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Generalized Exchange and Economic Performance: Social Embeddedness of Labor Contracts in a Corporate Law Partnership 13

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ABSTRACT [1]

This chapter examines the relationship between social structure and economic performance at the intraorganizational level. It attempts to identify a few conditions under which individual social relationships are most productive for the firm in collegial organizations—where the production process is difficult to routinize, where professional expertise and advice cannot easily be standardized, and therefore where internal transaction costs for the firm as a whole can be assumed to be a large part of total costs. An empirical study of a medium-sized northeastern U.S. corporate law firm is used for that purpose. In this firm, attorneys are shown to be bound by a labor contract that is difficult to sustain on pure economic terms: partners can easily free-ride, and associates can threaten the quality of work. Against this damage potential, a social system sustains their commitment. Using network data collected in the firm, social capital is described and measured at the individual, workgroup, and structural levels to show that the more constraining the member’s coworkers network, the easier it is for the firm to extract higher economic performance,

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including from tenured partners, by controlling the time put into work. With regard to partners, such teams represent an element of self-entrapment compensated by status and professional recognition. Examples of low and high economic performers, and their respective combinations of social resources, are provided as illustrations. A locally multiplex generalized exchange system is then described as providing firm-level social capital. Its existence is viewed as a precondition for individual-level and group-level social structure to be productive because it maintains the circulation of social resources in the firm. A multilevel form of embeddedness is thus revealed here and shows the importance of taking into account a meso level when measuring the relationship between social capital and performance. In this particular case, the notion of multilevel embeddedness advances our understanding of economic performance: the latter is rooted in individual social capital, that is itself rooted in workgroup and firm social capital, which in turn helps individual members in being more productive. Finally, however, this virtuous circle is shown to be fragile. First, because group-level social capital also threatens the cohesiveness of the firm: well-knitted teams can defect and take away with them valued members and clients. Second, given the dependence of economic performance on firm social capital, the relative contribution of individual ties and collective social structure to economic performance is also a highly politicized issue.

INTRODUCTION: STRUCTURAL SOLUTIONS TO STRUCTURAL PROBLEMS

Current managerial conceptions of corporate social capital often build on basic tenets of transaction-cost economics. They contend that economic growth increasingly depends not only on production costs but also on a critical factor, the so-called transaction costs. Transaction costs arise when market situations produce information asymmetry and therefore need visible signs for building confidence between economic actors. In fact, such a perspective stems from a more general tradition that focuses on social mechanisms supporting and enhancing economic performance, beginning with Durkheim (1893) and by now strongly established (Macaulay 1963; Bourdieu 1980; Coleman 1990; see Flap, Bulder, and Völker 1998, and Gabbay 1997 for a review). Following this general perspective, social networks of ties within organizations are assumed to enhance performance because they reduce transaction costs by decreasing information asymmetries and opportunism. Thus, maximizing performance means not only improving technology, product and organizational innovation, managerial coordination, or financial management but also changing informal social restrictions, improving solidarity, and investing in social capital. These means introduce a long-term time frame in exchanges and make it possible for people to invest in a starting or an ongoing relationship. In this view, large amounts of social relationships are a basis for efficient cooperation and for solidarity within organizations.

This chapter examines the question of the relationship between performance and social structure at the intra-organizational level. It attempts to identify a few conditions under which individual social relationships are most productive for the firm in collegial organizations (Waters 1989)—where the production process is difficult to routinize, where professional expertise and advice cannot easily be standardized, and therefore where internal transaction costs for the firm as a whole can be assumed to be a large part of total costs. In this organization, social capital is located at different levels: individual level, group level, and firm level. Individual social capital is defined as the resources flowing through an individual's contacts. At the workgroup level, social capital is a function of high density and cohesiveness in strong work relationships. Firm social capital is provided here by a *locally multiplex* and generalized exchange system—a pattern of ties among members that helps them exchange various resources indirectly, supports cohesive work ties, and maintains a specific form of solidarity.

To address the issue of the relation between performance and social structure, I look at the effects of these levels on one another. Following other scholars' more general work (Burt 1992b; Flap 1990; De Graaf and Flap 1988; Flap and De Graaf 1986; Lin 1982, 1995a; Lin and Dumin 1986; Lin, Ensel, and Vaughn 1981; Campbell, Marsden, and Hurlbert 1986; Marsden and Hurlbert 1988), I do so by reporting an empirical network study of a corporate law firm focusing on intraorganizational performance data. This study shows that one of the conditions under which individual social capital is most productive for the firm is precisely that such a locally multiplex and generalized exchange system constrains some of its members—partners and associates with specific relational patterns and workgroup membership—in reaching higher economic performance (defined in terms of number of hours worked and dollar amounts brought into the firm). In other words, the members' labor contract (the partnership agreement for partners and the employment contract for associates) is combined with other social ties—such as strong collaboration, advice, and friendship, both at the dyadic level and the structural level.

This approach makes particular sense in collegial organizations (Waters 1989, Lazega 1998b). In effect, in the economic conditions of 1990, it can be assumed that when performance of partners and associates is good, firm performance is also good. However, in this firm, getting practically tenured partners to work well is sometimes a problem: there are enormous incentives to free-ride. Getting associates to work well is also a problem: although they are well paid, there is a very low chance for them to become partners. If partners can free-ride and associates threaten the quality of work, members have a labor contract that is difficult to sustain on a purely economic basis. Because, as Durkheim (1893) pointed out, a contract is always incomplete, members need the expectation that this contract will be fulfilled, and—in case this exchange does not work—the flexibility that multiplexity provides to enforce these contracts. Getting cooperation and keeping production going are also a result of exchanging these resources in a multiplex way. Therefore, a generalized exchange system can be assumed to relate the three levels of capital to one another by maintaining the circulation of social resources in the firm. Several steps are taken to show that this exchange system, a component of this firm's corporate social capital, increases the efficiency of individual performance and collective action.

First, I show that a social system sustains members' commitment to their labor contract: members who are strongly socially integrated perform well economically; others perform less well. On the one hand, formal dimensions of structure, in particular hierarchical status and seniority, have the greatest influence on economic performance. In general, partners put in less hours but collect more dollars than associates because they charge more; in this firm, the more senior attorneys are, the higher their hourly fees. Associates collect less although they put in more time than partners. On the other hand, however, the nature of the individual social network also has an influence on economic performance: attorneys informally sought out for advice and for collaboration by many others tend to bill and collect considerably more than others. In addition, when social capital is proxied in terms of Burt's (1982) constraint scores, results confirm that members (both partners and associates) with a constraining coworkers network are pressured to put in more time, thus collecting more dollars. The more constraining one's coworkers network, the higher one's economic performance. Thus, position in relational structure and social capital accumulated in this position do count for explaining performance, although these effects are weaker when compared to the weight of institutionally defined hourly rates.

Second, the effect of individual-level social capital on economic performance is decomposed at the dyadic level by looking at specific combinations of ties that provide a decisive push in performance increase (or that represent a liability that decreases performance). For example, specific configurations of social ties, such as mutual triplex ties, are strongly correlated with high performance. This fleshes out the positive effect of constraint scores in the coworkers network. Examples of partners with low and high economic performance (in terms of dollars brought in), and their respective combinations of social resources, are provided as illustrations. High performers draw heavily on their social resources. In that respect, the firm as a whole benefits from the networks that some individuals have (dense multiplex networks, especially constrained at the group level in the coworkers network) and suffers from the networks that other individuals have (sparser networks and especially weakly constrained in the coworkers network).

Third, strong and stimulating (that is, constrained) coworkers ties combined with advice ties or with both advice and friendship ties have a chance of being economically more productive than other ties and more likely to happen in dense workgroups. At the structural level, a locally multiplex and generalized exchange system encouraging the emergence of workgroups is then described as a precondition for individual social network to be productive because it maintains the circulation of social resources in the firm. This structure integrates work and social ties in a way allowing strongly knitted positions to perform better by extracting and facilitating higher efforts from their members. By doing so, it makes it possible to improve performance for members whose work ties are embedded in a way offering access to advice (which, in this firm, is a form of free collaboration), creating economies of time, providing flexibility in exchanges by allowing a resource of one type to be engaged for a resource of another type, and helping in foregoing immediate self-gains for a smoother and longer-term collective action. This social structure, to put it in Uzzi's (1997a) words, governs the intervening processes that regulate performance outcomes, both positive and negative. This system is a feature of the firm as a whole: it is a component of its corporate social capital. It can thus be asserted that if economic performance is rooted in individual social capital, the latter is itself rooted in collective social capital or firm social capital.

