pattern of relationships between positions of structurally equivalent partners in the lateral control network. Numbers in Positions are IDs of partners assigned to them. Square boxes indicate that members of these positions are chosen to control each other. Members of elliptic positions are not chosen to control each other. ID numbers underlined represent partners who made a big difference in terms of revenue during the previous year. This figure does not graphically include Partners 4, 5 and 20, mainly because their respective relational profile is too different from that of anyone else in the network. In Burt's (1982) terms, they belong to the "residual category". This does not mean that the analysis is carried out without them. If one is willing to accept lower reliability coefficients than those used here (around .9), then Lever 4 would belong to position Four (.72), Lever 5 to position Two (.69), and Lever 20 to position Five (.68). Leaving them in the residual category (by-the-book procedure) or including them in these respective positions does not change the overall pattern in a way which makes a difference for the argument presented here regarding how members of the elite of levers are chosen to monitor each other.

Fig. 2. Positions of approximately Structurally Equivalent Partners in the Lateral Control Network, and Relationships Between Positions.

relations among positions. For a detailed description of the procedure and the pattern emerging from the analysis, see Appendix B).

The overall pattern in the flows of lateral control described by this figure is not simply that of a stratified center-periphery structure; it also shows how lateral control is expected by respondents to operate within the "elite" of early sanctioners. Several central positions, occupied by a few actors each, are often chosen to control each other as well as many others. This analysis also captures the fact that the elite of sanctioners is fragmented into minders and finders. In the first category, the current managing partner, a deputy managing partner, partners sitting on committees such as the associate committee (and controlling allocation of associate manpower to partners) are important sanctioners (mainly position Five): they have an important responsibility since they are chosen to control the highly central finders in position Four. The second category is represented by finders in Position Four who are also senior sanctioners. Two partners with special status in City I have a position of their own (position Three), and so do members of position Six, Partners 8 and 21, who are single-infractor sanctioners mainly chosen to control Partners 11 and 20 who are important sanctioners. As indicated in Appendix B, the two top sanctioners have a relational profile which is too different from that of other partners in the lateral control network to belong to any common position.

This analysis of approximated structural equivalence in the lateral control "network" illustrates the fact that Hypothesis I can be extended to the elite of sanctioners, thus contributing to a solution to the classical question of "who would guard the guardians". At the aggregate level, respondents do indeed divide the main sanctioners at the top, and choose segments of this oligarchy to control each other in an approximately circular way: almost perfect circularity is obvious between Positions Three, Four, Five, and Six. Hypothesis II is thus confirmed.

CONCLUSION

To summarize, this paper began by asserting that reasoning at the structural level in terms of generic social mechanisms solving problems of collective action – and therefore called corporate social capital – improves our understanding of early monitoring and sanctioning in collegial organizations, and can therefore offer additional insight into a broadly conceived structural theory of collective action. Building on previous work on social influence by structural sociologists, our examination of a formally egalitarian partnership shows that the organization helps members in their attempts to gain from each other a "quasi-voluntary compliance" with its rules and agreements. It does so by

developing structural constraints on lateral control, which are reflected in respondents' choices of early monitors and sanctioners. These constraints guide peers in their choices of early sanctioners – often colleagues with status – for a given infractor in the absence of strong hierarchical channels. The existence of this lateral control regime in turn raises the issue of 'Who will guard the guardians?' In effect, the lateral control regime identified in earlier work is fragile. In this paper, protection of this form of social capital is shown to be ensured by a specific lateral control structure. One of the main characteristic of this structure is that important sanctioners are dispatched into positions that are then selected to control each other.

This result was obtained by making predictions about who is most likely to be chosen as a sanctioner in such a company of peers. The more control partners have over firm administration (including resources such as associate manpower), the more likely they are to be chosen as early and specialized sanctioners. Two types of main sanctioners were identified. The first type includes partners who are not powerful in business terms (so as not to raise controversies), not central in terms of friendship only (so as to carry some weight), and tend to have firm-specific status as members with management responsibilities. A second category of main sanctioner also emerged from the analysis: partners powerful from a business perspective, with strong economic status, but perceived to be uncommitted to any subgroups in the firm.

