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Corporate Social Capital and the Strategic Management Paradigm: A Contingency View on Organizational Performance[#]

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SOM-theme B - Innovation and interaction

ABSTRACT

The strategic management paradigm explains organizational performance through the alignment between environment, strategy, and reference points. We extend this paradigm by incorporating the role of interorganizational networks on firm performance, thus integrating strategic management and corporate social capital theory. This results in four normative propositions that describe the conditions under which particular interfirm network structures assist or impede firm performance.

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Corporate Social Capital and the Strategic Management Paradigm: A Contingency View on Organizational Performance

What makes an organization more successful than another? Scholars of the firm have long concerned themselves with the search for the differential characteristics that affect performance of organizations. Recently, within this context the research of social networks has gained considerable prominence. Inter-organizational networks have been shown to affect, among other things, the learning potential of companies, the potential for resource procurement, and firms' ability to harness themselves against competition and changing customer demands. Despite the growing interest in the study of social networks and organizations it has been pointed out that the literature still lacks an overarching paradigm that systematically associates the two (Granovetter, 1985; Salancik, 1995). In response, social capital theory has been embraced by organizational scholars as a potential theoretical basis for the study of networks in organizations (Nahapiet & Ghoshal, 1998; Pennings, Lee & Van Witteloostuyn, 1998; Gabbay & Leenders, 1999). However, notwithstanding the tremendous increase in social capital references in the organization literature, a common definition of social capital and a coherent theory (and encompassing set of measures and indicators) for the systematic explanation of the effects of networks on the performance of organizations is still missing.

Recently, Gabbay & Leenders (1999) suggested to define social capital as the productive set of resources, tangible or virtual, that accrue to an actor through the actor's social relationships and facilitate the attainment of goals. In effect, Gabbay and Leenders suggest to frame social capital in terms of the competitive or value-generating *outcomes* of social networks, rather than as the structural appearance of the network itself. If these outcomes are beneficial to the attainment of goals, the network is said to generate social capital. Since Gabbay and Leenders focus on the effects of networks on organizations and their members, they employ the term 'corporate social capital.' In the present paper, we adhere to this definition.

Two recent developments in the social capital literature are of consequence to our current paper. First, although traditionally the focus of social capital theory has been on the effect networks bring to *individuals* (e.g., Burt, 1992, 1997; Podolny & Baron 1997; Higgins & Nohria 1999) in recent publications scholars have pointed to the social capital effects of inter- and intra-organizational networks on *organizations*.¹ For instance, Nahapiet & Ghoshal (1998) and Tsai & Ghoshal (1998) provide a detailed discussion of the interrelationship between social structure and the creation and maintenance of intellectual capital by firms. Leana & Van Buren III (1999) derive a formal network model of how organizational employment practices foster or discourage, eventually, successful collective action. Pennings et al. (1998) show that social networks diminish dissolutions of professional service firms. In sum, social capital theory has started to gain its position among prominent theories of organization.

Second, although most social capital studies are partial to explaining favorable effects of networks, it has recently been proposed that it is useful to make a distinction between the positive and negative outcomes of networks (Gabbay & Zuckerman, 1998; Leenders & Gabbay, 1999a; Adler & Kwon, 2000; Hansen et al, 2001). In this view, social networks provide social capital only in their productive and positive effect on the goal attainment of actors—when networks inhibit an actor's performance, they provide *social liability* rather than social capital. A network may thus provide social capital to one organization and social liability to another. Similarly, social networks may provide social capital for the attainment of one goal, but social liability for the attainment of another. For example, a cohesive network can provide a firm with timely access to external knowledge resources, but may also decrease the firm's ability to anticipate changes in the market by shielding off the firm from valuable outside information (Podolny, 1994). Moreover, social networks may yield social capital at one point in time, but social liability at another. As an example, Gargiulo & Benassi (1999) show that the network that in the past had provided managers with ample social capital later increased the number of

coordination failures for which these managers were responsible. The network had become a constraint, impeding their performance.