In sum, firm social capital, that requires many kinds of contributions, is also key to maintaining collective action and production. It is made more visible in the description of the firm as a locally multiplex generalized exchange system. Generalized exchange is strong at the level of workgroups. In particular, cycles characterizing local (that is, group-level) and multiplex generalized exchange can be found in this system, especially in the flows of resources among teams within the same office and specialty. This form of embeddedness is shown to relate three levels of social structure and help enforce the labor contract between partners and associates. It makes them more productive by relying on chains of mutual obligations and debts. In particular, partners are especially well positioned to play on resource dependencies to get associates' commitment to their labor contract (which is not necessarily in their narrow and short-term self-interest).

I then argue that, in many ways, this exchange system is good for both the firm and the individual. Individual social ties help the individual perform and this network transforms itself into firm-level social capital because it produces an exchange system that makes the firm as a whole more successful in billing and in helping members maintain their commitment to their labor contracts and solidarity. In other words, the firm has found in this exchange system *a structural solution to the structural problem* of cooperation and commitment to the labor contract, a sort of partial equilibrium in the circulation of resources needed to fulfill it.[i] By allowing such a system to exist, this firm maintains certain forms of resource circulation, a precondition for group solidarity.[ii]

However, this virtuous circle is also fragile. First, group-level social ties also threaten the cohesiveness of the firm: well-knitted teams can defect and take away with them valued members and clients (Lazega 1992a, 1999). Second, the relative contribution of individual ties and collective social structure to economic performance can be a highly political issue. Allocation of credit in teams (that is, clearly disentangling members' contributions) is often difficult. This study therefore confirms that looking at how an organization, especially a collegial one, extracts economic performance from its members requires a sociological conception of performance that must pay attention to the micropolitical context of members' action and to their strategic behavior in this context (Weber 1978 edition; Coleman 1990; Granovetter 1985; Hechter 1987; Lindenberg 1990, 1996; Raub and Weesie 1990; White 1981). This approach therefore entails a micropolitical conception of economic performance. Narrow conceptions of performance ignore the fact that—as Crozier and Friedberg (1977), Friedberg (1993), or Meyer (1994) put it—no measurement of performance in organizations ever goes unchallenged. To some extent, criteria used to measure efficiency of actors are negotiated by members themselves. This negotiation means that measurements of efficiency are strategic and politicized. In effect, they are always multidimensional; research in this area is complex, and multivariate approaches rarely conclusive. Practitioners know that it is impossible to find simple measures of performance for organizations with multiple and often conflicting goals. Meyer (1994), for example, shows that performance measures can be considered to be temporary constraints to which members of the organization adjust. It is thus impossible to define absolute measurements of performance, outside of a strategic context or institutional conventions. In the context of the law firm examined here, team work, autonomy and flexibility in selection of coworkers, and a weak hierarchy unable to force partners to cooperate all make it harder to provide one best measurement of performance by individual employees and workteams. This is why a study of the relationship between generalized exchange and economic performance necessarily leads to issues of fairness and to an examination of the policitized nature of performance measurements.

In conclusion, the forms of embeddedness discussed in this chapter help members perform and reach a form of solidarity, but do not necessarily produce, by themselves, a self-sustaining social order. The structural solution provided by this exchange system raises new problems related to the balance of power within the firm (Lazega 1992a, 1999): it is a politicized issue, all the more easily politicized, because members can make their relative contribution to firm performance unmeasurable—for example by bringing more resources into the exchanges—which is made possible precisely by the existence of a multiplex and generalized exchange system. This topic of politicization of performance measurements, however, is beyond the scope of this chapter.

PROFESSIONAL LABOR CONTRACTS IN A CORPORATE LAW PARTNERSHIP

Fieldwork was conducted in a northeastern corporate 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. In Nelson's (1988) terminology, this firm has characteristics of both a traditional and a bureaucratic law firm.[iii] It is closer to the traditional type, especially because the tensions between bureaucracy and partners' participation in management are open and explicit and because it does not have formally defined departments.

The firm services mainly corporations and other organizations prepared to bear its fees. 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 commingling partners' assets (clients, experience, innovations) (Gilson and 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, that has to deal with many centrifugal forces created by differences in status, geographical location, and specialties (Lazega 1992a, 1992b, 1999).

The partnership agreement applies to the various aspects of a firm's life the prevailing firm philosophy regarding legal practice and how it should be undertaken. In doing so, it brings an element of predictability to firm operations and minimizes the room for disputes regarding issues such as firm management, compensation decisions, and withdrawal terms. The agreement accomplishes this by setting clear ground rules as to each partner's rights and responsibilities in connection with these issues and with the operation of the firm itself (Rowley and Rowley 1916 and 1960).

The law firm is a relatively decentralized organization that grew out of a merger, but it does not have formal and acknowledged distinctions between profit centers. Although not departmentalized, the firm breaks down into two general areas of practice: the corporate litigation area (half the lawyers of the firm) and the more strictly speaking corporate area (anything other than corporate litigation). Work is supposed to be channelled to associates through a specific committee of partners, but this rule is only partly respected. 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 of a managing partner and two deputy managing partners who are elected each year, renewable once, among partners prepared to perform administrative tasks and temporarily transfer some of their clients to other partners. This structure was adopted during the 1980s for more efficient day-to-day management and decision making. The current managing partner is not a rainmaker who brings in important clients 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, and so on) and to the partnership as a whole during partnership meetings.

This specific law firm is very much a stratified organization, in spite of a set of rules that tries to smooth the hierarchical nature of its business. Consistent with Nelson's (1988) more general terminology, its authority system is based on a distinction between *finders*, *minders*, and *grinders*. With a few exceptions, the finders are partners who find new and lucrative clients and bear the greatest responsibility for them. Their governing authority is not as formal as that of their analogues in corporations. Directives are reached by a form of gentlemen's agreement. The minders are partners with managerial roles and responsibility for long-established clients. The managerial role in large firms arises from the necessity of coordinating diverse practice areas, promoting an efficient organization of work, and decentralizing control over a large professional staff working on highly specialized matters. The grinders are other lawyers—either partners who function as little more than salaried staff or associates—who are subject to the demands of partners and perform the actual legal work.

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 contribute enough to firm's revenue or 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, and so on), 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 long term self-interest:

> Our compensation system has no built-in peer review process. There is no committee meeting with each partner, no interview devoted to pulling out from that individual his or her state of affairs. The peer review that we have right now is everyone sits down in the partners' meeting, and you have in front of you the printout that shows how many hours I worked, how many hours I billed, how many hours I collected, and how outstanding my account receivable is, and then you get people grumbling at the meeting about the account receivable going up and not coming down. (The managing partner at the time of the study)

The firm does not have a formal peer review system that could provide intermediate steps between informal control and formal court procedures:

> With the compensation system there is no built-in financial incentive for people to do things. If you have people who are motivated by other things, like self-respect, pride in craftsmanship, intellectual curiosity, competitiveness—whatever those different personal attributes are—that's not a problem. There are people who aren't as motivated by those other things as certain other people and may wind up resting on their laurels, sitting on their hands, whatever euphemism you want to come up with for becoming lazy both intellectually and how much they are willing to work. (The managing partner at the time of the study)

Before expulsion, partners have the power to punish each other seriously by preventing one of their own 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 or her. Buying out a partner is very difficult and costly:

> The rule is 90 percent affirmative votes of all partners to expell a partner. Abstention counts against expulsion. We have expelled only two partners in twenty years. Both were extremely serious situations. For one of them, there was a unanimous vote: this person went way around the bend with a number of things. The second guy didn't want to be part of us. A petition was circulated, saying 'I would vote to expell him.' He was presented with that and resigned. But expulsion is extremely hard to exercise. Three persons can block it. At least two of our partners are good examples of that. One of them is a decent guy on a personal level. He says that under pressure he does things but that he is a corporate lawyer, and there is no pressure on him usually, so he just doesn't do it. The other partner is in a different situation. He was at the low end (of the performance scale) for a long time. Partner 5 went to talk with him. He claims that there isn't anything to do. He says: 'I am a corporate lawyer, my kind of work has dried up, I am out there in the bushes, hustling, doing everything I can.' That is difficult to check. But there is also the fact that part of the people he has worked with do not want to do it again because they think his competence is in doubt. Partner 17 is extremely good in his field. He once volunteered to go see this partner to share some work with him. He went to see him, but he says this partner did a horrendously poor job. So with our 90 percent rule, we don't cover for that. Apart from these examples, all the other partners do carry their weight. Of course, you're hot this year, you'll be down next year. But there is no need for a compensation committee that would just do what it wants to do, with all the subjectivity involved. (The managing partner at the time of the study)

It should also be mentioned that, since partners cannot be forced out unless there is near-unanimity against them, most partners in this firm manage to have at least one safety partner—a friend who would presumably side with them unconditionally and become their insurance policy against this consequence (Lazega 1992a, 1995b; Lazega and Lebeaux 1995; Lazega and Krackhardt 1998). 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 isolate one of their own informally by, at the very least, not referring clients, not lending associates, and not providing information and advice. This strengthens the suggestion that performance depends on the social circulation of resources in the firm.