Studying lateral control using a network approach is useful theoretically because it helps combining structural and collective action perspectives in order to identify an informal organizational control mechanism. Such a synthesis contributes to a theory of collective action by developing our understanding of how a collegial organization creates a structure which helps individuals find indirect ways to pursue contingent commitment to rule compliance and mutual control. It does so particularly by identifying structural constraints in peers' mutual monitoring of conformance to a set of their own rules. These constraints create a pattern which shows that lateral control or leverage is likely to depend on central and "active" (chosen often) sanctioners with sufficient status to cut across intra-organizational boundaries and reach many different partners. Lateral control is thus likely to be delegated to a subset of colleagues, the "protectors of the common good", who are expected more often than others to reinforce institutional arrangements when partners have to deal with socio-emotional problems affecting productivity. They certainly draw some of their authority from their capacity to represent in a credible way the interests of the firm as a whole. But this authority, or right to speak on behalf of the common good, is supported by various forms of status, either by their willingness to serve in administrative positions, or by their importance to firm revenues. A structural

approach is thus able to show that firm-specific status is a key aspect of a wider pattern which helps maintain cooperative institutions. Especially in heterogeneous or polarized systems, part of this status and capacity to inspire deference may be due to main sanctioners assumed ability to use the good connections that they have on different sides.

By allowing partners to avoid conflict escalation, this lateral control pattern of convergent expectations also helps these partners manage early monitoring and sanctioning in their attempts to deal with the second-order free-riding problem and the threat that it represents to collective action. By dividing the elite of sanctioners and expecting them to control each other, this structure becomes part of the social capital of this firm. In effect, it protects this lateral control regime from the threat of a coalition of rogue sanctioners who enforce rules that they do not respect themselves. Because it can help partners deal with the costs of enforcement that plague ever collegium, a serious problem associated with collective provision of delicately calibrated institutions, this form of corporate social capital can be said to be a credible component of a social and informal governance structure in such organizations.¹¹

NOTES

1. Technically, this notion of lateral control regime refers to three-way sub-structures exposing the pathways of influence and social pressure.

2. In this terminology, a sanctioner fulfills a function similar to that of a broker, especially of a "coordinator" (as defined by Fernandez & Gould, 1994), who remains within the organization and establishes a link between two other members.

3. In this context, power, whether formal or informal, has to take into account this dimension of formal equality and cannot assert itself systematically without relying on an ideology of collegiality (Nelson, 1988). This does not mean that peers are actually equals. Even if they are formally equals, some are "more equal than others". In law firms, for example, partners who attract large clients or manage the firm, wield more influence when important decisions are made. But formal egalitarianism among partners is maintained as a feature of their "professionalism" (Waters, 1989), and power retains a "now you see it, now you don't" quality (Nelson, 1988).

4. This is what others refer to, for instance, as autonomous regulation (Reynaud, 1989), concertive control (Barker 1993), or as compliant control (Heckathorn, 1990).

5. The literature on control among professionals has actor's behavior shrouded in secrecy and what might be called professional discretion and collective concealment (Freidson, 1975; Freidson & Rhea, 1963; Hughes, 1958). Bosk's (1979) physicians watch each other via technical and normative judgments. With regard to Merton's "observability", this firm has a distinctive collective openness among partners who keep track of one another via time-sheets and a sophisticated accounting system.

6. On the conditions under which vignettes can be used to elicit judgments or choices, and the criteria underlying them, see for instance Rossi (1979). In this situation, the

question is a real vignette in Rossi's terms, based on a reality that is the same for all the respondents, and leaving them where they actually are. It casts the respondent as "informant as respondent" into the role of managing partner; this is not artificial in this firm where every partner can be a managing partner, and indeed is expected to become one some day. Respondents therefore say what they would do and expect, not what others would do and expect. However, this vignette would probably not be appropriate in a larger and more bureaucratic law firm where the position of managing partner carries with it more power and a different status, and where individual performance is not made as visible as it is here (Friedkin, 1983).

7. "Lateral" partners, in law firms' jargon, are partners who were never associates in the firm. Instead of coming up through the ranks, they were hired directly as partners, mostly away from another firm.