The theory of corporate social capital focuses on the attainment of goals by organizational actors. In the present paper, we are specifically interested in how and when an organization's network leads towards *above-normal corporate performance*—a question that converges with the basic purpose and philosophy of the strategic management paradigm (e.g., Barney & Zajac, 1994; Rumelt, Schendel & Teece, 1991). Research in this tradition has emphasized the importance of matching industry and environmental conditions with firm strategy in order to achieve sustainable and above-normal performance.

In the 'traditional' strategic management paradigm firms were seen as autonomous entities confronted by faceless environments (Astley, 1984). This atomistic view is the basis of the seminal works of Andrews (1971) and Porter (1980) in which competitive interdependence is treated as a given and, once known, prescribes (and predicts) a firm's behavior. This then leads to a predominantly internal focus concerned with matching organizational capacities to environmental demands. However, as Gulati et al. (2000: 203) observe, this image 'is increasingly inadequate in a world in which firms are embedded in networks of social, professional, and exchange relationships with other organizational actors ... the conduct and performance of firms can be more fully understood by examining the network of relationships in which they are embedded. By adopting a relational, rather than an atomistic, approach, we can deepen our understanding of the sources of differences in firm conduct and profitability.' In concert with their suggestion, the purpose of the current paper is to integrate, from an interorganizational network point of view, the accumulated knowledge in the social capital and strategic management frameworks in order to develop a paradigm that explains the creation and management of organizational long-term abnormal performance.

In particular, our aim is to explore conditions under which interfirm networks enhance or impede competitive advantage. Ours is not the first effort in this direction. Recently, several scholars have begun to apply concepts and theories from the social

network literature to the study of firm strategy. Some of the prominent examples include Powell's work on organizational learning and innovation (1990; Powell, Koput, and Smith-Doerr 1996), and Gulati's (1995a, 1995b) and Kogut's (1988,1989) research on joint ventures and alliances. Baum and Dutton (1996) have discussed the social embeddedness of firm strategies. Other² important work in this area includes the work of Pfeffer (1987), Podolny (1993, 1994; Podolny and Stuart, 1995; Podolny & Castellucci, 1999), Stuart (1998, 1999, 2000; Stuart et al. 1999; Stuart and Podolny 1996), and Uzzi (1996, 1997; Uzzi and Gillespie, 1999). Some of this work has taken the perspective of the industry, or that of the network as a whole; other work uses the relationship as the unit of analysis. In this paper, we explore the conditions under which two generic types of network structures—mechanistic and organic—promote or obstruct successful outcomes of strategic management activity.

We add to the literature by developing a normative model relating the inter-organizational network around a focal organization (the firm's egonetwork), firm strategy, environment, and strategic reference points to business performance. For ease of presentation, we will use the term *competitive system* to denote the configuration of the firm's environment, strategy, and strategic reference points. We argue that the alignment of a firm's competitive system with the firm's egonetwork affects competitive conditions and allows for (or obstructs) successful performance.

Although we will borrow heavily from the literature in sociology, organization theory, and strategy, by no means is our goal to provide a review of the literature in any of these fields. Rather our purpose is to present a framework for studying networks and strategy that will bring together issues in competitive strategy and network analysis. In the end our goal is to contribute both to the network literature and to the literature on strategic management.