A few general indications about the relational climate and structural tendencies in this firm are needed here to understand the way in which the notion of embeddedness of labor contracts is used below. The climate and tendencies can be summarized by two separable forms of interdependence describing the interlocking of social relations such as being strong coworkers, advice relations, and socializing outside work. One of these forms concerns the interplay of friendship and advice, wherein an individual's friends may be a source of further friendship and advice ties (the friends of friends are often friends, and the advisors of one's friends are often friends or advisors, or possibly both). Advice ties, that will be shown to be key to economic performance, are thus often driven by personalized ties. The second form concerns the interdependence of advice and coworker ties, with the possibility that advice ties play an important role in generating further advice ties and, in conjunction with coworker ties, further coworker ties. Finally there is a weaker association between coworker and friendship ties in that the configurations comprising two friendship and one coworker tie are unlikely. There is a taboo with strongly personalizing work ties, particularly for partners with regard to associates who might leave the firm before coming up for partnership, as well as with associates who will eventually come up for partnership. Partners often feel that such relationships would tie their hands on the day of the vote. Associates know that they are being kept at arm's-length and express it more openly. Associates 58 and 51 express this in the following ways:

> I am a big believer in keeping your job and personal life separate. You have to have your job to fall back on if you have a personal problem in your life. I would respect that privacy. I don't think friendship could matter here. I think the partners share their personal life with other partners, and associates with associates. But I don't believe that partners and associates share their personal life. It is probably also the associates' fault. Their goal is to make partner, and you don't want to show your vulnerability. You think it will affect your chances to become a partner—especially during the first four years, when you are not secure about your job, and your knowledge is limited. (Associate 58)

> An interesting change in relationships comes when some people who were senior associates two years ago are now partners, and we don't spend as much time together outside work any longer. Since they will have to make a decision concerning us, we don't socialize anymore. But I still consider them to be friends because I feel close to them. (Associate 51)

Associates also feel that partners don't let them in more generally:

> Between partners and associates, there is a gulf—regardless of how friendly we are. As an associate, I am left in doubt. I know that some friends I have were not made partners. There have been people who have gone all the way to the eight years and were not made partners. I will feel less constrained to talk about firm matters with other associates. There are a few partners, however, to whom I would talk about sensitive firm matters. I would actually never bring up the subject myself. But when they bring up the subject, I listen. It is difficult to realize how associates grapple and work just to be able to understand where they are, the kind of firm they really are in. (Associate 48)

These networks are thus partly dependent on each other, even though they each do have a life of their own, mainly because they each solve different problems of cooperation (Lazega 1992a; Lazega and Pattison 1998).

WHAT MAKES TENURED PARTNERS WORK?

In any organization, measurements of performance are intrinsically difficult to interpret and their informative value can change from one year to another.[iv] As seen above, performance data are never as hard and undisputable as one often expects them to be. In fact managers know and learn that such data must be handled with great care. A narrow conception of organizational efficiency ignores the fact that no measurement of an actor's performance goes unchallenged within the organization. Therefore, using performance measurements is not easy and rarely provides spectacular results. In spite of correlation between some forms of human capital (for example, years with the firm) and performance, there is no easy and clear-cut correlation between performance and social networks.

Members of this firm know that measuring economic performance describes only one aspect of contribution to collective action. This is why managing partners often emphasize spreading credit around generously. Many factors account for members' individual performance. These factors can be external or environmental (some areas of practice provide more work, some markets are currently more lucrative) and individual (some attorneys are personally more motivated or hard working). For these reasons, the following analyses link information on members' economic performance—narrowly understood as the amounts of dollars brought into the firm at the end of the year—with information on social status and relations among them. Differences in such performance may be explained, in part, in terms of relationships within the firm—for instance, because relational factors can help gain access to needed resources, reduce transaction costs with coworkers, or help pressure colleagues back into more productive behavior. To examine such effects on performance, I used information collected in early 1991 about each attorney's (partner and associate) relationships within the firm and combined it with information on their individual performance for the year before the study was conducted.

Variables and analysis

Specifically, to study the effect of position in firm structure on this type of economic performance, I look at the correlations between measurement of economic performance and various social factors related to firm structure, work process, and members' ties in 1991. I first use as covariates three dimensions of formal structure of this firm that were expected to be the most important (status, office, specialty), as well as two attributes of members defined from outside the firm (gender and law school attended). Table 1 presents the distribution of lawyers in this firm per variable.

Table 1. Distribution of lawyers per variable

Status	Partner	Associate	Total
Seniority			
Level 1	14	7	
Level 2	13	10	
Level 3	9	5	
Level 4		7	
Level 5		6	
Office			
I (Boston)	22	26	48
II (Hartford)	13	6	19
III (Providence)	1	3	4
Specialty			
Litigation	20	21	41
Corporate	16	14	30
Gender			
Man	33	20	53
Woman	3	15	18
Law school			
Ivy League	12	3	15
New-England non–Ivy League	11	17	28
Other	13	15	28
Total	36	35	71

The first covariate is status, a variable with two levels—partners and associates. We can hypothesize that status matters for economic performance in the sense that firm rules require associates to put in more time than partners. This variable is elaborated on in the second covariate—seniority. We can hypothesize that seniority matters for economic performance in the sense that the more senior members are, the higher the hourly rates systematically charged to clients. This second covariate is a variable with eight levels, indicating the three possible levels of seniority for a partner,[v] and five levels of seniority of associates. For associates, seniority has the meaning of being member of a cohort recruited the same year. We can thus look at gradual effects of numerical rank on economic performance. Office membership and practice are the third and fourth covariates. Office is a variable with three levels—Office I, II, and III; practice has two levels—litigation and corporate. They are expected to have an effect on economic performance as indicators of variations in market demand. The next covariates are other actors' attributes—gender and lawschool attended. These attributes are included as control variables representing two characteristics of the outside world that could have an influence on economic performance. In this firm, women attorneys are mostly associates and often feel that they need to work harder than their male colleagues to reach the same economic results—for example, because they mostly have to deal with male clients or partners. Law school attended, a typical human capital variable, has three levels, indicating whether a lawyer went to an Ivy League law school, to a New England non–Ivy League law school, or to another law school. This variable is introduced in the model to look at the extent to which a form of prestige acquired outside the firm may have an effect on performance—for example, via more lucrative clients.

To locate members in the informal structure of the firm and proxy their individual social capital, I use six variables based on standard sociometric information on three types of relations collected in this firm in 1991: coworkers, advice, and friendship (for name generators, see Appendix A). From these data, I derived proxies of individual social capital by looking at two types of measurements. The first was their individual indegree centrality scores in these networks.[vi] *Indegree centrality* represents a measurement of the extent to which members are popular in these networks and therefore accumulate work-related resources circulating in them (Wasserman and Faust 1994: 169–219). One can therefore hypothesize that they will be in a better position to perform economically.

The second was their individual constraint scores as defined by Burt (1992b) in the same networks. For Burt (1992b), network constraint measures social capital as a form of network structure. Specifically, constraint is a function of network size, density, and hierarchy (that measures the extent to which relations are directly or indirectly concentrated in a single contact). A contact in which relations are concentrated is a knot in the network, making it difficult for negotiations to proceed independently in separate relationships. Constrained networks leave little opportunity for individual initiative and little chance to withdraw from difficult relationships. Difficult relations persist because they are interlocked with coope-rative relations. The higher the constraint, the fewer opportunities for alternatives offered by one's contacts or contacts' contacts, and the lower the performance. In our case, constraint represents a measurement of the extent to which colleagues can exercise unobtrusive but insistant pressure on a member. High constraint in a specific network means that clique members in that network have high investments in each other and high expectations from each other. The denser a member's personal network of coworkers, the more his coworkers can coordinate their informal efforts at prodding him or her back into performing more. They can, for instance, try to increase their own collaborations with him or her, and exercise unobtrusive but insistant pressure to put in more time. One can therefore make the hypothesis that, in the case of this firm, high constraint facilitates high economic performance.[vii]

In other words, in this type of collegial organization, a constraining network of strong ties, in which members overinvest, tends to create teams of partners and associates who rely on each other, at least for work. With regard to partners, such teams represent an element of self-entrapment compensated by status recognition: teams allow partners to create emulation and redefine what is an acceptable performance within their workgroup, including themselves. But coordination is also made easier in such workgroups: they bring associates together productively. The following is an example of how partners in this firm typically like to talk about their associates and the kind of intellectually challenging attitude they encourage within their teams:

> Ours is a fascinating structure built on, to some extent, maximizing a certain type of efficiency. All are encouraged to think hard. You look good as an associate if you can convince a partner that he is wrong about something. You have the freedom of thought within legal problems. There is a great intellectual freedom here. An associate yesterday told me that she didn't think that a decision of mine in a file was correct. She stuck to her guns, and fifteen minutes later I called her to tell her that she was right. In other places, if the boss says something, everone says 'good idea, boss.' Not here. (Partner 19)

Thus proxies of social capital add a set of covariates to the baseline model. The effect of centrality and of constraining ties on economic performance is expected to be positive.