8. A caveat must be made here. A closer look at the data on individual performance allows us to introduce more nuance in this identification of central partners. If most main sanctioners tend indeed to have firm-specific status as partners with management responsibilities, some are high performers with a specific profile. The elite of sanctioners includes a category of partners who do have high scores in key networks, such as Partners 1 and 2, who have close relationships to lucrative clients, and are important in terms of business and revenue brought in. However, they are also autonomous, uncommitted to any clique, and therefore perceived as capable of acting objectively and negotiating on behalf of the firm without triggering additional and escalating conflicts, or being suspected of representing specific coalitions, or individually benefiting from exercising pressure on their own peers. They are freer partners who may be chosen as sanctioners because they are not locked in a constituency. In that respect, structural constraints such as unequal distribution of control of resources can still be said to have an effect on choices of sanctioners, but in a way which reinforces a norm of conflict avoidance among peers (Freidson, 1975) and helps dealing with a clique structure underlying the choices of sanctioners. In short administrative responsibilities and control over *some* resources in the firm (such as allocation of associate manpower) does increase the likelihood of being chosen as early and specialized sanctioner.

9. As summarized by Wasserman and Faust (1994: 169-219), centrality measures identify the "most important" actors in a social network. Since definitions of importance vary considerably, a variety of measures has been developed to locate the most central members in a network. I use here one of such measures, called degree centrality, which highlights the difference between the most and the least "active" members, i.e. chosen most often by all the other members. In the lateral control network, high outdegree centrality scores reflect the most "popular" (chosen often) sanctioners. Network analysts have tried various methodologies to look at the extent to which centrality is an operationalization of power, i.e. the extent to which actors can convert a central position - where they benefit from a high concentration of resources - into power. In his review paper, Mizruchi (1994) shows that, although the literature has demonstrated a positive association between centrality and power, the association between the two is more complex than earlier studies had suggested. For example, simulation and experimental results by Marsden (1982, 1987; Cook et al., 1983; Markovsky et al., 1988) have found that in certain types of structures such as "restricted access structures", actors with high "local" centrality may be more powerful than actors with high "global" centrality. Studies by Cook et al. (1983) and Marsden (1987) have suggested that the centrality-power relation is affected by whether networks are "positively" or "negatively"

connected; in negatively connected networks, a tie between actors A and B precludes a tie between A and C; in such networks, there is no association between centrality and power. In Cook et al.'s networks, actors with high local centrality are more powerful than those with higher levels of global centrality. Marsden (1987) shows that the relative power of actors with high global centrality depends on the extent to which central actors are able to form coalitions. Despite a variety of such findings on the relationship between centrality and power, Mizruchi (1994) concludes that most studies have revealed at least some substantively meaningful association. Given that the networks studied here are neither restricted access networks nor negatively connected, the assumption that centrality can be considered to be an acceptable measure of power can be reasonably upheld. Indegree centrality was chosen (as opposed to other types of measurements of centrality) because it can be considered to be an index of status. For an evaluation of the robustness of this index for measuring status and power in organizations, see Brass and Burkhardt (1992).

10. Structural equivalence and its statistical approximation refer to a procedure which represents patterns in complex social networks data in simplified form to reveal subsets of actors who are similarly embedded in these networks of relations, and to describe relationships between these subsets (Wasserman & Faust, 1994: 347–393). Two actors are structurally equivalent if they have identical ties to and from all other actors in the analyzed network. Since actors in a real social network are almost never structurally equivalent, the analysis uses a measure of the degree to which pairs or subsets of actors approach structural equivalence. Analyses described in this section are carried out by available network analysis software, particularly Structure 4.2 (Burt, 1991) and Ucinet 4 (Borgatti, 1991).

11. The fact that this analysis is carried out on data collected in a traditional corporate law firm does not mean, in my view, that this lateral control regime and associated protections are a waning form of social capital. Indeed, at the global level, larger multi-city and multi-country professional services firms operating as a one-stop shop for multinational companies are managed in different ways, and control is exercised there more bureaucratically. However, it would be highly questionable for observers (and foolish for such firms) to ignore the gap between global and local governance mechanisms. It makes sense to hypothesize that, at the local level, even in large and more bureaucratized partnerships (or perhaps in incorporated firms), such lateral control regimes also operate as a form of corporate social capital. In effect, they characterize collective action among rival peers, and such local firms are comprised of at least large pockets of such partners. This hypothesis, however, remains to be tested empirically.