SOCIAL NETWORKS AND THE STRATEGIC MANAGEMENT PARADIGM

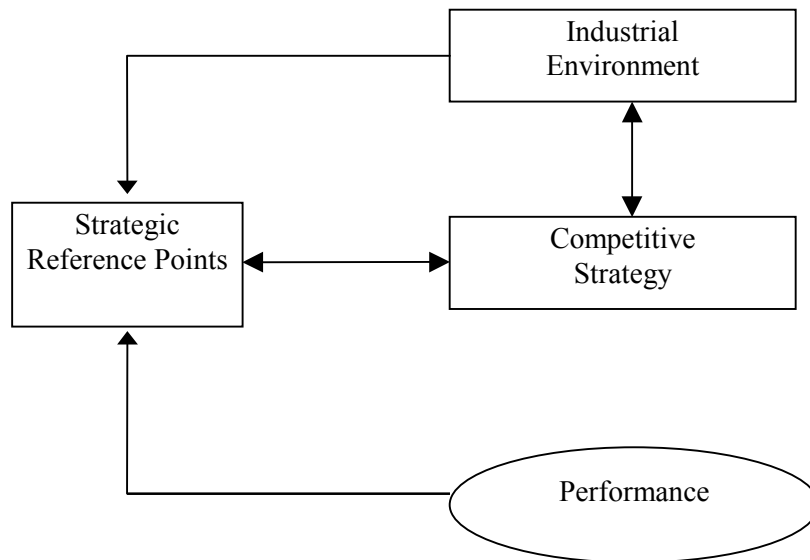
Strategic Management (RESP)

Central in the field of strategic management is the explanation of firm performance (P)—it is commonly believed that strategy (S) and organizational aspects are associated with performance. This has led researchers to focus on different strategic and organizational issues such as levels of strategy, strategic typologies, and strategic capabilities. Moreover, researchers have focused on the environmental (E) aspects of the organization's competitive context.

A firm's strategy (S) and environment (E) play a major role in the analysis of firm performance (P). However, researchers are divided in terms of the key components and theoretical explanations that link E, S, and P. The divide is largely between the competition-based view (CBV) and the resource-based view (RBV) of the firm. The CBV is strongly influenced by concepts developed in economics with position and market power of the firm in its competitive environment (E) being the major forces driving, ultimately, firm performance (P). Within this view profitability is the overriding goal—it is delivered by competing in the product market place. This is evident particularly in the seminal work of Porter (1980; 1985) which strongly expanded the popularity of this branch of theory (Rumelt et al. 1991).

In RBV, the focus moved from the demand side (the nature of the industry) to the supply side (inside the firm). Firm strategy was believed to be based primarily on the accumulation of organizational resources and capabilities. RBV does not deny the importance of competition, but puts its emphasis on the internal resources of the firm. More specifically, resource-based studies emphasize such intangible resources as tacit knowledge, learning, strategic intent, and intelligence. Resource-based theories focus on the resources of the organization as *the* source of successful competitive strategy (S). The source of competitive advantage lies in the organization's resources, rather than in competition in the competitive environment (E)—the focus has shifted from value appropriation to value creation.

FIGURE 1
RESP Framework



The ESP-strategic management paradigm is summarized on the right hand side of Figure 1 (see Caves et al., 1980; Fiegenbaum, 1997).

Research on the risk/return association of performance has identified new and important aspects that pertain to the ESP framework (e.g., Singh, 1986; Baird & Thomas, 1986; Jemison, 1987). Much of this research has been inspired by the research of Bowman (1980) who found negative relationships between risk and return. Bowman's findings run counter to the classic belief that risk and return have a positive association since managers, and hence organizations, are assumed to be risk averse. Subsequent studies (e.g., Fiegenbaum & Thomas, 1988; Bromiley, 1991) showed a negative association between risk and return for firms below their target (troubled firms) and a positive association for firms above their target. In other words, organizations below their targets become risk seekers, while those above their targets become risk-averse. The attitude toward risk taking has become the focus in

the study of strategic reference points (R). Fiegenbaum, Hart, & Schendel (1996) extended the ESP-framework to include the role of reference points—we denote this framework by RESP (see Figure 1). While strategic reference points affect the kind of strategy a firm selects, Fiegenbaum et al. (1996) argue that strategic reference points are, in turn, also affected by the nature of the firm's environment (E), strategy (S), and performance (P). Reference point theory has also been studied in marketing (e.g., Shoham & Fiegenbaum, 1999), human resource management (e.g., Bamberger and Fiegenbaum, 1996), and competitive strategy (Labianca et. al 2001).

In sum, we argue that the RESP framework of strategic management represents the many and diverse perspectives in the field. It is broad enough to describe the basic components and the possible relationships that exist among them. However, each school of thought has its own perspective in terms of the relationships between the four elements (RESP) to be explored.

