

*Social Capital of Organization:  
Conceptualization, Level of Analysis and Performance Implications*

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## *Social Capital of Organization*

### ABSTRACT

In this chapter we explore the benefits of social capital and the harmful affects of social liabilities. Following Allison (1971), two models of the organizations are juxtaposed: those of the Rational and Political Actors. The issues of social capital require different perspectives when its implications for performance are addressed. The mediation through individuals takes a prominent place in the Political Actor, and moves to the background in the Rational Actor. The issue of aggregation from the member to the organization is primarily an issue when we view the organization as a Political Actor in which the members' social capital aggregates to that of their organization. Two illustrative cases that fit the two models are then presented, the industrial business groups in Japan and Korea on the one hand, and the population of professional services firms in the Netherlands on the other. In the case of business groups we point to both the benefits of social capital and the drawbacks of social liability. When we shift to the study of professional services firms, we demonstrate that social capital as a distinct organizational resource diminishes the likelihood of dissolution. The implications for social capital and liability are exposed and reviewed.

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*Introduction*

Organizations are presumed to have boundaries. They are endowed with various kinds of assets on which they make ownership claims, and which are protected with isolating mechanisms such as patents and contracts. They are liable for the products and services they produce. Also, they have members whose inclusion in the organization is usually beyond dispute. In fact, the firm as a collection of individuals is often bracketed when considering the competitive game it is playing with other firms. Yet, organizational boundaries are precarious and certainly permeable. They have exchange relationships with suppliers and clients, collude with competitors, and forge all kinds of alliances with them because they cover only part of the value added in their value chain. In their positioning across the chain they face such decisions to "make or buy" components and supplies, whether to share or even outsource R&D efforts, or to operate on a stand-alone basis. Their coherence and integrity might decline and bundles of resources often unravel into discrete parts, but these resources might also become combined—for example in divestments and acquisitions, respectively.

Organizations are embedded in a web of relational ties. In the present chapter, the term social capital captures this relational web. Social capital of organizations constitutes a distinctly collective property that might be mediated by individuals, yet is uniquely organizational. Social capital complements financial and human capital as assets that are more or less valuable, scarce and imperfectly tradable (Barney, 1991). Social capital is even more unique and difficult to appropriate than these other types of assets as it hinges on the continued involvement of two or more parties. Firms, as repositories of unique resources require complementary assets in order to compete successfully. Social capital is crucial in bundling intangible assets and provides the absorptive capacity to merge

proprietary knowledge with that of others. Organizations need to coordinate their interdependencies in the value chain and negotiate a position in their industry. By forging external networks, the organization maintains optimal boundary conditions and remains in tune with external trends and events. At the same time, its boundary structures preserve an organizational modicum of identity and protection against erosion of its assets.

The benefits of social capital seem beyond doubt; less intuitive might be the cost of social liability. Social embeddedness endangers a firm's appropriability regime, and might also envelop the firm too tightly into a web of ties that it stifles its ability to change or impedes its innovative capability. While network relationship is often viewed as conferring various benefits, we should therefore also examine its undesirable consequences.

As numerous chapters in this book indicate, social capital means the ability to sustain long term relationships and associations. The concept originates in sociology, with two writers standing out: Bourdieu (1980, 1994) and Coleman (1990). In this chapter we extend their representation of social capital by treating it as a unique *organizational* resource. We will further reflect on the nature of organizations, and ask how such human aggregates or their social organization are capable of possessing social capital. As with human capital, we need to dwell on the tension between individual and organizational levels of analysis. While it is tempting to "anthropomorphosize" the firm as a human aggregate and impute an ability to mold its surrounding network, we need to ask how such semblance comes about, who the agent is, and what collective motives are operating. After having dwelled on these issues, we explore the implications of organizations that have accumulated social capital. We do so by contrasting two contrasting settings, i.e., business groups and professional service firms, as these stylized forms might respectively illustrate the firm as rational and political actor, and by implication, the sort of aggregation issues that color the reason we depict their social

capital. Below, we belabor these two metaphors to highlight aspects of corporate social capital. We conclude by spelling out implications and future research opportunities.

### **Concept of Organization and Its Social Capital**

It has not been customary to view organizations as embedded in a network of relationships, although person based networks have been used to describe a firm's external linkages (e.g., Levine, 1972). Much of the pertinent literature has focused on individuals (e.g., Burt, 1997; Coleman, 1988; Granovetter, 1985; Uzzi, 1997), their place in some larger network, and the impact it has on their behavior and attitudes. Many views stand in sharp contrast with an "over-socialized" view of man. Economists tend to couch transactions in personal, self-interest seeking terms. As parties in a market, people engage in "arm's length" relationships and their interaction is solely conditioned by the need for exchange. Contrary to such a utilitarian tradition, norm theory in modern sociology assumes that people are overwhelmingly sensitive to the expectations of others (Wrong, 1961). Sociologists often stress the structural context within which parties meet, and such a context might give rise to small number conditions in which actors develop personal bonds, based on trust and mutuality. Uzzi (1997) calls such links "embedded ties<sup>1</sup>." Within such bounds, utility maximization is often suspended for the sake of preserving reciprocal, even altruistic relationships. The next issue involves then the extension from the individual as a party onto himself versus the individual as an "office holder." Size also matters; for example a market with single proprietorships (e.g., the

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<sup>1</sup> Note that embedded ties could have two [if not three] rather divergent meanings: (1) ties that are reinforced by mutual feelings of attachment, reciprocity, and trust; and (2) ties that are a link within a larger set of links and nodes. Since Uzzi's work is confined to dyads, the first meaning applies. When the members of a dyad become affected by third parties who envelop their tie, as in Burt's (1992) work on structural holes, the second meaning applies. In both cases, the concern is with a focal person. If one moves to an even higher level of analysis, as for example the internet, transactions among textile traders in 15<sup>Th</sup> century Florence and Flanders, or community power structures, then the network takes primacy over the ties between individuals who are embedded in those networks. A person's or firm's "centrality" conveys relative access to other actors in the network such that a focal actor's social capital hinges partly on the direct and indirect ties that the tied partners possess (e.g., Levine, 1972). Empirically the effect of centrality on firm behavior or performance has not been studied adequately.

diamond industry) entails rather different inter-firm networking than the US banking world in which firms are tied together, for example through interlocking directorates.

Entrepreneurs, new ventures, and small firms differ markedly from large corporations in terms of the links they maintain. The links that bind them might vary from those that are heavily endowed with trust to those that fit the arm's length relationships. The large corporation is prone to have arm's length relationships with external actors, but as we will see, they often invest in boundary spanning systems in which personally mediated links are discernible. Small firms are more likely to develop bonds of trust and mutual adjustment with external actors such as suppliers and clients, although some conditions give rise to arm's length relationships (e.g., Uzzi, 1997).

We need to position these distinctions against the "model" of the firm which is often implicit (Allison, 1971; Simon, 1957; Thompson, 1982). Organizations have often been viewed as "rational actors" (Allison, 1971) or have otherwise been treated as unitary economic agents. As a singular agent, the firm might be embedded in a multiplex web of inter-firm relationships as manifest in contracts, joint ventures, stock cross-holdings, etc. As units with clear legal boundaries and other "isolating mechanisms firms complement each other in the value chain. The ties that bind them can be viewed as social capital for coordinating inter-firm activities. If we, however, view organizations as human aggregates, as Allison (1971) for example stipulates in his organization as "political actor," we might attribute to that organizational social capital by virtue of the aggregate social capital of its members. The presumption of firms being endowed with social capital appears non-problematic but the implications are rather different in the two scenarios thus depicted. In this chapter we should visit the issue of firm as rational versus political actor in greater detail.

In this chapter, for the sake of the argument, we juxtapose the rational actor caricature with its political actor counterpart and examine the social capital as an integral

part of these models<sup>2</sup>. In the case of the firm as rational actor, we treat individuals as a component in what often appears to be a multi-layered network; partly mediated by individuals and partly by other linking vehicles. In the case of the firm as political actor, the link will often be personal and fit the characterization of simple tie, based on trust and tacitness.<sup>3</sup>

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<sup>2</sup>Note that the rational model of the firm does not presume anything about its embeddedness here. In either the rational or political scenario, we do not assume organizations to behave as if they are atomized from the impact of their relations with other organizations, or from the past history of these relations. If we were to extend methodological individualism to the embeddedness of firms, we would not be able to furnish an adequate account of how firms' actions combine up to the level of the value chain, markets or institutions. We only make the analytical distinction based on the relative saliency of aggregation when examining social capital as a firm-specific asset.

Hence, our reluctance to include Allison's second model, the "organizational actor model" in our review. In the extreme, over-socialized individuals would reduce to mentally programmed automatons who mechanically replicate the routines that the organizational socialization process has imprinted onto them. As role incumbent, they would have no discretion to embellish their position or protect personal interests, nor could they be construed as the personal authors of their social network.

<sup>3</sup> Some examples might illustrate the issues at hand. Firms are tied to each other through trade associations, business groups, consortia, cartels, joint ventures, and directors who sit not only on their board but on the boards of other organizations as well. They are locked into licensing agreements and long term supplier-buyer arrangements, and might have made significant investments in specific inter-firm relationships. The presence of such links and their benefits seem obvious, when that capital is treated as firm level or individual level phenomenon.

For example, Boeing's 747 aircraft requires the input from numerous contractors and sub-contractors—only certain chunks of the cockpit and wings are developed and produced by Boeing. Such inter-firm transactions result in long term links that become independent of the members who forged them originally. Many firms occupy positions in the value chain with interdependencies so dense that one occasionally might consider the value chain to be a more salient unit of action than the firms that exist within the value chain. A simple illustration from the computer industry might further illustrate this observation.