Using these covariates, several models were estimated to explain economic performance measured as the amount of dollar fees brought to the firm (managing partner not included) in 1990. It is important to realize that not all the covariates representing various dimensions of position in firm structure can be used at the same time because of strong dependency between them. This is typically the case for status and seniority; in the models, the most refined covariate, seniority, is used. In addition, status and seniority overlap with the number of hours worked and hourly rates as explanatory variables. The more senior attorneys charge more per hour. Associates work longer hours than partners.[viii] Therefore, to avoid this problem, analyses below test the robustness of social capital effects using three different models. This multicollinearity will be taken into account in the interpretation of results. In terms of economic and relational variables, the best overall models achievable with this data set predicting the number of hours worked and the amount of dollar fees brought in are presented in Table 2.

Coworkers' Constraints and Economic Performance

As predicted, model 1 contains an important effect confirming our expectations. It shows that, in this firm, constraint by teams of coworkers has a positive and statistically robust effect on the number of hours that members put in. The density of members' network of coworkers helps the latter control and increase the amounts of effort invested into hard work. In that respect, the effect of members' social network on their performance is confirmed. However, beyond this confirmation, an additional and unexpected dimension of social structure also emerges here. Interesting negative effects of dense friendship ties (and centrality in the friendship network) on performance are apparent. One can speculate about the reasons for these effects, such as spending more time on personalizing work relationships, or providing role-distance, outside work than on actual work.[ix] But this shows that individual and group-level social ties can also take less productive forms—forms that decrease performance. In terms of economic outcome, structure that brings social capital to the individual may thus bring social liability to the firm. Social capital can be a double-edged phenomenon.

Focusing back on the positive effect of constraint in one's network of strong coworkers, models 2 and 3—where the weight of economic variables such as hourly rates is more visible—show that such an effect is robust. Indeed, it is also present as a good predictor of the amount of fees brought into the firm at the end of the year. It is thus relatively independent of the way performance is measured.

Table 2. Variables explaining economic performance measured by the Number of hours worked (Model 1) and by the amount of dollars brought into the firm in fees in 1990 (Models 2 and 3) in 1990

Effects	Standardized Estimates		
	Model 1	Model 2	Model 3
Seniority	0.01	0.76***	
Hourly rates			0.78***
Time input#			0.40***
Office	0.24**	0.15*	0.05
Specialty	-0.16*	0.01	0.07
Gender	-0.03	0.00	0.02
Lawschool attended	-0.14	-0.03	0.02
Centrality			
Friendship	-0.27*	-0.11	-0.01
Coworker	0.17	0.01	-0.02
Advice	-0.02	0.27*	0.23*
Constraint			
Friendship	-0.81***	-0.15	0.11
Coworker	0.23*	0.16*	0.13*
Advice	-0.04	0.05	0.04

*p<0.05, **p<0.01, ***p<0.001. Statistical significance levels are purely indicative, since observations were collected for the population, not for a sample. Adjusted R-squared are 0.66, 0.86, and 0.89, respectively (and 0.63, 0.84, and 0.87, respectively, without the coworker constraint variable). The managing partner, who concentrates on firm policy and administrative work and is not a timekeeper during his tenure was not included in the computations of these parameter estimates.

#. Including the interaction effect of time input and hourly rates does not provide additional insights here because senior partners who charge high rates are not among the members who put in the greatest number of hours.

In model 2, status and seniority count. Partners do collect more money than associates, and the more senior lawyers are, the more money they tend to collect. In general, partners put in fewer hours but collect more dollars than associates because they charge more. Associates do collect less money although they put in more time than partners. The more senior associates are, the more hours they bill and the more they collect; senior partners charge more per hour, put in less time, and collect more money. Market conditions have a mixed effect on economic performance: in terms of office membership, Hartford attorneys put in more time than Boston attorneys, and collect more; but in terms of division of work, no specialty (corporate or litigation) seems to be systematically more lucrative than the other—in spite of a general advantage for litigation in the early 1990s in U.S. corporate law firms.

Given our interest in the effect of informal relationships on performance, it makes sense to look into the latter effects in more detail for associates and for partners separately. The following results are then obtained. For partners only, effects considered here for hours billed are at best unstable. Practice has a very weak effect: litigation partners bill slightly more than corporate partners. Again, partners popular as friends tend to bill slightly less (as for associates mentioned below). For associates only, centrality in terms of friendship affects collection negatively. This means that associates very active socially and providing on average more emotional support or role-distance to others may end up being handicapped in terms of collecting. Obviously, the link between the two phenomena is indirect and remains to be explained, but it is nevertheless persistent. The more central associates are in terms of their number of coworkers (that is, the more colleagues they work with), the more hours they bill. The only associates who collect more hours are those who are also central in the coworkers network (they tend to be senior associates). For associates, seniority is the best predictor of performance in terms of hours collected, but seniority *and* centrality as a coworker are the best predictors of performance in terms of hours billed.

In this context, the analysis of the effect of individual social ties on economic performance also shows that attorneys informally sought out for advice and for collaboration by many others tend to bill and collect more than others. This extra effect is partly due to the fact that senior partners are central advisors. As already mentioned, the effect of social capital measured in terms of Burt's constraint scores is still present in model 3, in which seniority is replaced by hourly rates and time input. This confirms our expectations: members with a constraining coworkers' network put in more time, bill more hours, and collect more dollars. The more constraining one's coworkers' network, the higher one's economic performance.

Thus, overall, multivariate analyses show that the effect of position in informal structure and social capital accumulated in this position do count for explaining performance, but these effects are weaker than the weight of seniority or hourly rates as defined by the institutional setting.[x] The next sections provide a more detailed illustration of such effects.

STATUS, SOCIAL CAPITAL, AND ECONOMIC PERFORMANCE: AN ILLUSTRATION

As suggested, in particular, by the effect of constraint in the coworkers' network, economic performance is indeed rooted in the structure of individual social ties in the firm. This raises the question of the relative weight of specific combinations of ties in providing a decisive push in performance increase (or representing a liability that decreases performance). In this section, I look at similar effects from a different angle by showing that a specific configuration of social ties is required, at the dyadic level, for high economic performance in this firm. This is due to the fact that maintaining production (collective action) requires many kinds of contributions and resources. Describing this configuration is equivalent to understanding how social resources combine with one another to increase or decrease individual performance. Results obtained above are translated into a description of specific configurations of ties that are associated with economic performance. These associations can be measured by the correlations between the frequency of more or less multiplex combinations of dyadic ties for each actor and his/her performance measurements.

Table 3 : Correlation table for performance measurements in 1990 and most frequent types of combination of ties among dyads of actors. Only combinations of ties with a significant correlation were kept in the table.

Performance measurements

	Hourly rates Dollars	Time Input Dollars	Time Input Hours	Fees Billed Dollars	Fees Billed Hours	**Fees Collected Dollars**	Fees Collected Hours
No ties	-0.34**	-0.31**	-0.08	-0.31**	-0.15	**-0.31****	-0.17
iFj and jFi	-0.36**	-0.20	0.11	-0.26*	0.05	**-0.26***	0.01
jAi	0.47***	0.36**	0.11	0.42***	0.19	**0.41*****	0.20
jCi and jAi	0.36**	0.15	-0.08	0.21	-0.01	**0.20**	0.01
iCj and jCi and jAi	0.54***	0.44***	0.10	0.43***	0.18	**0.45*****	0.24*
iCj and jCi and iAj	-0.52***	-0.34**	0.04	-0.40***	-0.05	**-0.39*****	-0.04

Configurations of Dyadic Ties and Economic Performance

As mentioned in the presentation of the firm, many combinations of ties are possible at the dyadic level in three networks. The most frequent type of combination (besides the 'no tie' possibility) between two persons in the firm is a mutual cowork tie with one unreciprocated advice tie (from *j* to *i*)—I will call this compound a

Blau-tie in reference to Peter Blau's (1964) work on exchange of advice for status. Many partners have such ties with themselves as advice distributors and associates as advice seekers. In contrast, there are no duplex mutual cowork and friendship ties. The complete absence of such ties is interesting. As seen above, although friendship and work can go hand in hand when an advice component is also present, the two resources seem to have distinctly different natures.