Social Networks and the Strategic Management Paradigm (RENS-P)

Related to the RESP paradigm is a recent stream of strategic management theory sometimes called the 'socio-cultural' approach. The essence of socio-cultural theory is that companies (and their managers) are embedded in social and cultural systems that influence their decision-making and thus the strategies they develop (Whittington, 1993). Networks directly and indirectly influence the strategies of all members in the competitive arena (e.g., Whitley 1991).

The mere presence of firms, suppliers, and customers in the firm's environment creates a competitive potential, but it does not necessarily ensure this potential is fulfilled. The social ties maintained by a firm are at the heart of the process that creates sustainable competitive advantage. Many of the competitive advantages in industries depend on the flow of information, the discovery of value-adding exchanges or transactions, the willingness to align agendas and work across organizations, and strong motivation for improvement. Underpinning these are networks (Porter, 1998). As Moran & Ghoshal (1999: 409) argue, it is not resources per se, but the ability to access, deploy, exchange, and combine them that lies at the

heart of competitive advantage of firms—in other words: networks (cf. Talmud, 1999).

Despite the passionate calls made by Granovetter (1985) to economic sociologists and by Pfeffer (1987) and Powell (1996) to scholars of strategy, strategy research is still characterized primarily—although not exclusively—by an atomistic approach (Baum & Dutton, 1996). The competition-based and resource-based views of the firm tend to conceptualize markets as comprising of independent actors, each acting autonomously. In RBV, for example, the search for resources and capabilities has typically been restricted to the organization itself and has ignored the organization's ties to other entities in its environment. The empirical reality, however, is that firms are increasingly embedded in vast and overlapping networks of ties with customers, suppliers, competitors, universities, governments, and other institutions (Galaskiewicz and Zaheer, 1999). A recent suggestion has been that the search for these resources extends beyond the boundaries of the firm (Gulati, 1999; McEvily & Zaheer, 1999; Stuart & Podolny 1996; Ahuja, 2000). The network can be thought of as an inimitable resource itself, and as means to access inimitable resources and capabilities (cf. Freeman & Barley 1990; Galaskiewicz and Zaheer, 1999; Gulati et al. 2000: 207; Stuart & Podolny 1996: 36; Zaheer & Zaheer 1997). Gulati (1999) refers to these as 'network resources' in a fashion similar to the concept of corporate social capital. Just as traffic can not be fully understood without studying the road-system, organizations (and their performance) can not be fully understood without studying the pattern of relationships among the actors in an industry.

Social networks act as a hinge within the RESP-framework—they affect, and are affected by, all elements of the framework. Interfirm affect how firms evaluate their performance. Similarly, they affect, and are affected by, the strategies organizations employ. Finally, they partly shape, and are shaped by, firm performance. In essence, networks play an important role in the congruence between the elements of the RESP-paradigm. Below, we will denote this extended paradigm as Reference Points-Environment-Networks-Strategy-Performance, or RENS-P.

A Contingency View

Central in the RENS-P framework is the concept of fit. The key assumption is that for an organization to perform effectively, fit between environmental and strategic characteristics has to be established (e.g., Venkatraman, 1989; Venkatraman & Camillus, 1984; Miles & Snow, 1994). The concept of fit is central to the field of strategic management, which has experienced over the years an increasing interest in the issue of fit between a firm and its environment, strategy, structure, and processes.³ Our notion of fit is closely related to that of the structural contingency theory known from the Organization Behavior literature, the best-phrased summary of which is probably given by Galbraith (1973) in the two maxims that ‘there is no one best way to organize’ and that ‘all ways of organizing are not equally effective.’