During the main-frame computer era, it was common for firms like IBM and Hitachi to control all the steps in the value chain, from silicon, computer platform, system software, application to distribution and service. The firm was the value chain, and competition between corporations matched competition between value chains. In the late nineties, we observe a fragmented horizontal competition between firms, but vertically dense complementarities have surfaced. Microsoft competes with Apple and Unix, but is symbiotically linked with upstream PC manufacturers and their suppliers, such as Intel. Downstream, the firms relate to distribution and service firms such as computer stores and mail order firms. Microsoft has been a shrewd exploiter of network externalities: the various technologies require complementary products, lead to the formation of virtuous cycles such as software developers writing more Microsoft Windows applications, and when these become available, more customers adopting Microsoft Windows. Increasingly all firms in the value chain become "locked-in" (or locked-out!) resulting in a complex string of links that are straddled around a dominant computer design (e.g., Yoffie, 1996). In such a value chain, links are often de-personalized and it is the organizations that become the salient unit of the network. The ties in such networks are critical for the firms involved as their products and technologies become heavily intertwined with those of others.

Much of the social capital literature has an individual slant (e.g., Burt 1997) and firm attributes have often been examined as an individual manifestation. Burt's (1997) recent study examines investment banks but really focuses on its traders and the "structural holes" that benefit the size of their performance based bonuses. One might also focus on their banks' tombstones and the social capital that could be

We want to stretch the concept of social capital such that it might become an extension of the individual as an office-holder in an organization and consequently, become an accessory for his firm's functioning. For example, an early study by Pettigrew (1974) on the "politics of organizational decision making" narrates the position of an information technology specialist as a boundary spanner between his firm and external vendors. As office-holder his significance derives from the quality of internal and external embeddedness. We might then ask whether the office holder's network connections can be combined with that of others into an index of organizational social capital. Furthermore, inter-firm links might also be discernible beyond the IT specialist, for example by the long term outsourcing of data storage and retrieval services, or the presence of a hot line with the IT consultants. Such a link is not "simplex," but what might be called "multiplex." The Pettigrew example illustrates the transition from the firm as a human aggregate to the firm as a coherent, singular entity where the issue of aggregation becomes bracketed, or remains altogether outside the purview of the observer.

### **Level of Analysis**

It is problematic to move from the individual to the organizational level of analysis when analyzing inter-firm networks. The issue of aggregation from the member to the organization is primarily an issue when we view the organization as a Political Actor in which the members' social capital aggregates to that of their organization.

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inferred from them. Coleman's (1988) classic example involves the tight social circle of diamond traders in New York whose smooth and paperless transactions hinge on the social ties that they maintain with other traders. The trust that is sustained within such a network results in a substantial reduction of transaction costs. Likewise, he (Coleman, 1988) shows that children whose parents know other parents and teachers are better embedded in their school community and show lower dropping-out rate. Finally, Uzzi (1997) recounts the linkages among individuals who make up the New York apparel industry. In such instances, the issue of aggregation and presumption of firm as a unitary actor is rather moot: the entrepreneur is the firm. In these and many other contributions, social capital is a resource that belongs to the networking or interacting individuals and that might affect the venture with which the embedded individual is associated.



Nevertheless, people associated with the organization as Rational Actor carry out deeds on behalf of their firm, and while the model is agnostic about their integrity or, we could focus on their role as distinct linking mechanisms as well.

At face value, the individual-collective distinction seems merely conceptual, not “real.” The issue oscillates between two frames: do individuals as agents or office-holders connect organizations and other human aggregates? Or do organizations and other human aggregates connect individuals? In this chapter, we are mostly concerned with the first type of framing. Nonetheless, we recognize that many inter-firm links condition the intermediation of individuals. In abstracting away from individuals as mediators of inter-firm links we shift from the view of the firm as a “political” actor to that of a “rational” one (Allison, 1971). The level of analysis becomes moot and little need exists for acknowledging cognitive, cultural, or strategic differentiation—whether in the organizational core or at its boundaries.

To the extent that aggregation surfaces as a salient feature, we should abandon the neoclassical notion of the firm as a unitary actor with a well defined preference ordering and whose strategy betrays a clear and unambiguous preference ordering. Its membership has a singular identity. The challenge for firms is to consolidate divergent identities into a coherent one such that they might even approximate the firm as a unitary integrated actor. The members are assigned to interlocked sets of roles and they develop informal sets of hierarchical and horizontal relationships with other people inside and outside the organizations. A large chunk of organizational social capital exists by virtue of the individuals whose relationships span organizational boundaries.

Some organizational participants are more contributory in their social capital than others, depending on their involvement in the focal firm and its transacting partners. Indeed, not all members are equivalent in their ability to leverage their social capital for the firm. Members vary not only in their contribution to external ties but also in their participation in the organization (e.g., Cohen, March and Olsen, 1972). When

aggregating the social capital of members to arrive at a stock index of firms, there is also the issue of redundancy. A network link is redundant if the marginal increase in benefits from acquiring or maintaining that link equals zero. Redundant ties have been well documented at the individual level – e.g., Granovetter’s (1974) “weak” versus “strong” tie and Burt’s (1992) presence or absence of “structural holes.”

The aggregation of the networks of organizational participants is prone to have redundant contacts. The number of members maintaining contact with representatives of other organizations might produce “stronger” ties that are particularly beneficial for the transfer of sophisticated knowledge. For the transmission of information or what might be called “explicit knowledge,” such strong ties are hardly efficient (compare Hansen, 1997). Furthermore, not all social capital of members aggregates to the social capital of the organization. The social contacts of certain organizational members may have little or no instrumental value for their organization<sup>4</sup>. Only overlapping membership in groups and organizations, that are operationally or strategically relevant, matter when aggregating individual social capital to that of the organization; the most common example is interlocking directorates ( Pennings, 1980; Stokman, Ziegler and Scott, 1985).

*Boundary spanner or multiple-group membership.*

The concept of overlapping membership as a way to represent an individual’s social capital should also be invoked to revisit the issue of a firm’s boundaries. If members vary in their inclusion in the focal organization, their external contacts should vary in value as well. Even if organizational members have valuable external ties, they become a valuable component of the firm’s social capital only if the members enjoy

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<sup>4</sup> By the same token, an individual who is neutral to the bridging between two firms cannot easily be incorporated in the organization’s social capital. Referee, arbitrator, or mediator roles are sharply different from those we associate with ambassador, spy, or guest engineer. The former’s neutrality might depreciate or sanitize whatever information or knowledge the “middle-man” furnishes to the linked organizations. His neutrality also precludes intimacy and creates social distance. We assume that organizations have discrete bundles of knowledge and information whose rents will be augmented by the development of “proprietary” social capital.

access to certain peers—for example those with power, information, and other resources. If inclusion is highly partial, their social capital becomes marginalized as well.

For simplicity's sake, organizational members might be stratified into a *core* group, a *regular or associate* group, and *temporary or marginal* workers. The *core* group consists of essential employees who are long-term employees and owners. Their fate is usually tied to that of the organization. The *regular or associate* group consists of rank-and-file employees who have been involved in the organization for “some” time and face good prospects to join the core group. Many members who participate in that tournament will “plateau,” become sidetracked or might even be terminated, however. The *temporary or marginal* category include temporarily hired workers and employees of sub-contractors, i.e., workers who fill the jobs not requiring firm-specific skills and who have little chance of moving into another category of members.<sup>5</sup>

It follows that the social capital associated with the *core* group is more important than that of the *regular* group. The reason is two-fold. First, members in the *core* group are more likely to use their social contacts on the behalf of the organization. Consistent with the garbage can model (Cohen, March and Olsen, 1972), these members have the highest “net energy load,” as their fate is closely tied to that of the organization. Second, they are likely to maintain more valuable social contacts for the organization. They are more central to the access structure, and enjoy higher positions with more power and authority. Many of the firm-relevant social contacts are based on the job and title of individual members. A CEO becomes a board member of a peer organization, supplier or

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<sup>5</sup>Sherer (1995) identifies three major types of employment relationships. The first is the employment relation coupled with ownership. It includes employees who share the risk of organization via various incentive systems which link their earnings to the performance of the organization. Employees in that relation constitute the *core* group in our analysis. The second is the traditionally described employment relation in which employees receive a fixed amount of earnings, provide a fixed length of time, and perform work based on the direction from the supervisor or job description. Employees in these types are designated *regular* group in the present discussion. The third embodies relationships that involve temporarily employment or contracting out. Employees in this type form the *temporary or marginal* group. Note that with the rise of temporary employment agencies, outsourcing and sub-contracting, this latter group has acquired huge proportions. Analogous distinctions have been made by Jensen and Meckling (1976) and Milgrom and Roberts (1992).

some other organization; a partner in a consulting firm befriends senior executives in the firm he works for, etc. Compared to the employees in *regular* or *temporary* groups, members in the *core* group tend to have social ties with people who occupy higher, more visible and more prestigious positions in their organizations. In other words, people who have social contacts with members in the *core* group of a focal organization tend to have more valuable resources at their disposal for the focal organization than do the people who have primarily social ties with members in its more peripheral ones. Core members also stay longer with their organization such that their organization stands to benefit more from their social capital. Overall, we need to focus on the nature of the employment relationship to weigh an individual's ability to link his firm with other ones.

Figure A provides a graphical display of organization stratification in terms of magnitude of personal inclusion.