Table 3 presents correlations between specific configurations of dyadic ties for each individual in the firm and several measurements of performance. This exploratory analysis provides several results. First, there is a negative correlation between having many ‘no ties’ (or many ‘empty’ ties—potential ties not actually realized) and putting time in, billing, and collecting. The less one exchanges resources with others, the lower one’s performance. Second, there is a positive correlation between having many ties such as ‘being sought out (unreciprocated) for advice exclusively’ (no cowork or friendship component) and dollar amounts invested (time worked by hourly rate), billed (time billed by hourly rate), and collected (fees actually collected). The same correlation holds when the tie includes an unreciprocated friendship component. This is partly related to the fact that senior partners, who are often sought out for advice and cited as friends (without reciprocating), bill and collect more given their higher hourly rates. Third, and more suprisingly, correlations between having many ties that are exclusively reciprocated work ties and any performance index are all really small. ‘Work only’ relationships are quite neutral in terms of their association with economic performance. Such ties are more frequent for associates than for partners. However, adding one component to this combination changes this result. Given that partners work with associates more than with other partners, there are positive correlations between having many such ties with the added component ‘being sought out for advice’ (unreciprocated) and performance indexes. Such Blau-ties are much more frequent for partners than for associates. In my view, this confirms that self-entrapment by partners in teams of coworkers is compensated by Blau-type status and professional recognition. When adding friendship components to such ties (such as citing *j* as a friend or citing each other as friends), positive correlations become stronger, although there are less occurrences of that type.[xi] Fourth, and conversely, there are mostly negative correlations between having ties with components such as ‘having a reciprocated work relationship and seeking out advice (unreciprocated)’ and dollar amounts put in, billed, and collected. Such ties are more frequent for associates (particularly nonsenior associates). Finally, there are strong and positive correlations between having individual triplex mutual reciprocated ties and dollar amounts put in, billed, and collected. Exchanges of that type are much more frequent for partners. In short, the results translate our previous statements into relational terms. Partners’ higher economic performance, for example, shows in the correlation between having many Blau-ties and the amounts of dollars collected.

To illustrate this analysis, the data provide examples of low and high economic performers and their specific combinations of social resources. In these examples, each attorney has a relatively different profile, but important common characteristics are related to low or high performance.

Low and High Performers: The Importance of Blau-ties

Among low performers (still in terms of dollars brought in in 1990), one partner has, in terms of compounds of ties, a higher than average proportion of persons that he cites as strong coworkers who do not reciprocate, and he has a lower than average proportion of Blau-ties, and of triplex reciprocated ties. He considers many people to be his friends, but they do not reciprocate. His partners do not listen much to his opinions about firm management and policy issues. In terms of his configurations of dyadic ties, this partner—who is the least productive or performant one—has the following combinations. Four types of ties in which he says that he is friends with others who do not reciprocate, four types of ties in which he is sought out for collaboration and that he does not reciprocate, four types of ties in which he is sought out for advice (lower number than the average partner), and five types of ties in which he seeks out others for collaboration but is not cited by them. The strong specificity here is also the absence of direct reciprocity. There are many relations with a transfer of resources, but few relations where there is direct and multiplex exchange. Notice that none of the configurations associated with strong economic performance is present in this partner's profile. Recall the managing partner's comment about this partner:

> [Jack] is a decent guy on a personal level. He says that under pressure he does things but that he is a corporate lawyer, and there is no pressure on him usually, so he just doesn't do it.

A roughly similar pattern characterizes a second low-performing partner. He has a much higher than average proportion of 'no ties' and a higher than average proportion of persons that he cites as strong coworkers who do not reciprocate; he also has a lower than average proportion of Blau-ties, and of triplex reciprocated ties. He nevertheless has an average number of reciprocated friendship ties. Most of his partners do not listen much to his opinions about firm management and policy issues. Very few come to him for advice, and he has a relatively low number of coworkers. At the dyadic level, the specificity of this partner's relational profile is the contrast between his very few ties with others in the firm and two very strong (triplex reciprocated) ties with unconditional partners (his insurance policy against expulsion). He also claims three friendships with other partners, but they are unreciprocated. Recall the managing partner :

> [Frank] was at the low end (of the performance scale) for a long time. Partner 5 went to talk with him. He claims that there isn't anything to do. He says: 'I am a corporate lawyer. My kind of work has dried up, I am out there in the bushes, hustling, doing everything I can.' That is difficult to check. But there is also the fact that part of the people he has worked with do not want to do it again because they think his competence is in doubt. Partner 17 is extremely good in his field. He once volunteered to go see this partner to share some work with him. He went to see him, but he says [Frank] did a horrendously poor job.

In sum, the two low performers are less involved than others in exchanges of production-related social resources in the firm. They do not create teams of associates who can rely on them for work and provide status recognition.

Among high-performing partners, there are broadly speaking two of types of relational profiles. The first type includes some of the most senior partners, especially given their high hourly rates. Their ties often seem to combine unreciprocated transfers toward *j* more than exchanges with *j*. They are more often sought out than seeking someone out—providers rather than beneficiaries. This makes economic sense, since they are in charge of running the organization that ultimately produces their larger share of the pie. But it also makes sense socially. For example, Partner 1 is highly sought out for advice. He cites few coworkers because he mainly worked, during previous year with a junior partner acting as a 'foreman' (Partner 26) concentrating coworkers' exchanges. Partners 2 and 4 have the same relational profile, except for their more frequent mutual involvement in mutual coworkers' ties and a higher than average proportion of Blau-ties. In addition to the work-oriented components, Partner 4 has an exceptional five triplex mutual ties with other partners. Thus, in general, unless they work with a 'foreman,' senior high performers are strongly work-oriented persons intensely involved in coworkers' ties and highly sought out for advice. Their compounds do not include many friendship components, except with a very few select other senior partners with whom reciprocation is taken for granted.[xii] The taboo concerning friendship with associates seems to be extended to young partners with a few exceptions for contemporaries.

The second type of high-performing partner also includes work-oriented persons with an above-average proportion of Blau-ties. They do, however, diversify their exchanges of resources—their types of ties—much more than their senior partners. Their compounds are more personalized and include more friendship components.[xiii] Typical of this relational profile is Partner 26. He is hard working, heavily involved in the business of the firm, one of the persons with the most ties in the firm altogether, among the record holders for the Blau-ties and for the triplex mutual ties (with his Boston contemporaries who—for reasons linked to the history of the firm—form a very cohesive group of partners). But in addition to many mono-resource uniplex ties (such as being often sought out for advice and only for advice, although not as much as Partners 1 and 6), he is involved in many duplex or triplex ties with colleagues who work with him but also like him (often unreciprocated) and come to him for advice (unreciprocated). He is thus more relaxed about personalizing work ties and shows more social openness (than senior partners) to colleagues working with him. He is a work-oriented all-around exchanger and investor of resources.

The contrast between low and high performers' relational profiles shows that high performers (in terms of dollars brought in) draw heavily on their social resources and have common specific relational characteristics, in particular those involving them—not surprisingly—in task-related exchanges with associates. In that respect, the firm benefits from the networks that some individuals have (dense multiplex networks, especially constrained at the group level in the coworkers network and rich in Blau-ties) and suffers from the networks that other individuals have (sparser networks and especially weakly constrained in the coworkers' network).