ACKNOWLEDGMENTS

I would like to thank Miguel Centeno, Deborah Davis, Geoffrey Hazard, Jean Kellerhals, Christian Lalive d'Epina, Albert Reiss and Stanley Wheeler for help during fieldwork. The study was funded by the Swiss National Foundation for Scientific Research. It was also made possible by support from the Department of Sociology, Yale University, from Yale Law School, and from Lasmus-Cnrs in Paris. I am also grateful to David Lazega and Véronique Biau,

to the editors of this volume, Shaul Gabbay and Roger Leenders, and to an anonymous reviewer: all helped improve this paper.

REFERENCES

- Barker, J. (1993). Tightening the Iron Cage: Concertive Control in Self-Managing Teams. *Administrative Science Quarterly*, 38, 408–437.
- Black, D. (Ed.) (1984). Social Control as a Dependent Variable. In: D. Black (Ed.), *Toward a General Theory of Social Control*. New York: Academic Press.
- Black, D., & Baumgartner, M. P. (1983). Toward a Theory of the Third Party. In: K. O. Boyum & L. Mather (Eds), *Empirical Theories About Courts*. New York: Longman.
- Blau, P. M. (1964). *Exchange and Power in Social Life*. New York: Wiley.
- Borgatti, S. (1991). *UCINET 4*. Department of Sociology, University of Southern Carolina, Columbia, SC.
- Bosk, C. (1979). *Forgive and Remember*. Chicago: The University of Chicago Press.
- Brass, D. J., & Burkhardt, M. E. (1992). Centrality and Power in Organizations. In: N. Nohria & R. G. Eccles (Eds), *Networks and Organizations*. Boston, MA: Harvard Business School Press.
- Bucher, R. (1970). Social Process and Power in a Medical School. In: M. N. Zald (Ed.), *Power in Organizations*. Nashville: Vanderbilt University Press.
- Burt, R. S. (1982). *Toward A Structural Theory of Action*. New York: Academic Press.
- Burt, R. S. (1991). *STRUCTURE 4.2*. Center for the Social Sciences, Columbia University.
- Cartwright, D. (1965). Influence, Leadership, Control. In: J. G. March (Ed), *Handbook of Organizations*. Chicago: Rand McNally.
- Coleman, J. S. (1990). *Foundations of Social Theory*. Cambridge: Harvard University Press.
- Cook, K. S., Emerson, R. M., Gillmore, M. R., & Yamagishi, T. (1983). The Distribution of Power in N-Person Exchange Networks: Theory and Experimental Results. *American Journal of Sociology*, 89, 275–305.
- Ellickson, R. C. (1991). *Order Without Law: How Neighbors Settle Disputes*. Cambridge: Harvard University Press.
- Fernandez, R. M., & Gould, R. V. (1994). A Dilemma of State Power: Brokerage and Influence in the National Health Policy Domain. *American Journal of Sociology*, 99, 1455–1491.
- Fortado, B. (1994). Informal Supervisory Control Strategies. *Journal of Management Studies*, 31, 251–274.
- Freidson, E. (1975). *Doctoring Together: A Study of Professional Social Control*. New York: Elsevier.
- Freidson, E. (1984). The Changing Nature of Professional Control. *Annual Review of Sociology*, 10, 1–20.
- Freidson, E., & Buford, R. (1963). Processes of control in the company of equals. *Social Problems*, 11, 119–131.
- Friedkin, N. E. (1983). Horizons of Observability and Limits of Informal Control in Organizations. *Social Forces*, 62, 54–77.
- Gargiulo, M. (1993). Two-step Leverage: Managing Constraint in Organizational Politics. *Administrative Science Quarterly*, 38, 1–19.
- Gilson, R. J., & Mnookin, R. H. (1985). Sharing Among Human Capitalists: An Economic Inquiry into the Corporate Law Firm and How Partners Split Profits. *Stanford Law Review*, 37, 313–392.