--Figure A about here --

There are also other ways to compartmentalize the firm as a community of people who are endowed with human capital, and who are differentiated by skill, function, types of markets, products, or technologies. Firms have either a functional or divisional (and in many cases some hybrid) structure whose boundaries define identities. In fact, although firms proclaim to be a hierarchy that economizes on transaction costs (Williamson, 1975), they in fact comprise numerous sub-cultures, with their own identity and parochial interests. While hierarchy and lateral linkages integrate disparate units, they often face major hurdles in consolidating their skills or knowledge, or more generally in bundling their contributions to the common good (Brown and Duguid, 1997; Kogut and Zander, 1994). A firm's *internal* networks such as heavy duty project managers (Clark & Fujimoto, 1991), overlapping teams, and interdepartmental career paths become vehicles for knowledge migration, but such networks are often comparatively deficient because specialization impedes knowledge transfer, especially knowledge that is difficult to package. Ironically, communities of knowledge within the firm have often easier access

to like- communities in other firms than they do with the sister departments within their own firm. The implication is that such external networks are often more efficacious in bridging the firm with external actors than do networks that embrace the total organization. By way of example, we might consider a firm's participation in an "invisible college" less problematic than its participation in a trade association (Powell, 1990; Lazega, this volume).

### *Multiplex versus Personal Forms of Organizational Boundaries*

At the level of inter-organizational relationships, we could make an even stronger argument about the individually anchored social capital of organizations. When the vendor of a software firm leaves, he might appropriate the connections with clients that he has built up during his tenure. One might thus argue that the social capital of organizations is tied up in the individuals they employ.

Yet, as with all intangible assets, social capital can also be treated as an intangible asset that is not exclusively buried in personal networks. Social capital is often "depersonalized" or is couched in multiplex forms. Interorganizational links established through individuals might begin to lead a life of their own. Or such links become embellished by other glue such as contracts, traditions, and institutional arrangements. The members who are then a complement to a system will in fact also be governed by the norms and beliefs that are endemic to local social arrangements.

When links become multiplex, they cease to be dependent on individuals who act as brokers. By way of examples, patent citations signal proximity of knowledge among organizations and can be examined as a conduit for inter-firm knowledge transfer. Cartels amount to a clique with shared norms where the members are firms rather than people. A set of firms might be tied through mutual share holdings. Affiliation among organizations, such as *keiretzu* in Japan, *chaebol* in Korea, or business groups in Sweden

illustrate bundles of inter-firm connections that cannot be reduced to middleman-members.

Strategic alliances such as joint ventures, R&D partnerships, and minority investments embody nodes in webs of inter-firm networks in the telecommunication, micro-electronic and biotechnology industries (e.g., Hagedoorn and Schakenraad, 1994; Omta and van Rossum, this volume). Severing some of these linkages might be impossible. For instance, Microsoft has extensive lock-in agreements with PC makers and their suppliers and PC manufacturers in fact have contracted for the pre-arranged installation of Microsoft's operating system in what used to be called "IBM-compatible" personal computers. Biotechnology firms' entrenchment can be inferred from patent citation networks in which their intellectual property is more or less linked with that of other firms; the tightness of their links is derived from the proximity as measured by relative citation frequencies (Stuart, Hoang and Hybels, 1997).

All of this requires us to dissect the ingredients of inter-firm networks into at least three categories<sup>6</sup>:

- (1) *link*: any sort of association between two or more firms, including equity cross-holdings, patent-ties, licensing agreements, R&D partnerships, equity joint venture agreements, gatekeepers, or interlocking directorates
- (2) *ties*: human mediated links, such as interlocking director or guest engineer. Ties can be "neutral," reflexive (Pennings, 1980) or even universalistic versus parochial and particularistic.
- (3) *relationships*: human mediated ties that are particularistic, as for example the guest engineer who has an OEM employment status but resides on the premises of a supplier.

In short, organizational social capital bifurcates into personalized and depersonalized forms, with relationships often augmented with ties and links; while in

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<sup>6</sup> The classification was suggested by Jon Brookfield.

other instances, the link might persist without the benefit of a relationship. This distinction often corresponds to a simplex versus a multiplex web of network connections. Multiplex “links” appear to be more congruent with the rational actor metaphor of Allison, while “relationships” feature prominently in treatments of organizations as political actors. Table 1 furnishes some examples. First, the organization itself can have a link with other organizations that is instrumental for its functioning. Affiliation among organizations, such as *keiretsu* in Japan or *chaebol* in Korea is a social link of the organization itself rather than of organizational members. As a legal entity, the firm is capable of contracting, of acting as a partner in any market relationship, including the setting up of joint ventures, the acquisition of another firm, or the shedding of a business unit to other firms, etc. Indeed, independent of their members, the organization often maintains social capital through the repetitive exchanges with other organizations. The pattern of exchanges has stabilized, even if the individual members who participate in the process have been changed (Chung, 1996). Investment banks perpetuate their collective efforts when they syndicate public offerings (Chung, Singh, and Lee, 1995). Semiconductor firms joined SEMATEC when they sought to acquire greater economies of scale.

Whether one assumes a personal or impersonal link [or a hybrid form comprising both links and relationships] between organizations, links constitute the ingredients of arrangements that govern the firm-environment interface. In some cases the arrangements can be viewed in their own right, but their efficacy in managing external dependencies depends critically on the quality of the relationship with internal and external decision makers. Adams (1976) was one of the first writers to review such arrangements. He refers to so called “boundary transaction systems.”

*Boundary transaction system*

Social capital fits with the notion of more or less permeable boundaries of organizations that become spanned by a “boundary transaction system”(Adams, 1976). Figure B provides a graphic representation. As Table 1 indicated, such systems diverge into pairs of individual dyads such as the interlocking director or guest engineer whose role in maintaining the firm’s network depends critically on a balanced overlap between the inside and the outside. Or boundary transaction systems are larger and more elaborate entities—for example kereitzus and R&D partnerships. In the latter case the inter-firm link is not nearly as dependent on the presence of boundary-spanning individuals such that the significance of their mediation is comparatively minor. The personal ties often complement non-personal ones such as reciprocal ownership arrangements and R&D partnerships.

--Table 1 and Figure B about here--

Furthermore, the relative salience of the system hinges on the duration of links that are maintained by individuals that make up the system. The longer the tenure, the more distinct the boundaries of the transaction system and the greater the likelihood that its members “go native,” i.e., acquire an identity almost different from the firms they span. Consider boards of directors, or executive councils of Japanese business groups who over time might become closely knit teams. Employees originate from leading universities, where they have already formed friendship networks, and synchronically move upward through equivalent organizational ladders, such that the 'old boy network' remains intact from university years until retirement. The implication is that succession patterns further strengthen the boundary system’s identity (Yoshino and Lifson, 1986). For example, Toshiba and Tokyo Power maintain close buyer-seller relationships; they both draw graduates from Tokyo University who get promoted in their respective companies, and they move in tandem, their roles might change but their mutuality stays intact. The demography of the system co-evolves with that of the respective



organizations. Such evolutionary arrangements ensure network continuity throughout the firms' history.

The boundary transaction system is useful in that it points to the role of member's social capital in producing organizational social capital. Likewise, by recognizing that the system often evolves into a system that cannot be reduced to the participating members, social capital might become depersonalized. The system might become part of a business group, cartel, a joint venture, a long term licensing agreement, or R&D partnership. Such systems are bound to become semi-freestanding entities when three or more firms decide to participate. For example, SEMATEC and ESPRIT are consortia of semiconductor firms that joined forces at the behest of the US and European Union governments respectively to create what we might call a boundary transaction system.

A key difference between a simplex and multiplex boundary system involves the notion of trust. In a simplex system, trust is anchored in a dyad of trustor and trustee who maintain a form *personal trust* of what Simmel calls "mutual faithfulness." Bradach and Eccles (1989) refer to expectations that the other side will not behave opportunistically. It accords with the definition of trust by Mayer, Davis and Schoorman (1995: 712) - a willingness of a party to be vulnerable to actions of another party based on the expectations that the other party will perform a particular action important to the trustor, irrespective of the ability to monitor or control the other party. This definition excludes the social context of the dyad.

In multiplex systems, the social context becomes central and will in fact color the nature of the relationships between individuals who are part of that system. The context includes not only traditions, ties inherited from individuals who are no longer present, contracts and financial leverage, but also forms of *institutionalized trust* (Luhmann, 1979; Shapiro, Sheppard and Cheraskin, 1992; Zucker, 1986). The institutionalization evolves both temporally and spatially. Firms have often recurrent contacts with other firms, and the history of their relationship provides a platform for the current boundary

system. Firms are also entrenched in larger entities, most notably business groups. The firms that make up a business group share norms about inter-firm transactions, have developed routines for contracting, and enjoy a group-derived reputation that molds the dynamics of interpersonal relationships within a boundary transaction system between two member firms. And history matters here, too: the member firms have collectively gone through actions that resulted in shared practices, mutual stock ownership, exclusive supplier-buyer relationships, or investments in transaction specific assets (Dyer, 1996). The historical and spatial context for two individuals who span their respective firms is therefore critically important in comprehending corporate social capital.

The fact that building up such capital requires time was nearly illustrated in the recent difficulties between Ford and its suppliers. Ford sought to redesign its Taurus model, while at the same time redesigning its boundary transaction system (Walton, 1997). For example, the firm attempted to move from multiple, arm's length ties with suppliers to single source relationships. Having made few investments in social capital, its "relational competencies" (Lazerson and Lorenzoni, 1997) for managing such supplier relationships were grossly inadequate. The boundary system included individuals such as Taurus project managers and representatives from 235 suppliers. The project's social architecture was to embrace a Japanese-style long-term cooperative relationship with suppliers. Yet, the culture of the system could be described as "You could not trust them."

The boundary transaction system should not be confined to individuals who gave rise to the system or were involved in its perpetuation. It ranges from dyads of individuals to complex social, economic, and technological arrangements. It evolves from individuals who interact frequently so that the firms become familiar with each other. Familiarity alleviates transaction costs, improves coordination across organizational boundaries, and reduces agency problems—in short the familiarity that comes with organizational networks confers benefits. Familiarity also produces group-think, cuts the

firms off from important external stimuli, and renders it increasingly inflexible. More specific benefits of social capital and the harmful effects of social liability are discussed next.