In this paper we study the structure of relationships maintained by a focal firm: the firm's egonetwork. These networks bring knowledge, information, control, physical resources, and financial resources. Not all firms possess comparable levels of network resources and firms differ in the types and levels of resources they require. Specifically, firms' networks vary in terms of structure, or the pattern of ties, and nodal diversity, or the variation in the mix of contacts in firms' networks (McEvily and Zaheer, 1999: 1136; Galaskiewicz and Zaheer, 1999). Similarly, Miller (1996) suggests that a firm's strategy (and success thereof) is a function of the strength, diversity, and longevity of a firm's interactions.⁴ In like manner, in their study of how networks affect the cost of capital firms pay on their loans, Uzzi and Gillespie (1999) argue that one needs to consider at once the longevity of the relationships maintained by the focal firm, their multiplexity, network size, and extent of network coupling. These researches all have in common that the authors stress simultaneous consideration of a set of network attributes, rather than a focus on one single characteristic such as size or strength. In the remainder of this paper, we will argue that at least four characteristics appear to move in tandem in the RENS-P framework: tie volume, diversity, strength, and longevity. These characteristics correspond with those considered by Zaheer, Miller, and Uzzi to a considerable extent and together compare closely to the classic categorization of Burns & Stalker

TABLE 1
The Continuum of Organic vs. Mechanistic Networks

	Mechanistic network	Organic network
Tie volume	low	high
Tie diversity	low	high
Tie strength	high	low
Tie longevity	high	low

(1961). In their study of industrial firms, Burns & Stalker noticed two systems of management practice. The first consists of firms with a management structure characterized by rules, stability, and a high degree of formal standardization—Burns & Stalker called these 'mechanistic.' The second pertains to organization that is much looser and adaptive, largely informal, and governed by mutual adjustment and standardization of norms—they called these structures 'organic.' In concert with Burns and Stalker, we define organic egonetworks as consisting of a high volume of ties, many of which (potentially) short-lived, relatively weak, and diverse in content. In a mechanistic egonetwork, on the other hand, the focal organization maintains a relatively low volume of ties, most of which are strong and stable. Table 1 provides a summary.

In the remainder of this paper, we will derive propositions on the interplay of social networks and the elements of the RENS-P paradigm. In so doing, we will develop a contingency theory that integrates the strategic management paradigm and social capital theory. From these propositions we will then derive conditions under which networks provide firms with social capital or social liability. Figure 2 shows the extended RENS-P framework with the four propositions. Although the tone of the discussion that follows below may seem deterministic, mutual causality and dynamic and iterative processes of adjustment between the various elements of the framework are believed to be the rule (cf. Child, 1972; Hrebiniak & Joyce, 1985; Miller, 1988).

FIGURE 2
The RENS-P Framework

2a.