- Gouldner, A. W. (1954). *Patterns of Industrial Bureaucracy*. New York: The Free Press.
- Hechter, M. (1984). When Actors Comply: Monitoring Costs and the Production of Social Order. *Acta Sociologica*, 27, 161-183.
- Hechter, M. (1987). *Principles of Group Solidarity*. Berkeley: California University Press.
- Heckathorn, D. (1989). Collective Action and the Second-Order Free-Rider Problem. *Rationality and Society*, 1, 78-100.
- Heckathorn, D. (1990). Collective Sanctions and Compliance Norms: A Formal Theory of Group-Mediated Social Control. *American Sociological Review*, 55, 366-384.
- Hedström, P., & Swedberg, R. (1998). *Social Mechanisms*. Cambridge: Cambridge University Press.
- Hughes, E. C. (1958). *Men and their work*. Glencoe, Ill: The Free Press.
- Kandel, E., & Lazear, E. (1992). Peer Pressure and Partnerships. *Journal of Political Economy*, 100, 801-817.
- Krackhardt, D. (1987). Cognitive Social Structures. *Social Networks*, 9, 109-134.
- Krackhardt, D. (1990). Assessing the Political Landscape: Structure, Cognition, and Power in Organizations. *Administrative Science Quarterly*, 35, 342-369.
- Lazega, E. (1992). Analyse de réseaux d'une organisation collégiale: les avocats d'affaires. *Revue Française de Sociologie*, 33, 559-589.
- Lazega, E. (1995). Protecting the Common Good Among Equals: A Lateral Control Regime of Partners in a Corporate Law Firm. LASMAS Preprint no 96/1.
- Lazega, E. (1999). Le phénomène collégial: une théorie structurale de l'action collective entre pairs. *Revue française de sociologie*, 40, 639-670.
- Lazega, E. (2000). Rule Enforcement Among Peers: A Lateral Control Regime. *Organization Studies*, 21, 193-214.
- Lazega, E., & Vari, S. (1992). Acteurs, cibles et leviers: analyse factorielle de réseaux de contrôle dans une firme américaine d'avocats d'affaires. *Bulletin de Méthodologie Sociologique*, 37, 41-51.
- Lazega, E., & Lebeaux, M.-O. (1995). Capital social et contrainte latérale. *Revue Française de Sociologie*, 36, 759-777.
- Lazega, E., & Krackhardt, D. (2000). Spreading and Shifting Costs of Lateral Control in a Law Partnership: A Structural Analysis at the Individual Level. *Quality and Quantity*, 34, 153-175.
- Leenders, R., & Gabbay, S. (Eds) (1999). *Corporate Social Capital and Liability*. Boston: Kluwer.
- Levi, M. (1988). *Of Rule and Revenue*. Berkeley: University of California Press.
- Lindenberg, S. (1993). Club Hierarchy, Social Metering, and Context Instruction: Governance Structures in Response to Varying Self-Command Capital. In: S. Lindenberg & H. Schreuder (Eds), *Interdisciplinary Perspectives on Organization Studies*. Oxford: Oxford University Press.
- Markovsky, B., Willer, D., & Patton, T. (1988). Power Relations in Exchange Networks. *American Sociological Review*, 53, 220-236.
- Marsden, P. V. (1982). Brokerage Behavior in Restricted Exchange Networks. In: P. V. Marsden & N. Lin (Eds), *Social Structure and Network Analysis*. Beverly Hills, CA: Sage.
- Marsden, P. V. (1987). Elements of Interactor Dependence. In: K. S. Cook (Ed.), *Social Exchange Theory*. Newbury Park, CA: Sage.
- Merton, R. K. (1957, 2nd ed.), *Social theory and social structure*. Glencoe, The Free Press.
- Mizruchi, M. S. (1994). Social Network Analysis: Recent Achievements and Current Controversies. *Acta Sociologica*, 37, 329-343.
- Morrill, C. (1992). *The Executive Way: Conflict Management in Corporations*. Chicago: Chicago University Press.