### **Performance Implications of Social Capital**

At the onset of this chapter, social capital was mentioned as an integral part of the organization's intangible assets. The reference to assets suggests a rent producing potential. However, social capital as such cannot produce rents, but it contributes to greater rent maximization of other resources that complement social capital.

Burt (1992) points out that social capital is owned jointly by the parties to a relationship whereas financial and human capital are the property of individuals or firms. In other words, social capital is embedded in the positions of contacts an organization reaches through its social networks (Lin, Ensel, and Vaughn, 1981). Second, social capital is related to rate of return in the market production function whereas financial and human capital pertain to the actual production capability. We should ask: What is the role of social capital in economic transaction? Under perfect competition, social capital cannot generate any economic rents (Burt, 1992). The market however is hardly perfect and information is not costless. The member's social capital strengthens his firm's ability to retain clients, perform market intelligence, and learn about new technologies. This is particularly true in our knowledge economy where many industries are characterized by abstract products or services, whose quality and other dimensions are difficult to articulate and where delivery of output is highly coupled with reputation (cf. Burt, 1992). Clients resort to their social contacts to screen their suppliers because assessment criteria for quality might be hard to come by. While social capital is not part of the production function, it has profound impact on the benefits that firms derive from their productive capabilities. Putting it differently, social capital brings the opportunities to exploit financial and human capital at a profit.

In the next two sections, we belabor these implications by reviewing two examples with rather different manifestations of interfirm ties: industrial firms that make up business groups such as Keiretzus and Chaebol and professional services firms that comprise the audit industry. We have hinted that these two examples present different manifestations of a firm's external networking. Firms that belong to a business group are typically depicted as (“rational”) actors in a conglomerate-type setting with mutual equity ownership, long term supplier-buyer transactions, and shared directorships. The relational structure that business groups have is assumed to furnish social capital to member firms. We impute such benefits to the firm without confronting aggregation issues or delving into internal factions. Individuals are merely one of the threads that makes up the fabric of networks of business groups. Thus the member-firms of business groups are depicted as integrated, unitary actors who might benefit from their inclusion. The groups furnish interesting data on the benefits of social capital and costs of social liabilities among firms that come close to the stylized Allsion-type Rational Actor.

In contrast, professional services firms belong to the sector that resembles a cottage industry, where *individual* professionals appear to be the most salient participants. While many professionals join a partnership and thus become co-owners of the firm, these organizations are very flat and by dint of the professionalization comprise members whose loyalty might be as strong to their firm as it is towards the profession. The social capital of the firm might in fact be the social capital of individual professionals. Even if we aggregate their social capital to that of the firm they belong to, there always remains the issue as to whether it is the partner, his peers as co-owners, or his firm who can make claims on the social capital that is mediated by the professional. The professional has his own roster of clients and might in fact feel more loyal to those clients than to his brethren with whom he makes up the partnership. His ties, and by implication his firm's links, often fit the notion of embedded ties. Arm's length transactions are incompatible with the rendering of services, although some emotional

distance with the client is often deemed appropriate. Since partnerships often break-up, or witness an exodus of partners, the caricature of Allison's political actor might sometimes be quite appropriate as a general descriptor. Yet, as we will see we often have to qualify this caricature.

### *Business groups*

Social networks have been a pervasive feature of Asian societies in general. According to Hofstede's (1980) landmark study, Asian societies stress collectivist values and cherish loyalty and commitment to family, organization, and community. At the corporate level we also discern a preponderance of networking—most visibly in business groups. Business groups include Japanese keiretzus, or their pre-war predecessors, called zaibatzus, and Korean chaebols. These groups contain myriad firms held together by ownership links, supplier-buyer relationships and mutual guarantee for each other's bank loans. Other countries, most notably Sweden (e.g., Hakanson and Johanson, 1993; Sundqvist, 1990; Berglov, 1994) and Argentina (e.g., Acevedo et al., 1990), harbor business groups, but take on a local, idiosyncratic form. Therefore it is prudent to limit ourselves to a relatively homogeneous class of cases (compare Guillen, 1997). Furthermore, some other Asian countries manifest distinct forms of social capital among organizations; we could mention bamboo networks that are depicted as a guanxi (relation) - based cluster of Chinese firms (compare, Tsui, 1997; Weidenbaum and Hughes, 1996). In these cases, the individual as family member performs a primary role in forging inter-firm links, and the family rather than the firm appears to be the most salient unit of analysis. Unlike more centrally coupled business groups in Korea and Japan, these Chinese forms of organization are octopoid and opportunistically diversified (Tam, 1990). In this section, we restrict ourselves to keiretzus and chaebols.

**Chaebols.** Korean business groups manifest several features that set them apart from Western-style business groups (Kim, 1997). They display family ownership and

management, controlled by a powerful chair. The chair's power derives from stockholdings and from being the father or senior family member who are heads of member companies. Kim (1997) even refers to unquestionable filial piety and patriarchy based family control within modern multinational firms. A founder's descendents actively participate in the top management of the Chaebols. When the founder dies, his descendents succeed as heir. When the founder with multiple descendents dies, "his" chaebol sometimes divides into several mini-chaebols as the case of Samsung indicates. Still, the kinship and family networks link the member firms of those mini-chaebols.

Chaebols also exhibit high flexibility in mobilizing financial capital, technology and human resources. Unlike keiretzus and zaibatzus (although the same Chinese character is used to denote this extinct type of Japanese business group as well as chaebol!) that are governed through consensus building and psychological commitment, chaebols are nimble in their deployment of resources and the patriarch can implement strategic decisions without consulting others. There is widespread rotation of key personnel, R&D efforts are pooled across companies and transfer of cash can be arranged through financial services firms, and the member companies can guarantee each other's borrowings from financial institutions.

Finally, the complex set of networked firms that make up a chaebol are exceptionally broadly diversified. Kim (1997) shows that a chaebol like Samsung operated in light and heavy manufacturing as well as in financial and "other" (e.g., construction, media, hospitality, and advertising) services. Presumably, such diversification allowed chaebol to offset lack of high-tech skills by exploiting semi-skilled and unskilled labor in a way that would not be feasible to a non-networked competitor (Amsden, 1989), while at the same time produce products that are price-competitive rather than quality-competitive in the global markets. Compared to keiretzus, chaebol is basically shaped on the basis of the founding family. The financial institutions

are less utilized to form the relationship within chaebol's member firms, because chaebols are blocked from owning more than 8 % of shares in commercial banks.

**Keiretzus.** Chaebol should thus not be confused with keiretzus or even with their name sake zaibatzus although the degree of contrast is a matter of controversy. After the second world war, zaibatsus were dismantled but reappeared in a different form called "keiretzus." As a result of the transformation, the founding families of zaibatsus lost their shares and power and thus were no longer a source of connections. The insurance companies are at the keiretzus' apex, and from them cascades a transitive pattern of equity cross holdings--the implication being that the insurance firms and their executives are the ultimate center of power and influence (Nishiyama, 1982). Keiretzus' governance is much more decentralized with decision making among firms by consensus rather than through fiat by the keiretzus' insurance firm's executives. The zaibatsus provided a template and became mimicked by Korean entrepreneurs and in any event evolved into a prominent form during Korea's industrial revolution. Zaibatzus and chaebols share characteristics such as family ownership, management by patriarch, and unrelated diversification. However, unlike the chaebol, the zaibatzu also controlled commercial banks, giving them access to capital markets.

Keiretzus are laterally federated with transitive stock ownership arrangements that induce minimal interference in between-firm interactions, rather than resembling a chaebol-like holding with a vertically arranged governance structure<sup>7</sup>. Gerlach (1987: 128) refers to them as "business alliances," which he defines as the "organization of firms into coherent groupings which link them together in significant, complex long-term ownership and trading relationships." They are distinct in the manner in which they have

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<sup>7</sup> The term *transitive* cross-equity holding refers to a string of keiretzus firms between which ownership is mutual yet unequal. Nishiyama (1982) reports the pattern of large block holdings in the Sumitomo Business Group, with Sumimoto (S.) Life Insurance owning a larger percent of shares in S. Bank, S. Metal, S. Chemical, S Electric, etc. than vice versa; it augments its power over these firms because these firms in turn own shares in each other, such that cumulatively, S. Life Insurance scores highest on the "comprehensive power index."

established coordinative mechanisms to govern their relationships. These include high level councils of executives, the shaping of exchange networks, and the external presentation as a coherent social unit, for example through advertising and product development activities. Prominent, but largely invisible in the structuring of network links is the role of financial institutions, which unlike the chaebol are an important component of the Japanese style alliance. The member firms are heavily indebted to the keiretsu's main life insurance company and bank. The cross equity holdings constitute an important link over and beyond the relationships that could be uncovered if one were to have access to their inner circles. Unfortunately, no research exists on the power structure within such circles, and the sort of collective decision making processes that ensue. Thus we are also deprived from making strong conclusions regarding the stock of social capital among keiretsu firms. These links are not merely leverage tools, but in fact might acquire a significant symbolic meaning on their own and complement other media of networking such as exclusive R&D projects. The keiretsu as a somewhat hierarchical network is therefore *multiplex*--debt holdings, cross-equity holdings, supplier-buyer links, and personnel bonds are part and parcel of the connections that bind the firms into a tight and relatively unified alliance.