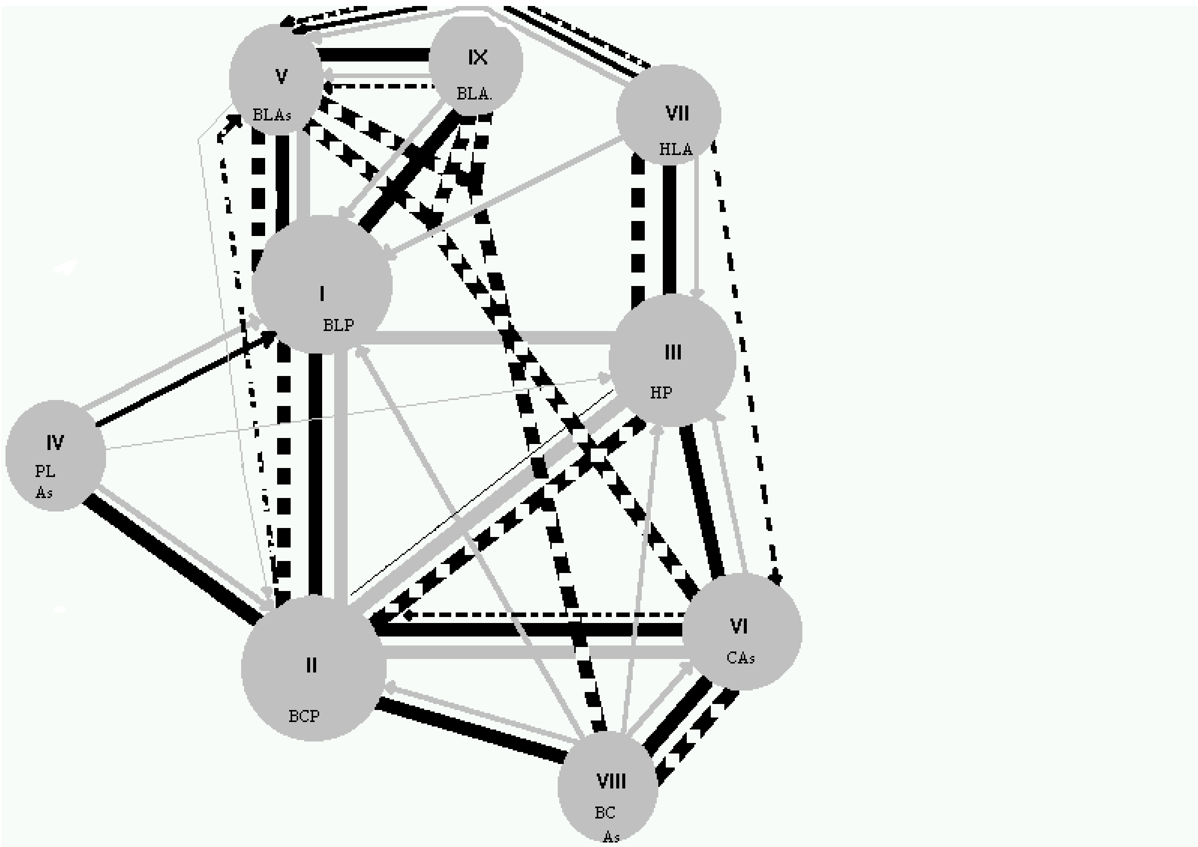
However, as suggested by the effect of constraint scores in the coworkers' network and by the illustrations above, such configurations of ties (described at the dyadic level) favoring high economic performance are not distributed randomly in the firm. Their distribution depends on a wider pattern of social ties, a pattern that represents a multiplex generalized exchange system. Recall that, as described above, the structural tendencies in this firm can be summarized by two separable forms of interdependence: first, the interplay of friendship and advice, wherein an individual's friends may be a source of advice ties; second, the interplay of advice and coworker ties, with the possibility that advice ties play an important role in generating further advice ties and coworker ties. Thus mutual strong work ties occuring in conjunction with either unidirectional (partner to associate Blau-tie) or mutual advice ties—which are positively correlated with economic performance in Table 3—have a higher chance of occurring in workgroups with constrained coworkers ties. In that respect, productive coworker ties are embedded in advice ties. In turn, advice ties are often driven by more personalized ties. While there is a very weak association between duplex coworker and friendship ties, there is a strong one between advice and friendship ties. This configuration also has a higher chance of occurring in cohesive workgroups, and it is especially consistent with the strongest positive correlation in Table 3 between triplex reciprocated ties and high economic performance. Thus strong and stimulating (that is, constrained) coworkers ties combined with advice ties or with both advice and friendship ties have a chance of being economically more productive than other ties and more likely to happen in dense workgroups. Mentor relationships, for example, exemplify one way in which closely selected associates can work with some partners, combine work and personal ties, and create teams.

The existence of such workgroups and the multiplex generalized exchange system in which they are themselves embedded are structural features of the firm as a whole: it is a component of its corporate social capital. It can thus be asserted that if economic performance is rooted in the structure of individual social ties and in cohesive workgroups, the latter are themselves rooted in collective social structure, yielding firm-level social capital. This firm-level social capital, that requires many kinds of contributions, is also key to maintaining collective action and production. It is made more visible in the following section.

CIRCULATION OF RESOURCES AND ECONOMIC PERFORMANCE

Firm social capital is partly reflected by a multiplex generalized exchange system.[xiv] The existence of this system in this firm has already been suggested by an abundance of density effects and scarcity of direct reciprocity effects at the dyadic level across the three networks (see, for example, Lazega and Van Duijn 1997). Such a general pattern of relations is made possible, in part, by reliance on the institutional framework of the firm as a guarantee that resources contributed will eventually come back (although not necessarily in kind) and by the fact that the longer members stay in the firm, the more personal relationships develop among them. For this pattern to encourage partner self-entrapment in their own workgroups, for example, it has to be shown to reflect and sustain the tendencies described above. Productive members can share several types of resources without immediate reciprocity. The system involves forms of indirect reciprocities that take into account several resources.

Figure 1: Relationships between positions of approximately structurally equivalent actors in three networks of relations (advice, coworker, and friendship) in the law firm (adapted from Lazega 1998)



Thick lines represent reciprocated choices. Grey line represent advice ties, black lines coworker ties, and dotted lines friendship ties. Roman figures represent the number of the position. Letters have the following meaning: H for Hartford, B for Boston, P for partners, As for associates, L for litigators, C for corporate. Thus position One represents BLP—Boston litigation partners. The bigger circles are positions of partners; the smaller circles are positions of associates.

A 'Locally Multiplex' Generalized Exchange System

When staying at the dyadic level, it is difficult to get a sense of how exchanges use different resources at the same time, and of the overall pattern of exchanges of the three resources in the firm. Recognizing this more generally, Lévi-Strauss (1949) distinguished two forms of exchange: direct or restricted exchange (dyadic) and indirect or generalized exchange (structural). An analysis approximating structural equivalence among members of the firm across the three networks provides such an overall view, represented in Figure 1. A detailed presentation of this figure and the density tables and image matrices on which it is based are available from the author. To summarize, it shows that the three networks stacked together break down into nine positions of approximately structurally equivalent members. Asymmetries in the transfers of resources, along with the dependencies attached to them, create a multiplex generalized exchange system as shown in Figure 1.

Positions One, Two, and Three are positions of partners: all the others are positions of associates. The thick gray lines (reciprocated advice ties) reflect the backbone of the firm: three partners positions and their senior associates. Notice that requests for advice converge toward them. Many of the relationships between positions are not symmetric. Position One is a socially dominant group of Boston litigation partners who get advice, strong collaboration and friendship from Positions Two and Five. Its members get almost what they want from the people they choose. Many positions of associates are directly indebted to it for advice and collaboration, but it is not the top-performing position (third in average individual dollar collection). Position Two is a group of Boston corporate partners almost in the same dominant situation as Position One, except that it has an exchange of advice for friendship with Position Five. Many positions of associates are directly indebted to it for advice but not for friendship. It is nevertheless the top economically performing position. Position Three is a group mixing Hartford corporate and litigation partners, in the same category as Positions One and Two in terms of dependence on others for resources. It claims strong collaboration from Position Two but is unreciprocated in kind: Position Two members tend not to rely on Position Three for strong collaboration but do so for advice and friendship. Here reciprocity tends also to be direct but not necessarily in kind. Note that Position Three has direct exchanges of strong collaboration only with two positions of associates, Positions Six and Seven, and not with other positions of partners—but cross-selling can still take place, for example, since it is a mixed position (in terms of specialties). As for Position Two, many positions of associates are directly indebted to it for advice but not for collaboration or friendship. It ranks second in average individual dollar collection.

If we come back to the individual and dyadic levels, this picture confirms that partners' positions are characterized by a comparatively very high proportion of Blau-ties—whereas associates' positions are characterized by the corresponding high proportion of ties in which they are the advice-seeking party—and are highly cohesive given their high representation of mutual triplex ties. Thus, at the aggregate level, all three resources tend to circulate within positions of partners and among the two Boston positions. Two additional forms of embeddedness indicate that the partnership agreement is enforced through both economic interest and social ties. Partners from Position One are in a socially advantageous situation to remind partners from Position Two of their commitment, or to calm down status competition among them. Partners from Position Two, in turn, are in a socially advantageous situation for pressuring Position One and Position Three partners back to good conduct. Although they are not often asymmetrically indebted to each other and dependent on indirect reciprocity from each other, economic relations among partners are overembedded for Position One and underembedded for Position Three, with Position Two members playing a key role of balancing the two forms.