- Nelson, R. L. (1988). *Partners With Power: The Social Transformation of the Large Law Firm*. Berkeley: University of California Press.
- Oliver, P. (1980). Rewards and Punishments as Selective Incentives for Collective Action: Theoretical Investigations. *American Journal of Sociology*, 85, 356-375.
- Ostrom, E. (1990). *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge: Cambridge University Press.
- Rossi, P. (1979). Vignette Analysis: Uncovering the Normative Structure of Complex Judgments. In: R. Merton, J. Coleman & P. Rossi (Eds), *Qualitative and Quantitative Social Research. Papers in Honor of Paul Lazarsfeld*. New York: Macmillan.
- Reynaud, J.-D. (1989). *Les Règles du Jeu: L'Action Collective et la Régulation Sociale*. Paris: Armand Colin.
- Stinchcombe, A. L. (1991). The Conditions of Fruitfulness of Theorizing about Mechanisms in Social Science. *Philosophy of the Social Sciences*, 21, 367-388.
- Taylor, M. (1987). *The Possibility of Cooperation*. Cambridge: Cambridge University Press.
- Wasserman, S., & Faust, K. (1994). *Social Network Analysis: Methods and Applications*. Cambridge: Cambridge University Press.
- Waters, M. (1989). Collegiality, Bureaucratization, and Professionalization: A Weberian Analysis. *American Journal of Sociology*, 94, 945-972.
- Weber, M. (1920/1978 edition). *Economy and Society*. Edited by Guenther Roth and Claus Wittich, Berkeley: University of California Press.
- White, H. (1992). Agency as Control in Formal Networks. In: N. Nohria & R. G. Eccles (Eds), *Networks and Organizations*. Boston, MA: Harvard Business School Press.
- White, H., Boorman, S. A., & Breiger, R. L. (1976). Social Structure From Multiple Networks I. Blockmodels of Roles and Positions. *American Journal of Sociology*, 81, 730-780.
- Wittek, R. (1999). *Interdependence and Informal Control in Organizations*. Doctoral Thesis, ICS, University of Groningen.
- Yamagishi, T. (1986). The Provision of a Sanctioning System as a Public Good. *Journal of Personality and Social Psychology*, 51, 110-116.

APPENDIX A

Procedure followed to construct Fig. 1 and represent the specialization of the main levers

Figure 1 is the result of principal component analysis. This method is a type of factor analysis that is similar to correspondence analysis. It differs from correspondence analysis, among other features, in that it does not use any weighting (that would take into account the frequency of each modality) in the analysis of the raw target by lever matrix that is used as data input. The absence of weighting strengthens the effect of numerically important columns in the extraction of factors. Thanks to this particular sensitivity, this method is especially well adapted to our situation because it is precisely the position of

the main levers (i.e. those selected most often as indicated in the columns of this matrix) that we want to identify and position in a three-dimensional space. In addition, correspondence analysis was not used because it is too sensitive to little cohesive groups of levers and targets, whereas a principal component analysis on the positive deviations from the independence matrix offers more massive overall effects.

In Fig. 1, Axis 1 is defined by the eigenvector for the first eigenvalue, Axis 2 by the eigenvector for the second eigenvalue, Axis 3 (vertical) by the eigenvector for the third eigenvalue. This figure is the result of a two-step procedure. First, the 36 individual matrices (called "slices" by Krackhardt) were stacked vertically to create a single 1296x36 matrix. Levers are the variables because the choices by respondents were choices of levers. The difference between the observed frequencies and the frequencies expected under the model of 'independence' in each cell of the table was computed. The larger the positive deviation, the stronger the link between the target and the lever. Only large positive deviations above a specific cutoff, which indicate a very central lever, were retained for graphic representation. This residuals matrix was used, in the second step, to represent the distances between the main levers in a multidimensional space.

To represent respondents, targets and levers *in the same space*, nine rows of supplementary observations were added to the contingency table. They are represented as points in the joint row and column space, but they are not used while determining the locations of the active row and column points of the contingency table. This means that supplementary observations were ignored in the computation of eigenvectors. The values in the nine supplementary rows were computed as follows. Respondents and targets were sorted by three levels of seniority: junior, medium, senior. They were assigned to each category based on their place on the letterhead paper and a "natural" threshold provided by the fact that they were considered within the firm to be different "generations" of lawyers. Nine categories were thus created, i.e. Senior respondent/senior target, Senior respondent/medium seniority target, and so on, up to junior respondent/junior target. The number of choices of each lever were summed for each of these nine categories, i.e. each time a lever was chosen by a respondent of that category to be sent to deal with a target of that category. The values for each category and lever were then added to the table as supplementary observations.