**Social Capital of Business Groups.** Firms that are part of chaebols and keiretsu are presumed to benefit from the social capital that ensues from their membership in these alliances (e.g., Kim, 1997; Lawrence, 1991). Social capital is manifest in two ways: First business groups provide its member firms with access to resources from other firms. As a quasi-holding or federation of businesses, they can furnish superior access to financial capital through a member financial services firm and cross guarantee each other's bank loans. Similarly, business group specific suppliers and their Original Equipment Manufacturers belonging to the same group display shorter lead times in new product development because they circumvent transaction costs, for example by making significant asset specific investments that in the absence of a business group context



would incur significant hold-up problems (e.g., Dyer, 1996; Gerlach, 1992). The inclusion in the keiretsu reduces the outsourcing to one or at most two suppliers, and the relationship is typically based on trust and mutuality. By way of contrast, Toyota relies often on a single, keiretsu-anchored supplier, while US auto manufacturers such as GM usually rely on as many as six suppliers, with whom they interact opportunistically and at arm's length (Dyer, 1996; Noteboom, this volume). The suspension of the hold-up problem results also in joint R&D and in the geographic clustering of OEM and their suppliers, thus economizing on value chain coordination costs, transportation distance, and inter-firm transfer of tacit knowledge (e.g., Hansen, 1997).

The social capital of business groups, however, is not confined to intra-group relationships. Since their boundaries are also salient at the group level, they have enjoyed scale advantages, not unlike those accorded fully vertically-integrated firms. Such assertions question the saliency or distinctiveness of boundaries, and in particular the issues associated with vertical integration, governance, and transaction costs (Williamson, 1996; Powell, 1990). Even though inter-firm links are not exclusively mediated by individuals – as we have argued they are multiplex, to say the least – the links that bind them might be so strong that the focal attention often shifts to that level of analysis when discussing social capital. They maintained levels of flexibility in moving around human resources and other assets, and because of superior access to cheap and unskilled labor, were able to claim cost leadership positions in their world of multi-point competition. (Kim, 1997: 180-195). Yet, on the next higher level of analysis, these groups commanded clear benefits that surpassed inter-firm arrangements, as reviewed by Powell (1990).

### *Empirical evidence*

For example in Korea, there is the often documented "cozy" chaebol-government interface. Chaebols as groups are often endowed with a good deal of social capital

because of the support they have extracted from the South Korean government.

Compared to non-chaebol firms, chaebols have had better access to state-controlled resources, and were thus able to exploit governmental powers for their own benefit (Kim, 1997). The chaebol dominated segment of the economy grew much faster than the economy as a whole.

The reasons that chaebols have received a great deal of governmental support are two-fold. First, the sheer size of chaebols has made them very important for the development-oriented Korean government. For instance, the value added by the 30 largest chaebols has been around 15 % of GNP and their sales volume has been around 80 % of GNP (Cho, Nam, and Tung, 1998). Since chaebols have been used as a tool for the government's industrialization policy, the Korean government has provided a great deal of favors including soft loans, import prohibition, tax breaks, etc. Second, the relationships of elite university graduates strengthened the relationship between the Korean government and chaebols. People who graduated from elite universities have occupied major positions in the Korean government, banks, and parliament. As a result, chaebols appointed elite university graduates as CEOs to lubricate their relationship with external entities. For instance, 62% of CEOs of the seven largest Korean chaebols in 1985 graduated from Seoul National University (Steers, Shin, and Ungson, 1989).

There is also some provisional evidence that member firms within a chaebol or keiretzu might encounter the adverse effects of "over-embeddedness." In Korea we have the case of the Kukje chaebol and recent bankruptcies of major chaebols, while in Japan the differential learning of keiretzu versus non-keiretzu suppliers provide testimony to the harmful effects of social embeddedness. The Kukje case emerged in February 1985 and evolved from an ordinary bankruptcy into a scandal when the Chun government disbanded the chaebol due to "reckless management, and exceeding high debt rates." It is most relevant for our argument, because of "nepotism management by the sons of the founder." (Kim, 1989). The bankruptcy case is somewhat ambiguous and opinions varied

as to whether it was over-embeddedness among member firms or deficient external social capital that accounted for the disbanding of Kukje. Yang, the chaebol president, claimed favoritism on the part of the Chun government. In any event, further research should identify whether it was social capital at the group level or at the group-state level that explains the demise of Kukje.

Due to the risk-sharing role of chaebols, Korean chaebols enjoyed very high survival chances and thus only a few chaebols experienced bankruptcy. During the period of January 1997 – January 1998, however, nine chaebols among the 30 largest chaebols experienced insolvency. The mutual guarantee of bank loans made whole member firms rather than some of them insolvent. In some cases, the failure of one member firm became the reason of the bankruptcy of the chaebol. Over-embeddedness to other member firms rendered profitable and financially sound member firms bankrupt, thus revealing the “dark side of social capital” (Gargiulo and Benassi, this volume).

Keiretzus in Japan also function as a tool for risk sharing among member firms (Nakatani, 1984) and thus they enjoyed a lower bankruptcy rate (Suzuki and Wright, 1985). However, criticism has surfaced regarding their traditionally claimed advantages. Gerlach (1996) sees the potential unraveling of keiretzus now that their benefits have appeared to wane. Nobeoka and Dyer (1998) have recently completed a survey of OEM-automotive supplier relationships and produced evidence indicating that suppliers that diversify away from a single keiretzu based OEM are more profitable compared with firms who are locked in a close single-source relationship. They interpret this finding as being due to either superior bargaining power, or to a broader exposure to technological know-how; such firms diminish their dependence on a single OEM or they witness learning benefits in that their know-how is likely to be more generic and less firm-specific.

Similarly, Lincoln, Ahmadjian and Mason (1997) provide evidence of Toyota the auto manufacturer and Toyota the keiretzu member, which diversified away from

keiretzu-based automotive suppliers. These authors report that intra-keiretzu knowledge was not only limited, but that Toyota did not even attempt to elevate its "internal" suppliers to the standard that would meet its needs. The implication is that, in spite of trust and inbred capabilities, the firm begins to question the benefits of traditional arrangements. Such precedents might lead the keiretzu on a path of further unraveling its stale social capital and the substitution of a fresh one.

Summarizing, business group's endowment of social capital should be differentiated into that social capital that is discernible at the group level versus that which resides at the interface between the business group and external actors. The beneficiary of social capital is the firm or a group of firms who are portrayed as unitary actors, operating in their economic-political arena. The evidence so far has shown social capital to be beneficial, but more recent evidence shows also that over-embeddedness might be harmful.

#### *Audit Firms*

The accounting sector presents another setting in which the costs and benefits of social embeddedness are evident. Unlike markets with industrial firms, as is the case with industries comprising business groups, the accounting sector produces largely intangible and abstract services. The measurement of product quality is elusive, the production flow is exposed to the client who is often an active co-producer of the services rendered. The firm has some degree of hierarchy but is usually much flatter. In fact most firms are stratified into partners (i.e., owners) and employees, some of whom expect to join the partnership. Their close exposure to the market place and their intense involvement with clients makes social capital a central feature of operations and a key driver of organizational performance. This sector resembles numerous cottage industries where personally mediated ties predominate, not unlike the settings of garment district members (Dore, 1983; Uzzi, 1997), or investment bankers (Burt, 1997).

Ironically social capital can be viewed as a substitute for objective criteria of quality, reliability and consistency. In the absence of objective, verifiable and measurable product attributes, clients might rely on their networks to select auditors or to remain loyal to them even after the honeymoon period has passed (compare Polodny and Castelluci, this volume). The endowment of social capital is therefore a critical resource in such sectors. Absent social capital, the firm might not extract much rent from its human capital. Furthermore, social capital allows the firms to leverage their human capital thus extracting more quasi rent from that asset. Social capital is not only *valuable* as rent producing potential, but is also *scarce* and *difficult to appropriate*. These aspects suggest social capital as a resource not unlike brand equity, reputation and goodwill, and should be further explored here.

As we indicated at the onset of this essay, social capital fits Barney's (1991) criteria of the *resource*-based-view of the firm. Resources that provide a competitive advantage should be valuable, rare, hard to imitate, and imperfectly substitutable. Applying these conditions to accounting firms and other professional service sectors, it appears therefore obvious that the social capital of an audit firm forms a major source of competitive advantage in this "knowledge" sector. Social capital of audit firms has a rent-producing potential, in that it is valuable and scarce (product market imperfectness) as well as imperfectly tradable (factor market imperfectness). Araujo and Easton (this volume) employ a similar list when they conceptualize social capital through a "relational" lens. Let us review these aspects of social capital in closer detail in order to reveal their role in explaining the benefits of embedded ties.

**Valuable.** As far as the value argument is concerned, a substantial number of studies in sociology have shown that social ties transfer influence and information (e.g., Burt, 1992, 1997; Coleman, Katz & Menzel, 1966). At the individual level, the benefit of having supportive relations has been well established. Supportive relations contribute to getting a job (Granovetter, 1974), high compensation (Boxman, De Graaf & Flap, 1991), and

promotion (Burt, 1992). We argue that this argument pertains to the (audit) firm level as well. Burt and Ronchi (1990) and Burt (1992) applied the notion of social capital to organizations. Burt (1992: 9) pointed out that "the social capital of people aggregates into the social capital of organizations." Social capital amassed in the organization's members is among the firm's most valuable productive assets (Burt & Ronchi, 1990). Unlike the setting of business groups, in this sector we can define an organization's social capital as the aggregate of the firm members' social capital. An individual member's social capital is captured by his connectedness with client sectors.

Why would audit firms with social capital enjoy competitive advantages and higher survival chances? That is, what is the role of social capital in the economic transaction of providing audit services? Under perfect competition, social capital cannot generate any economic rent (Burt, 1992). However, the market for auditing services is hardly perfect, and information about audit services is not costless. The owner's social capital strengthens his firm's ability to retain and attract clients. This is even more true in the audit industry, where information with respect to qualities of professionals is hardly perfect (cf. Burt, 1992; Polodny and Castelluci, this volume). Clients resort to their social contacts to screen their service providers, because assessment criteria for auditing quality are hard to come by. Crucial contacts include those that involve the client sectors that an audit firm serves. There are three reasons why network ties with client sectors may well facilitate the building and retention of clientèle.