This also confirms that the forms of embeddedness of the labor contract for partners and associates are radically different. Here, multiplexity is also more extensively used to enhance the productivity of this economic tie. Associates tend to feel indebted to partners for strong collaboration, advice, and sometimes friendship (mostly unreciprocated). Two senior associates positions, Positions Five and Six, have a less clear profile—in terms of direct reciprocity—than partners' positions. Positions Five exchanges the three resources with Position One partners. In that sense, it has almost a partners' profile. It has other uniplex and directly reciprocal exchanges and does not have to exchange one resource for another (with the exception of friendship for advice with Position Two). Two positions of associates are directly indebted to it for collaboration, advice, and friendship. Positions Six is in a different situation. It has more direct exchanges of strong collaboration with positions of partners and has also a direct exchange of advice with a position of partners. But it does not exchange friendship with partners (remember that it is made of lateral associates who did not grow up through the ranks but were hired away from other firms). It claims friendship with Position Two but this is not reciprocated—unlike Position Five's access to Position One's friendship. Position Six thus gets friendship from colleagues (Positions Five, Seven and Eight) sometimes different from those to whom it provides it.

Small cycles characterizing local and multiplex generalized exchange can be found in this system. Multiplex and local cycles reflect the existence of highly embedded strong coworkers' teams, for example, between Positions One, Five and Nine, or between positions Two, Six and Eight, or One, Two, and Four. This is due, in particular, to the fact that indirect reciprocity is at its strongest with less senior associates who are never in a position, for instance, to reciprocate for advice. They most often have to reciprocate in Blau-type status recognition and strong commitment to work. This reciprocation in commitment to work is not necessarily directly directed to sources of advice but to others. For example, Position Eight gets advice from Position Three but is only indirectly involved in strong work ties with Positions Three through Six. Another example is Position Seven, that gets the three resources from Position Five but is not in a position to reciprocate directly at all, and thus remains indebted but provides Position Three with strong commitment to work and friendship. A similar short cycle is also present between Positions Three, Six, and Seven. Position Four is in the same dependent situation as Position Seven with regard to the three partners' positions it has ties to. Note that it does not get friendship at all from other positions, not even indirectly, which shows that the generalized exchange system fails to provide this resource to some of its members.

A large spectrum of forms of embeddedness is present here to enforce the labor contract for partners and associates. It would be too simple to summarize the situation by saying that performance of individuals is affected by these forms of embeddedness because high performers are always involved in very multiplex cycles and low performers in less multiplex cycles, or because resistance to the general exchange circulation rule always produces low performers. For some associates high productivity goes hand in hand with strong friendship ties with partners: Positions Five and Seven overbill and overcollect compared to the other associates. Associates may often feel kept at arm's-length and that 'partners don't let them in', but here we also see that some partners are nevertheless in a favorable social situation to extract high commitment from these associates. And at the other extreme, Position Four associates are also highly productive but much less socially connected to the partners with whom they work: requests for advice still indicate social embeddedness through status recognition, but partners are less in a position to extract work for friendship. In contrast, junior associates are less productive economically and claim friendship with one another and with senior associates. Here partners can play on resource dependencies to get commitment from associates to their labor contracts in different ways, sometimes indirectly through the dependence of junior associates on senior ones. Senior associates can also play this resource dependence game with strongly socially embedded junior associates (in Position Eight, pure friendship ties are highly overrepresented, and Position Seven sends a record proportion of unreciprocated triplex ties) but not so much with partners.

Back to the dyadic level, we have seen that there is very often—in Positions Two and Seven, One and Nine, Two and Four, and Three and Six—a Blau-tie. This compound reflects one of the most frequent types of embeddedness. Partners also concentrate requests for advice and unreciprocated citations as friends and advisors or as coworkers and advisors. Such citations converge towards all partners' positions but are strongly overrepresented for Position One. Also associates' positions are much less cohesive, which is confirmed by a low proportion of mutual triplex ties. In Position Three, empty ties and mutual duplex (cowork and advice) ties are overrepresented.

Multilevel Embeddedness: A Virtuous Circle?

Exchanges and transfers of resources, along with asymmetries and dependencies attached to them, create a local and multiplex generalized exchange system. This is a social ecological system that has grown around the formal dimensions of the organization and constraints imposed by interdependence in production. It is part of firm-level corporate social capital: it helps members accept terms of the labor contract that they do not necessarily have a narrow interest in accepting. In other words, the firm has found in this exchange system a structural solution to the structural problem of cooperation and commitment to the labor contract, a sort of partial equilibrium in the circulation of resources needed to fulfill it. Given informal constraints guiding the choices of coworkers, advisors, and friends in this firm, and given the existence of such multiplex and local cycles reflecting the existence of highly embedded strong coworkers' teams, givers have a guarantee that they will become receivers, although not necessarily in kind. By allowing such a system to exist, this firm maintains certain forms of resource circulation, a precondition for group solidarity.

Thus, individual commitment to labor contract and individual economic performance are increased by membership in dense workgroups that themselves need a wider and more multiplex exchange system to operate. Individual performance that benefits the firm as a whole is driven by workgroup pressure and the social system of the firm: the organization helps its members perform, thereby helping itself through aggregated performances. In many ways this mechanism is good for the firm as a whole as well as for the individual. It allows very different individuals to carve out a place for themselves in the organization, based on the exchange of various resources. Social networks of individuals make them more productive in the organization—creating individual-level social capital; but it also transforms itself into firm-level social capital because the firm as a whole is more successful in billing and maintaining labor contracts and integration.

However, the embeddedness of individual economic performance in a social exchange system also raises the issue of the relative contribution of individual social capital and firm social capital to collective action and performance.[xv] When several resources circulate, exploitation is present but not easily measurable. For example, if firm-level social structure helps individual members perform, then members who participate in building up this social capital are also entitled to some of the credit that goes to high performers. In this situation, the restraint of members (both in keeping track of all their contributions and returns, and in politicizing the use of measurements) is a micropolitical condition for the efficiency of this system. This is especially the case with teamwork, where others' behavior can easily be perceived to be opportunistic. In fact, members' restraint is often weak: many conflicts in corporate law firms or other private professional services firms are disputes about fairness in compensation to individual partners. But many *cultural* aspects of such organizations, such as an ideology of collegiality, are explicit exhortation to such a restraint.

Thus measuring only economic performance tells only one side of the story of contribution to collective action. This limiting condition for the efficiency of such a virtuous circle is the reason for managing partners often to emphasize 'spreading credit' as widely as possible. Nevertheless, however, recognizing and measuring the relative and specific importance of corporate social capital (as compared to other forms of capital) cannot be done without understanding this political negotiation that enables members to evaluate their contributions. This means that the relative value of social resources is negotiated, and that this negotiation is political. Following these politicized negotiations and how they try to disentangle the merits of the firm as opposed to that of its individual members in the production of a specific performance is beyond the scope of this chapter, and perhaps beyond the possibilities of structural analysis.

CONCLUSION

In summary, this chapter examined the question of the relationship between social structure and economic performance at the intraorganizational level. I have identified a few conditions under which individual social ties are most productive for the firm in collegial organizations—where the production process is difficult to routinize, where professional expertise and advice cannot be standardized, and therefore where internal transaction costs for the firm as a whole can be assumed to be a large part of total costs. An empirical study of a medium-sized northeastern U.S. corporate law firm was used for that purpose. In this firm, attorneys are shown to be bound by a labor contract that is difficult to sustain on pure economic terms. Partners can easily free-ride; associates can threaten the quality of work. Against this damage potential, a social system sustains their commitment. Using network data collected in the firm, I describe and measure social capital at the individual, workgroup, and structural levels to show that the more constraining the member's coworkers' network, the easier it is for the firm to extract higher economic performance, including from tenured partners, by controlling the time put into work. Thus, position in the relational structure and social capital accumulated in this position do count for explaining performance, although these effects are weaker when compared to the weight of hourly rates as defined by the institutional setting. With regard to partners, such teams represent an element of self-entrapment compensated by stimulation, status and professional recognition.

Second, the effect of the individual social network on economic performance is decomposed at the dyadic level by looking at specific combinations of ties that sustain this commitment and provide a decisive increase in performance (or that represent a liability decreasing performance). For example, specific configurations of social ties, such as mutual triplex ties, are strongly correlated with high performance. This fleshes out the positive effect of constraint scores in the coworkers' network. Examples of low and high economic performers, and their respective combinations of social resources, were also provided as illustrations. Third, back to the structural level, a locally multiplex generalized exchange system is described as a precondition for individual and group-level social structure to be productive because it maintains the circulation of social resources in the firm, thus making it possible to improve performance for structurally well located members and workgroups who can benefit from this circulation. A multilevel form of embeddedness is thus revealed here, which shows the importance of taking into account a 'meso' level when measuring the relationship between social structure and performance. In this particular case, the notion of multilevel embeddedness advances our understanding of economic performance: the latter is rooted in individual social capital, which is itself rooted in workgroup and firm social capital, which in turn helps individual members in being more productive. Individual social ties can be most productive—for the individual and/or for the firm—when they are part of a favorable system accumulating collective social capital. By favorable, I mean that the individual social network is located at the right place and mobilized at the right time in a wider production and exchange system.