Values in the new 45x36 table were normalized to avoid having groups with a large number of choices brought artificially closer to the center of the figure. Scores on the three axes were thus computed for rows (targets) and columns (levers) as well as for respondents and targets collapsed into nine groups, as

displayed in the Figure. For these groups, the points projected on the map are the mean values for all the members of each group. For more precise technical indications about this approach, see Lazega and Vari (1992).

APPENDIX B

Procedure used to cluster partners into approximately structurally equivalent positions in the lateral control network, and description of the resulting structure represented in Fig. 2

This method uses Euclidean distance as a detector of equivalence between partners in the aggregated control network. The matrix aggregating the 36 individual lever by target matrices was used as input to STRUCTURE 4.1. Data were treated as direct measures of relations. Equivalence hypotheses were formulated using a hierarchical cluster analysis of the distances between actors' positions based on the Ward error sum of squares method. These hypotheses were tested (to confirm that a set of actors are approximately equivalent) using reliability coefficients based on correlations between distances to an individual with the mean distances to the other actors in the set. Once the positions were defined, the ties between them were determined by building the density table below where the cell is the average relation from actors in equivalence set A to actors in equivalence set B. The density table was transformed into an image matrix of dichotomized densities represented underneath it. For more details about this type of analysis, see Burt (1982, 1991).

Density Table for the Lateral Control Network Provided by Structure 4.1.

POSITION	1	2	3	4	5	6	RESIDUAL
1	14.8	7.9	4.1	4.1	7.5	5.9	5.7
2	2.8	22.5	0.0	5.9	1.4	0.5	10.0
3	34.7	9.1	230.0	15.0	37.5	167.5	75.0
4	55.0	54.1	50.0	240.0	68.8	67.5	108.8
5	41.0	17.0	25.0	23.8	97.5	36.3	32.5
6	19.7	8.6	85.0	15.0	42.5	20.0	35.0
RESIDUAL	51.5	80.2	41.3	80.0	44.4	27.5	48.3

Cell i,j is the average relation from someone occupying position I to someone in position J . The average relation between any two people in the network is 23.515. Figure 2 is based on one (of many alternative) image matrixe (see below) for the above density table. It was dichotomized using the overall density of the network (cell $i,j = 1$ if cell i,j density is greater than the average relation in the network between any two people).

POSITION	1	2	3	4	5	6
1	0	0	0	0	0	0
2	0	0	0	0	0	0
3	1	0	1	0	1	1
4	1	1	1	1	1	1
5	1	0	1	1	1	1
6	0	0	1	0	1	0

Cutoff at overall density

Position One includes City I partners with low indegree centrality scores. Position Two clusters City II partners also with low scores; it is the only position in which City II partners are found. Both positions do not control any other position or themselves. Positions Three, Four, and Five are composed of City I partners with high scores. Together they control position One. Position Six is composed of two City I partners; it fulfills an interesting function: its partners with low centrality scores in the control network guard partners with high centrality scores. Finally, three partners were not assigned to any position and make a "residual" category (i.e. a category made of atypical actors with a relational profile which is so specific that they are not even approximately structurally equivalent to anybody else). Two among the most central actors belong to this group. Partner 5 is lost to the residuals by position Two, mainly because he is often chosen by position Two members to control one another. Partner 20 is lost by position Five because he is more universal, and particularly often chosen to control City II targets. Partner 4 is lost by position Four because he is chosen to cover additional and specific targets (Partners 9, 15, 29). Position Four is composed of the two most senior partners of the firm. Along with Partner 20, they are given – by City I partners – exclusive lateral responsibility for position Two (City II) partners. This position is important because its members are chosen to cut across office boundaries and because it controls all the other positions without exception. It is watched only by position Five and Partner 20. In turn, Position Five is controlled by positions Three, Four, and Six. Note that positions Three and Five are almost similar in their role; they differ only to the extent that Five is chosen to control Four,

and Three is not. Leverage is thus highly concentrated in the hands of the members of three positions (Three, Four, and Five) and the residual category. It is also important to note that these three positions are chosen to control each other.

RESEARCH IN THE SOCIOLOGY OF ORGANIZATIONS
VOLUME 18

RESEARCH IN THE SOCIOLOGY OF
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2001



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An Imprint of Elsevier Science

Amsterdam – London – New York – Oxford – Paris – Shannon – Tokyo