First, people tend to rely on their current social relations to alleviate transaction cost (Ben-Porath, 1980). A stranger who does not anticipate an enduring exchange relationship, has an incentive to behave opportunistically. To curb this malfeasance, ill-acquainted exchange partners typically rely on elaborate, explicit, and comprehensive contracts. These contracts, however, are difficult to write and hard to enforce (Williamson, 1975). Mutual trust between the actors, developed through repetitive exchanges, obviates the need for writing explicit contracts. If the creation of trustworthy

social relations were costless, however, the existing network ties would not confer benefits to those who nurtured them. In reality, individuals and organizations have to invest substantial time and energy in forging durable relations with others (Burt, 1992). Variations in networking among firms should then contribute to differences in the firms' ability to attract clients. Second, trustworthy relations produce information benefits for the linked actors (Burt, 1992). Information is not spread evenly across all actors. Rather, its access is contingent upon social contacts (Coleman et al., 1966; Granovetter, 1985). An actor cannot have access to all relevant information, nor can he process and screen all important information single-handedly. Being embedded in a network of relations allows a particular actor to economize on information retrieval. Second hand information, at least, serves to signal something to be looked into more carefully (Burt, 1992). Personal contacts also make it possible for the involved actors to acquire the information earlier than others. Third, trustworthy relations enhance the possibility for an actor to refer his contact person ( for example, an auditor, physician or management consultant ) to a third party (i.e., 'tertius'). Burt (1992: 14) puts the benefit this way: "You can only be in a limited number of places within a limited amount of time. Personal contacts get your name mentioned at the right time in the right place so that opportunities are presented to you." The counterpart in a dyadic relation can play a role as a liaison to link the social actor to third parties.

**Scarcity.** The argument as to the scarcity issue is, again, specific to the CPA profession. The CPA profession is there to attest financial outlets of organizations. In effect, this was the very reason for the origination of the profession. In a way, this is comparable to other public professions. For example, police officers are trained to perform their public, and legally protected, role of preventing and bringing action against violations of the civil order. In a similar vein, CPAs are expected to prevent and bring action against violations of the 'financial order'. Therefore, CPAs are trained to perform their public attesting role - this is the core of any CPA education program. This very nature of the profession

implies that the majority of CPAs are employed in public practice, working within audit firms rather than client organizations. Only a minority is attached to internal control jobs within client organizations. Hence, social ties that come with current (or previous) partners or associates with previous (or current) employment outside the audit industry – i.e., through jobs in governmental bodies or private enterprises – are not abundant. For example, in 1920 roughly 80 % of Dutch CPAs worked in public practice. In the period from the 1960s up until the 1980s, this percentage was dropped to slightly above 50 %. Hence, there is much room for audit firm heterogeneity in this respect, both in time as well as over time.

**Nontradeability.** Apart from product market imperfection (resource value and scarcity), nontradeability is needed to guarantee the sustainability of rent appropriation. Social capital is tradeable, however, though all but perfectly. Within audit firms, an individual CPA handles a set of client accounts. That is, from the perspective of the client there is a double tie to the audit service supplier – i.e., to both the audit firm and the individual auditor. For one, client loyalty to the audit firm is rather high. This is particularly true for large companies, which rarely switch from one audit firm to the other (Langendijk, 1990). Among small and medium-sized client firms, audit firm switching may well be common, though. Additionally, however, a client's financial reports are attested by an individual CPA. This introduces a tie to the individual auditor, too. In many cases, the auditor's position involves confidentiality and trust. In a way, the auditor develops into a mediator who plays an advisory role in a wide array of financial and even non-financial issues. So, social ties are partly linked to the audit firm, and partly to the individual auditor. This implies that by moving to another firm, an auditor only depreciates part of this social network, because client sector ties are both an integral part of the firm as well as linked to the trust relationship with the individual CPA. Of course, here the partner-as-associate distinction is relevant from the very observation that ownership is associated with limited mobility.



Finally, we should mention that during the last half century partnership contracts have further diminished the portability of social capital. In both the US, Europe and elsewhere, partnership agreements typically contain a clause that blocks partners from taking clients with them in the event they leave the firm. Needless to say, such contractual constraints bolster the non-tradability assumption of a firm's social capital. Such clauses have also become standard since the second world war and diminish the mobility of a partner's roster of clients.

In sum, a firm of which partners are tied with potential clients is better positioned to build clientele since a potential client can 1) actually become the firm's client, 2) provide valuable information about potential markets, and 3) refer the firm to other potential clients. These aspects should strengthen a professional service firm's survival chances

*An empirical test.*

An empirical study of the Dutch accounting industry over a period of 110 years (1880-1990) was used to test the proposition that social capital diminishes the likelihood of firms getting dissolved. *Social capital* was proxied by various measures. For example, '*Partner from client sectors*' was the proportion of partners who worked in client sectors (i.e., other industries or governmental agencies). They are assumed to have more valuable network ties with potential clients than partners without job experience in client sectors. When departing partners find employment in client sectors, they are likely to have an affiliation that can utilize their professional knowledge. "Controller" and "chief financial officer" are examples. As a result, they are likely to be in a position to choose a professional service provider. Because they have strong incentive to take advantage of their social capital, they are likely to choose the professional service firm they worked for (Maister, 1993; Smigel, 1969). To reflect this effect, the study included a '*partner to client sectors*' variable. This is the proportion of partners who left the firm within the previous ten years in order to work for other industries or governmental agencies. A ten-

year span was adopted for two reasons. First, the strength of network ties may decrease over time, as the departed partners develop new network ties. Second, the departed partners are ultimately bound to retire from the business world and thus no longer provide economic opportunities to the firm. Note that these proxies of social capital derive from the mobility of professionals who move through a revolving door between two firms. Much of the social capital literature assumes stationary individuals who link two or more organizations through overlapping membership—for example interlocking directorates.

To test the hypotheses regarding social capital and dissolution, a hazard analysis was conducted on these firms, while controlling for numerous other variables (e.g., industry level variables such as density, size distribution, history and regulation; and firm level variables such as firm age and size). The rent producing potential of human capital is conditional on the firm possessing social capital. Further details are provided in Pennings, Lee and Witteloostuyn (1998). A partial display of the results is provided in Table 2.

--Table 2 about here--

The results were supportive of the hypotheses. In table 2 we present the results involving the human and social capital of owners, i.e. the partners without showing the simultaneous effects of numerous control and other variables, including those that are associated with firm and industry characteristics. Consistent with the hypothesis, all coefficients of the social capital proxies were negative, indicating that a firm's social capital significantly decreases firm mortality. The effect was statistically significant for two classes of social capital: ties that derive from the recruitment of professionals out of the accounting firm's client sectors, as well as ties that are associated with a firm's "alumni" who after the tenure in the firm have moved to client sector firms. The heterogeneity in bundles of social ties, as derived from the interfirm mobility of professionals did not affect the firms. When we add the proxies of human and social

capital involving associates to the model of table 2, it was found that associates' social capital does not benefit their firm. In short, this study provided some important findings regarding the beneficial effects of social capital.

*What further implications regarding social capital?*

This chapter illustrates the benefits and drawbacks of social capital that are either mediated by individuals or become formed through an array of linking vehicles such as cross-stockholdings and long-term buyer-supplier relationships. We have suggested that the model of the firm conditions our conceptualization and operationalization of social capital and the consequences associated with social capital. Firms are conceived of as unitary actors which interact with other actors (e.g., peer firms in business groups), or they can be conceived as a community of practices and aggregates of individuals with their distinct objectives and unique agendas (e.g., professional services firms). Allison's (1971) labels of rational and political actor correspond with these stylized forms of organization. In the former case, social capital can be operationalized through the multiplex arrangements that bind a firm to other actors. In the latter case, we focus on individuals and their ties that aggregate to organizational social capital. We then set out to review the benefits of social capital as a distinct organizational (intangible) asset.

Mediated by individuals, social capital nonetheless can be viewed as an organizational property. The individuals might be stationary (as illustrated by the linking pin (Likert, 1961) or double agents) or they might migrate between firms (as illustrated by the revolving door syndrome). The relative inclusion of the individual defines its functionality for information and knowledge transmission: the personal needs to be available for external linking, yet requires also sufficient proximity to internal members and groups who can convert the flow of knowledge and other resources into some competitive advantage.

Individuals can also mediate social capital in the case of business groups. In fact, some of the pertinent literature has focused on individuals as transmitters of knowledge between firms they span—for example, so called guest engineers who are employed by the OEM or its supplier and are assigned to work in the partners site, or civil servants who have been recruited by a chaebol firm and join their ranks. For example, in the above Kukje bankruptcy, it has been suggested that the chaebol management shunned participation in semi-public sectors such as the Ilhae Foundation, thus depriving themselves from individually mediated social capital. The Pusan based chaebol neglected to maintain part of its boundary transaction system. What sets business groups apart from partnerships, among others, is that business group links are typically multiplex, comprising both personal and impersonal means for maintaining durable links.

In spite of such differences, this chapter has indicated that network embeddedness can have both positive and negative consequences. The links that bind provide access to competitively critical resources, but they can also be so binding that they are stultifying and rather harmful. The case of Kukje illustrate the deleterious effects of embeddedness that becomes fractured as a result of governmental interventions. The inclination of Toyota to reduce its embeddedness within its keiretzu signals a desire to increase the flow of novel information that current links cannot furnish; its conventional supplier links might be too limited in contributing potentially innovative ideas. The negative first order effect and positive second order effect of social capital on performance in the apparel industry might be the most robust finding to date regarding the paradox of embeddedness (Uzzi, 1997).