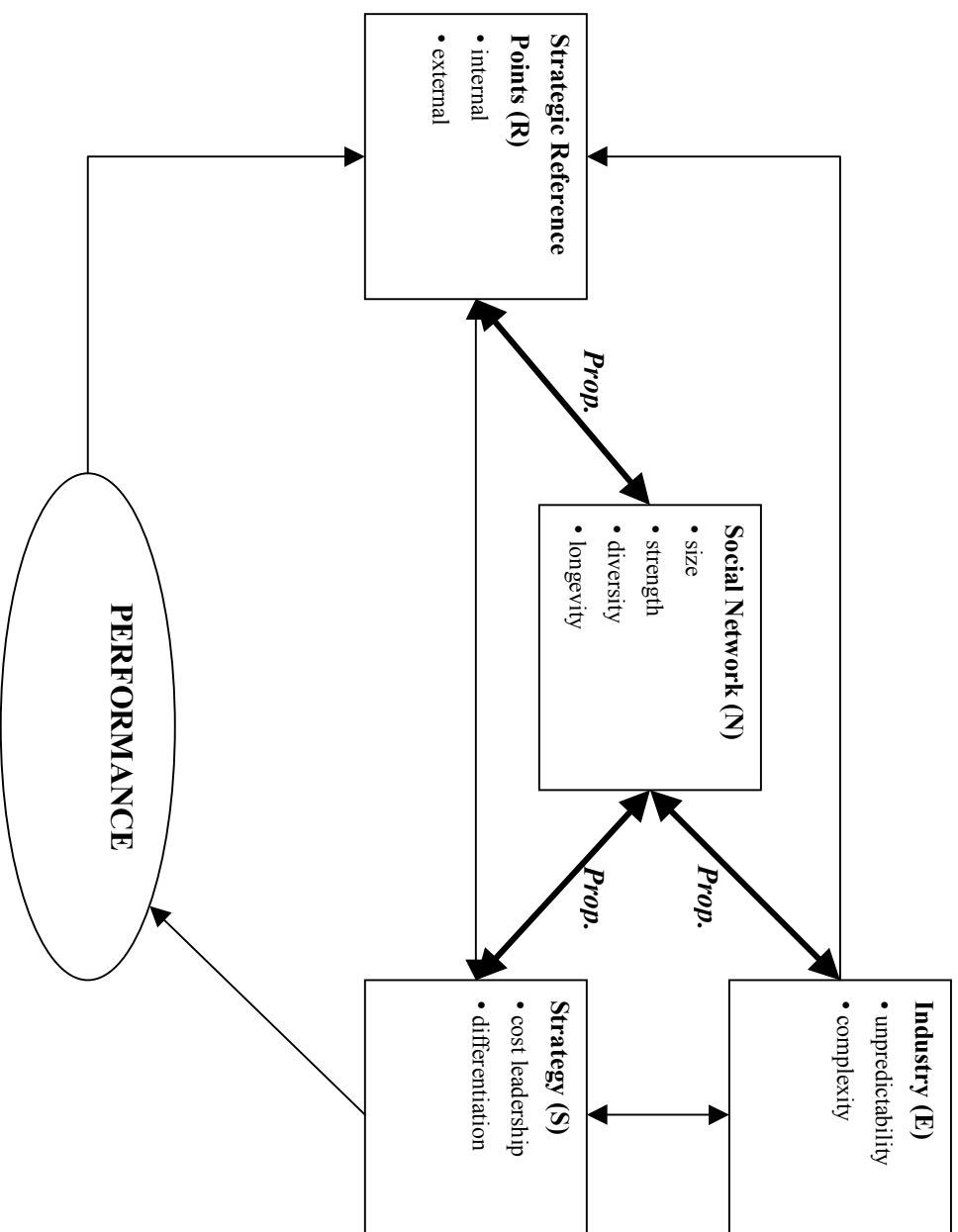
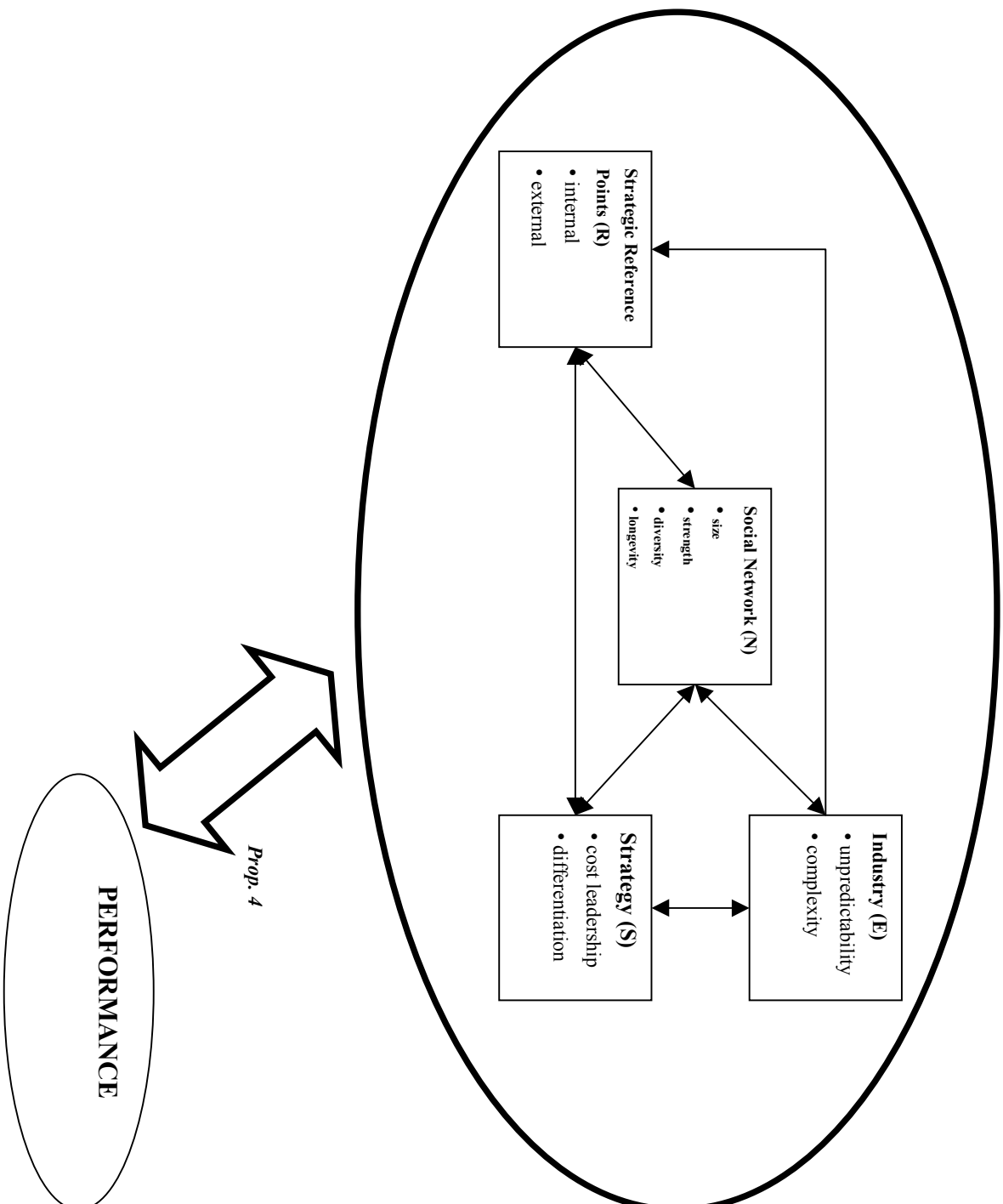