Finally, however, the politicized nature of performance measurement prevents us from claiming that a permanent *virtuous circle* is produced by the fact that social capital is located at the individual, group, and structural levels. Exploitation and behavior perceived to be opportunistic are also corollaries of this multilevel embeddedness. A final example illustrates one possible implication of these results. As many managing partners in law firms know, the importance of constraint at the group level is not necessarily an encouragement for management to create dense and permanent workgroups in collegial organizations. The existence of such groups is risky for the firm. They can threaten the firm with disintegration when entire teams consider themselves exploited (relatively to others in the firm or to others outside the firm), decide to defect, and take away with them part of the firm's human and social capital. As shown elsewhere (Lazega 1992, 1999), what the managing partner of this firms says about individuals is also true about workgroups:

> There are client loyalties to individual lawyers within the firm, but among ourselves we view all clients as clients of the firm. And indeed, if you are an individual to whom the client has demonstrated a great degree of loyalty, one of your responsibilities is to make sure that there are other partners to whom that client may also look and rely on, not necessarily on an ongoing basis. But if for some reason, for example, I am away, if I were suddenly to decide to go pump gas for the rest of my life—any number of things—that client loyalty is not an asset that belongs to me. If I were to go to another firm, if I have done my job well here at S,G&R, if I call my client and say 'I want you to know that I am in firm X,Y&Z now,' that client's response should be 'Whom at S,G&R should I call now?'. It shouldn't be 'What's your new number?' Whether that would be the case in all cases, who knows? That's what ideally it should be. (Managing partner at the time of the study)

Social structure can thus produce a large amount of social capital for collegial organizations, but its manipulation is double-edged.

APPENDIX A

SOCIOMETRIC NAME GENERATORS USED TO ELICIT COWORKERS, ADVICE, AND FRIENDSHIP NETWORKS

Here is the list of all the members of your firm.

Coworkers network: Because most firms like yours are also organized very informally, it is difficult to get a clear idea of how the members really work together. Think back over the past year, consider all the lawyers in your Firm. Would you go through this list and check the names of those with whom you have worked with. (By 'worked with' I mean that you have spent time together on at least one case, that you have been assigned to the same case, that they read or used your work product or that you have read or used their work product; this includes professional work done within the Firm like Bar association work, administration, etc.)

Basic advice network: Think back over the past year, consider all the lawyers in your Firm. To whom did you go for basic professional advice? For instance, you want to make sure that you are handling a case right, making a proper decision, and you want to consult someone whose professional opinions are in general of great value to you. By advice I do not mean simply technical advice.

Friendship network: Would you go through this list, and check the names of those you socialize with outside work. You know their family, they know yours, for instance. I do not mean all the people you are simply on a friendly level with, or people you happen to meet at Firm functions.

ENDNOTES

1 Elsewhere I have provided other examples of the fact that this firm finds structural solutions to structural problems (Lazega 1992a, 1995a, 1995b, 1997; Lazega and Vari 1992; Lazega and Lebeaux 1995; Lazega and Krackhardt 1997).

2 This is not to say that this ecological system, which makes the partnership agreement enforceable, disciplines all the members equally strongly. Some pay a higher price to be part for it. For example, some associates are put in a better position to try to build their competitive advantage on the use of these embedded ties. Close demonstration of this is, however, beyond the scope of this article.

3 Nelson (1988: 91–92) defines traditional management as characterized by '1) ad hoc and reactive policy-making, with little long-range planning; 2) direct administration by leading lawyers, aided only by a part-time managing partner, with no regular monitoring of internal performance measures or financial information; and 3) informally defined and shifting work groups.' Bureaucratic management is defined by '1) a specialized policy-making group that actively engages in strategic planning; 2) a developed administrative component consisting of a managing partner and a mechanism for collecting and analyzing data on the financial performance of individual lawyers and work groups; and 3) well defined work groups (usually taking the form of departments) with recognized heads who supervise the group and report to the central policy-making group.'

4 For example, given the way a partner is compensated in the firm, looking at the dollar amount actually collected in 1991 does not indicate exactly how productive this attorney was in 1991. Work done in 1990 can be compensated in 1991 (or perhaps even later), and such overlaps make it difficult to disentangle an attorney's productivity in one year as opposed to his or her productivity in another year. Simultaneously, looking at the number of hours billed in 1991 gives an idea of an attorney's productivity in 1991 but does not mean that all the work was done in 1991.

5 Seniority is defined by the rank of partners in the letterhead, which is mainly based on age and years with the firm (with the exception of four partners who were hired away from other firms). Coding of seniority levels in *senior*, *medium seniority*, and *junior* partners is based on cutoffs between Partners 14 and 15 (a difference of eight years in age) and between Partners 27 and 28 (a difference of nine years in age). These categories were explicitly used by the partners themselves.

6 For more information on these networks, see Lazega (1992a, 1992b, 1993, 1994, 1995a, 1995b), and Lazega and Van Duijn (1997).

7 This is partly at odds with Burt's (1992) general statement about association between low constraint and high performance and more consistent with Coleman's (1990: ch. 12) ideas on the benefits of closure and embeddedness of ties. In this chapter, I mainly analyze economic performance understood as the amount of fees brought into the firm at the end of the year. Such amounts depend minimally on the amounts of time worked and on hourly rates. Nevertheless, the more members work, the more they perform in that sense. My point is that extracting work from them should be easier in a constrained network of work ties. Analyzing the determinants of other types of individual performance, such as promotion to partnership, could presumably yield different results and an opposite sign to the association—which would be more in line with Burt's results. About this issue, see also Gabbay (1997).

8 There are many reasons for the inability of hourly rates and numbers of hours worked to explain all the variations in financial performance. First, billing partners do not bill all the hours worked by their team. There are various forms of nonchargeable time, and very often there is a negotiation between the firm and the client as to what is an acceptable price for the services rended. The billing partner then writes off a considerable proportion of hours worked before the bill is sent. Second, corporate law firms have notorious difficulties collecting what was billed, and many partners choose to live with high account receivables rather than antagonize a client from whom they expect more business in the future.

9 However, causal links are difficult with non longitudinal data; it is impossible to know here whether members are low performers because they establish different types of relationship with their colleagues or whether they establish these relationships to try to mitigate the effects of their low performance and carve out a different place for themselves in the group.

10 A longitudinal approach could bring more insights into these effects and especially enable researchers to identify causal relations. A look at performance data for the next year (1991) suggests the possible existence of a cyclical and informal mechanism in which attorneys who work and collect a lot on big cases tend to burn out temporarily, to attract much social approval, to slow down a bit, and work with fewer colleagues, until they are ready to pick up again, thus triggering a new phase in which they start working with more colleagues again, increase their work load, and bill more until they collect again. Needless to say, the existence of such a mechanism remains to be proven, and, if so, the cycle should vary from one attorney to another.

11 The type of tie in which *i* and *j* consider each other as strong coworkers and in which *j* seeks advice from i whereas *i* seeks *j* for socialization outside the firm is a frequent type of compound.

12 There are exceptions, of course: Partner 12, for example, has more than ten ties including unreciprocated (by *j*) friendship ties. Declaring more friends than one may actually have nevertheless characterizes associates' profiles much more.

13 Practicing very diverse and more complex—less task-oriented—types of exchanges also presupposes more flexibility with rules of exchange of resources. Description of such normative games, however, is beyond the limitations of this chapter.

14 For a discussion of the relationships between networks and generalized exchange systems, see for example, Levi-Strauss (1949), Ekeh (1974), Bearman (1997), Breiger and Ennis (1997).

15 The fact that this system helps some individual members reach high performance does not mean that it is egalitarian in the distribution of resources and in the provision of structural solutions to *individual* problems. This can also be illustrated by looking at the relative chances of senior associates to become partners. In their competition for the attention of partners, associates with the right connections to the right partners—with a specific position in this pattern and a specific type of individual social capital—have a clear structural advantages in the highly selective race to partnership. They are in the fast lane because these connections, among other advantages, allowed them to play with organizational rules in an rewarding way, in particular to cross internal boundaries (for example, seek advice from very senior partners), provided that such 'infractions' are limited and well localized (Lazega 1995a).