Uzzi (1997) makes the important observation that embeddedness is a two-edged sword. Embeddedness ranges from “under-embedded,” via “integrated “ to “over-embedded networks.” As was shown, this distinction hinges largely on whether links are “arm’s length”(i.e., contacts based on selfish, profit seeking behavior) versus “embedded” (i.e., contacts based on trust and mutual intimacy). A firm’s network that

comprises largely arm's length links does not confer much advantage in knowledge transfer, coordination, or strategic alignment. Conversely, a firm that is strongly entrenched in embedded networks might become so insular that it suspends exposure to markets and technologies that reside outside its immediate environment.

It appears that these distinctions do not readily map on the two contrasting cases we presented in this chapter. The partnerships in a professional services sector fit the conceptual distinctions between arm's length and embeddedness, together with their functionality such as trust, tacitness of knowledge being transferred, and mutual adjustment (Thompson, 1967) as coordination mode. At face value, partnerships are internally personalized and anchored in trust, and so we would expect some of the relationships to be among professionals and their clients. Uzzi's (1997) case involves similar *Gemeinschaft*-like firms, i.e., small entrepreneurial firms, mom and pop, a trade making up a cottage industry--in short, organizations in which face-to-face relationships predominate and which often become extended externally. The apparel world resembles the Chinese "bamboo network" (Tsui, 1997) and Dore's (1983) description of the Japanese textile industry, which he labels as "cottage industry" and in which goodwill becomes the central feature in describing the prevailing trust and mutuality. The network ties are largely mediated by individuals.

How do we map these descriptions onto the social capital of firms in business groups which tend to be multiplex? Are such links more *Gesellschaft*-like in their appearance and functionality? What sort of processes can we envision in a boundary transaction system in which personal ties complement contracts, equity cross-holdings, and traditions that outlive their instigators? We should ask such questions particularly when the individuals in the boundary transaction system "do not go native," and continue to link up with people and groups in the firms they span, together with other elements that define their inter-firm context. The issue is germane to our earlier review of the firm as a layered entity in which the boundary spanning system resides largely in the more

peripheral bands. Such networks abound with actors possessing “structural autonomy” (Burt, 1992) and creating opportunities for opportunism, information asymmetry, and knowledge hoarding—opportunities which Uzzi considers antithetical to embedded ties.

The implication of these observations is to recognize the two faces of organizations and to develop divergent frameworks for capturing the performance implications of network embeddedness. Without forcing us onto a meso-level of research, by artificially integrating face-to-face and small group dynamics with large scale firm-interface arrangements, we might develop a middle range theory of social capital that fits the specific questions we might ask. Whether organizations have at least two faces, or whether we invoke two cognitive models of organizations might be an issue left to philosophers and epistemologists. Empirically, we might envision a continuum in which organizations range from highly cohesive, well bounded aggregates that are tightly coupled and present few if any intrafirm hurdles for coordination, knowledge sharing, and strategic positioning. We can also envision organizations that are loosely coupled, with permeable boundaries and few isolating mechanisms, barely holding themselves together and maneuvering on the brink of dissolution. In either case, the firm is part of a larger context. How they position themselves onto this continuum, and what image we impose on them remains a never-ending challenge. The research on social capital will shed further light on how they negotiate their embeddedness, and what sort of advantages and shortfall they derive from that capital.

**Table 1: Examples of social capital among organizations**

<b>Mediated by Individuals (Simplex)</b>	<b>Mediated by Systems("Multiplex)</b>
Interlocking directorates (Pennings, 1980)	Business groups (Acevedo, et al, 1990)
Guest engineers (Dyer, 1996)	Chaebol (Kim, 1997)
Social register (Useem and Karabel, 1986)	Keiretzus (Gerlach, 1987)
Revolving door syndrome (Pennings, Lee and Witteloostuyn, 1998)	Investment bank syndicates (Chung, Singh, and Lee, 1995)
Alumni (McKinsey)	Joint ventures
Double agent	R&D partnerships
Gatekeeper (Tushman, 1978)	Guanxi-si-sen (Tsui, 1997)
Emissary	Electronic clearing house (Pennings and Harianto, 1992)

**TABLE 2**  
**Complementary Log-Log Regression of Firm Dissolution**

Variables	Model 2	
	<i>b</i>	<i>s.e.</i>
Intercept	-.450	.934
Partners' industry-specific human capital (Graduate school education)	-.138***	.040
Partners' industry-specific human capital (Industry tenure)	-.106**	.050
Partners' industry-specific human capital (Industry-tenure) <sup>2</sup>	.145***	.032
Partners' firm-specific human capital	-.236**	.107
Partners' firm-specific human capital <sup>2</sup>	.226***	.034
Partners "from" clientele environment	-.090***	.033
Partners "to" clientele environment	-.013***	.001
Heterogeneity in partners' origin	-.061	.062
Heterogeneity in departed partners' destination	.024	.076
Log-likelihood: Degree of Freedom	-2060: 39	
chi-square compared with previous model: d.f.	118***: 9	

Notes: \*  $p < .10$ , \*\*  $p < .05$ , and \*\*\*  $p < .01$  (two-tailed test)

Data: 1,851 firms, 8,696 firm-intervals, and 1,164 firm failures.

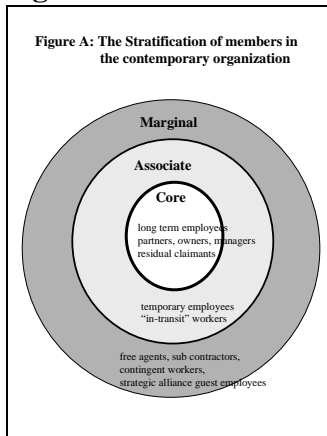
Regulatory, historical, industry level (e.g. density) and firm level (e.g., size, age) and Control variables not displayed (compare Pennings, Lee and van Witteloostuyn, 1998).

Model 2 includes the control variables, but not the variables involving associates'

Human and social capital.



**Figure A. Stratification of firms based on *partial inclusion* of their members**



**Figure B. Boundary Transaction System Comprising Four Individuals Among Two Organizations  
(located after references!)**

## References

- Acevado, M, Basualdo, E.M. and Khavisse, M., 1990. *Quien es quien?: Los dueños del poder económico (Argentina 1973-1987)*. Buenos Aires: Editora.
- Adams, J. S. 1976. The structure and dynamics of behavior in organizational boundary roles. In M.D. Dunette,(ed.), *Handbook of Industrial and Organizational Psychology*, pp 1175-1199. Chicago: Rand McNally.
- Amsden, P. H. , 1989. *Asia's next giant: South Korea and Late Industrialization*. New York: Oxford University Press.
- Allison, G.T., 1971, *Essence of Decision*. Boston: Little Brown.
- Allport, F.H. 1933, *Institutional behavior*. Chapel Hill, NC: The University of North Carolina Press. .
- Aruajo, L and Easton, G., this volume, A relational perspective on social capital.
- Barney, J. B. 1991. Firm resources and sustained competitive advantage. *Journal of Management*, 17: 99-120.
- Ben-Porath, Y. 1980. The F-Connection: Families, friends, and firms and the organization of exchange. *Population and Development Review*, 6: 1-30.
- Berglof, E., 1994. Ownership of equity and corporate governance – The case of Sweden. In T. Baums, R.M. Buxbaum and K. J. Hopt (eds.) *Institutional investors and corporate governance*. Berlin: Walter de Gruyter.
- Bourdieu, P., 1980. Le capital social: Note provisoires. *Actes des recherches en sciences sociales*. 3: 2-3.
- Bourdieu, P., 1994. *Raisons politiques: Sur la théorie de l'action*. Paris: Editions du Seuil.
- Boxman, E. A.W., De Graaf, P. M., & Flap, H. D. 1991. The impact of social and human capital on the income attainment of Dutch managers. *Social Networks*, 13: 51-73.
- Bradach, J. L., & Eccles, R. G. 1989. Markets versus hierarchies: From ideal types to plural forms. In W. R. Scott (Ed.), *Annual Review of Sociology*, 15: 97-118. Palo Alto, CA: Annual Reviews Inc.
- Brown, J.S. and Duguid, J.P., 1997. *Organizing knowledge*. Paper presented at the First Berkeley Forum. UC Berkeley.
- Burt, R. S. 1992. *Structural holes*. Cambridge, MA: Harvard University Press.

- Burt, R.S., 1997. The contingent value of social capital. *Administrative Science Quarterly*, 42, 2 :339-365.
- Burt, R. S., & Ronchi, D. 1990. Contested control in a large manufacturing plant. In J. Weesie & H.D. Flap (Eds.), *Social networks through time*: 121-157. Utrecht: Isor.
- Cho, D.S., Nam, S. and Tung, L. 1998. *Korean Chaebols*. New York: Oxford University Press.
- Chung, Seungwha, 1996. Performance effects of cooperative strategies among investment banking firms: A log-linear analysis of organizational exchange networks. *Social Networks*, 18: 121-148.
- Chung, S., Singh, H. and Lee, K. 1995. "Comparative capabilities and reputational capital as drivers of strategic alliance formation." Snider Entrepreneurial Center, The Wharton School, University of Pennsylvania, Nov.
- Clark, K. and Fujimoto, (1991) , *Product development performance: strategy, organization and management in the world auto industry*. Boston: Harvard Business School Press.
- Coase, R. 1937. The nature of the firm. *Economica*, 4: 386-405
- Cohen, M.D, March, J.G. and Olsen, J. P., 1972. A garbage can model of organizational choice. *Administrative Science Quarterly*, 17: 1-25.
- Coleman, J. S., 1988. Social capital in the creation of social capital. *American Journal of Sociology*, 94: S95-S120.
- Coleman, J. S., 1990. *Foundations of social theory*. Cambridge, MA: Harvard University Press.
- Coleman, J. S., Katz, E., & Menzel, H. 1966. *Medical innovation*. New York: Bobbs-Merrill.
- Dore, R., 1983. Goodwill and the spirit of market capitalism. *British Journal of Sociology*, 34: 459-482.
- Dyer, J., 1996. Specialized supplier networks as a source of competitive advantage: evidence from the auto industry. *Strategic Management Journal*, 17: 271-291.
- Gerlach, M.L., 1987. Business alliances and the strategy of the Japanese firm. In *Organizational approaches to strategy*, edited by G. Carroll and C. Vogel. Berkeley: University of California Press.

- Gerlach, M.L., 1992. Twillight of the keiretsu: A critical assessment. *Journal of Japanese Studies*, 18, 1: 79-118.
- Granovetter, M. S. 1974. *Getting a job*. Cambridge, MA: Harvard University Press.
- Granovetter, M. S. 1985. Economic action and social structure: The problem of embeddedness. *American Journal of Sociology*, 91: 481-510.
- Guillen, M.F., 1997. Business groups in economic development. *Best papers Proceedings*. Academy of Management, Annual Meeting, Boston, pp 170-174.
- Hagedoorn, J., & Schakenraad, J. 1994. The effect of strategic technology alliances on company performance. *Strategic Management Journal*, 15: 291-309
- Hakanson, H and Johanson, J., 1993. The network as a governance structure: interfirm cooperation beyond markets and hierarchies. In F Grabber (ed.), *The embedded firm*. London: Routledge.
- Hansen, M. T. 1997. *Integrating knowledge through the intra-company network: implications for product development time*. Working Paper, Harvard Business School.
- Hofstede, G.H., 1980. *Culture's consequences*. Beverly Hills: Sage.
- Jensen, M.C. and Meckling, W.H., 1976. Theory of the firm: managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3, 305-360.
- Kogut, B. and Zander, U., 1994. What firms do? Coordination, identity, and learning. *Organization Science*. 7(5): 502-518.
- Kogut, B. and Zander, U., 1997. *Did socialism fail to innovate? A natural experiment of the two Zeiss companies*. Working paper. The Wharton School, University of Pennsylvania.
- Kim, E.U., 1997. *Big business, strong state: Collusion and conflict in South Korean Development, 1960-1990*. Albany: SUNY Press.
- Kim, Y.H., 1989. *Kwangwon Kyongje T'ukhye Kyongje (Stateled Economy, preferential treatment economy)*. Seoul: Ch'ung Am.
- Langedijk, H.P. 1990. Wisseling van accountantskantoor: een fata morgana in de toekomst? *Maandblad voor Accountancy en Bedrijfseconomie*, 64, 264-270.
- Lawrence, R.Z., 1991. Efficient or exclusionist? The import behavior of Japanese corporate groups. *Brookings Papers on Economic Activity*, 1: 311-314.

Lazega, E., this volume. Generalized exchange and environmental performance outcomes: social embeddedness of labor contracts in a corporate law firm.

Lazerson, M.H. and Lorenzoni, G, 1997. The networks that feed industrial districts: a return to the Italian source. Working Paper, Economics faculty, University of Bologna.

Levine, J.H., 1972. The sphere of influence. *American Sociological Review*, 37: 14-27.

Likert, R., 1961. *The human organization*. New York: Wiley.

Lin, N., Ensel, W. M., and Vaughn, J. C. 1981. "Social resources and strength of ties," *American Sociological Review*, 46: 393-405.

Lincoln, J. R., Ahmadjian and Mason, E., 1997. *Organizational learning and purchase-supply relations in Japan: Hitachi, Matsushita and Toyota compared*. Paper presented at the JAIMS Conference on International Comparative Study of Knowledge Creation. Honolulu, Hawaii, 1996. Forthcoming in *California Management Review*, 1998.

Lincoln, J. R., Gerlach, M. L., & Takahashi, P. 1992. Keiretsu networks in the Japanese economy: A dyad analysis of intercorporate ties. *American Sociological Review*, 57: 561-585.

Luhmann, N. 1979. *Trust and power*. New York: Wiley.

Maister, D. H. 1993. *Managing the professional service firm*. New York: The Free Press

Mayer, R.C., Davis, J.H. and Schoorman, F.D., 1995. An integrative model of organizational trust. *Academy of Management Review*, 20: 709-734.

Milgrom, P. and Roberts, J., 1992. *Economics, organization and management*. Englewood Cliffs: Prentice Hall.

Nakatani, I. 1984. "The economic role of financial corporate grouping." In M. Aoki (Ed.), *The Economic Analysis of Japanese Firm*. New York, NY: North-Holland, pp. 227-258.

Nishiyama, T., 1982. The structure of managerial control: who owns and controls Japanese businesses. *Japanese Economic Studies*, Fall: 37-77.

Nobeoka K. and Dyer, J.H. 1998. *The Influence of Customer Scope on Supplier Learning and Performance in the Japanese Automobile Industry*, Working Paper, The Wharton School, University of Pennsylvania, Philadelphia.

Noteboom, B, this volume. The triangle: roles of the go-between.

Pennings, J.M. 1980. *Interlocking directorates*. San Francisco: Jossey Bass.

Pennings, J.M. and Harianto, F., 1992. The Diffusion of Technological Innovation in the Commercial Banking Industry, *Strategic Management Journal*, 13,1: 29-46.

Pennings, J.M., Lee, K and Van Witteloostuyn, A., 1998. Human and social capital and organizational dissolution. *Academy of Management Journal* (forthcoming)

Pettigrew, A., 1974. *The politics of organization decision making*. London: Tavistock.

Polodny, J and Catelluci, A, this volume. Choosing ties from inside the prison.

Powell, W.W., 1990. Neither market nor hierarchy: network forms of organization. In B.M. Staw and L.L. Cummings (eds.) *Research in Organizational Behavior*, 12: 295-336. Greenwich, CT.: JAI Press.

Shapiro, D. L., Sheppard, B. H., & Cheraskin, L. 1992. In theory: Business on a handshake. *Negotiation Journal*, 8: 365-377.

Sherer, P. D. 1995. Leveraging human assets in law firms: Human capital structure and organizational capabilities. *Industrial and Labor Relations Review*, 48: 671-691.

Smigel, E. O. 1969. The Wall Street lawyer, professional organization man? Bloomington: Indiana University Press.

Simon, H.A., 1957. *Models of man: social and rational: Mathematical essays on rational human behavior in social settings*. New York: Wiley.

Stokman, F.N., Ziegler, R and Scott, ?. 1985. *Networks of corporate power*.

Stuart, T. E., Hoang, H and Hybels, R.C., 1997. Interorganizational endorsements and the performance of entrepreneurial ventures. Working paper, Graduate School of Business, University of Chicago.

Stuart, T. E., this volume. Technological prestige and the accumulation of alliance capital.

Suzuki, S., and Wright, R. W. 1985. "Financial structure and bankruptcy risk in Japanese companies," *Journal of International Business Studies*, 16: 97-110.

Steers, R.M, Shin, Y.K. and Ungson, G.R. 1989. *The chaebol*. New York: Harper & Row.

Stuart, T. E., Hoang, H and Hybels, R.C., 1997. Interorganizational endorsements and the performance of entrepreneurial ventures. Working paper, Graduate School of Business, University of Chicago.

Sundqvist, S.I., 1990. *Agarna och Markten I Sveriges Borsbolag 1986*.(Owners and Power in Sweden 1986). Stockholm Dagens Nyheter's Forlag.

Tam, S., 1990. Centrifugal and centripetal growth processes: Contrasting ideal types for conceptualizing the developmental patterns of Chinese and Japanese firms. In S.R. Clegg and S.G. Redding (eds.) *Capitalism in contrasting cultures*. Sage.

Thompson, G., 1982. The firm as a dispersed social agency. *Economy and society*, 11,(3): 233-250.

Thompson, J.D., 1967. *Organizations in Action*. New York: McGraw Hill.

Tsui, A., 1997. Where guanxi matters? Relational demography and guanxi in the Chinese context. *Work and Organizations*, 24: 56-79.

Tushman, M.L., 1978. Task characteristics and technical communication in R&D. *Academy of Management Journal*, 21, 624-645.

Useem, M. and Karabel, J., 1986. Pathways to corporate management. *American Sociological Review*, 51, 184-200.

Uzzi, B., 1997. Social structure and competition in inter-firm networks: The paradox of embeddedness. *Administrative Science Quarterly*, 42, 1, 35-67.

Walton, M., 1997. *Car: A drama of the American workplace*. New York: Norton.

Weick, K.E., 1979. *The social psychology of organizing*. Reading: Addison Wesley.

Weidenbaum, M and Hughes, S., 1996. *The bamboo network*. New York: The Free Press.

Williamson, O.E., 1975. *Markets and hierarchies*. New York: Free Press.

Williamson, O.E., 1996. *The mechanisms of governance*. New York: Oxford University Press.

Wrong, D. H., 1961. The oversocialized concept of man in modern sociology. *American Sociological Review*, 26 : 183-193.

Yoffie, D.B., 1996. Competing in the age of digital convergence. *California Management Review*, 38, 4 :31-53.

Yoshino, M.Y. and Lifson, T.B., 1986. *The invisible link: Japan's sogo shosha and the organization of trade*. Cambridge MIT Press.

Zucker, L. G. 1986. Production of trust: Institutional sources of economic structure 1840-1920. In B. M. Staw & L. L. Cummings (Eds.), *Research in organizational behavior*, vol. 8: 53-111. Greenwich, CT: JAI Press.



Figure A. Boundary Transaction System Comprising Four Individuals Among Two