FIGURE 2
The RENS-P Framework

2b.



For clarity of exposition, we will consider each group of propositions independently of the other groups. However, we do recognize that various effects in one group are interrelated with the other groups. In the discussion section we will discuss some intricacies that follow from the interrelationships within this framework.

THEORY DEVELOPMENT AND PROPOSITIONS

Social Network - Environment

An organization's environment consists of a complex interplay of an array of elements. A firm's environment poses an element of uncertainty to organizations (Duncan, 1972), which has been characterized along a number of dimensions—the most common being unpredictability and complexity (Mintzberg, 1979).

Stable, non-changing, markets are increasingly uncommon. Change in itself is not problematic—it is the extent to which events are unpredictable which determines the difficulty firms experience in responding to environmental change. This increases the risk of failure for organizational responses and makes it difficult to compute costs and probabilities associated with decision alternatives. In the literature, this characteristic is often called 'dynamics.' However, since this term confounds change per se with unpredictable change, we prefer to use the term *unpredictability*.

A second characteristic, the *complexity* of a firm's environment is determined by the number of different actors the firm requires knowledge and information about, in order to timely respond to environmental events. Complexity increases with the number and dissimilarity of external elements relevant to the firm's operations.

Contingency propositions. Higher levels of *unpredictability* create a need for increased levels of information on the firm's environment. In a predictable environment, an organization can more easily insulate its operating core and standardize its activities or skills. Standardized, routine scanning of the environment is sufficient. Alternatively, faced with uncertain sources of supply, demand, and market conditions, the organization cannot rely on the standardization of its

information and knowledge acquiring process (Mintzberg, 1979). Relationships with an increasing number of (heterogeneous) environmental parties are required for timely access to information and for the insurance of access to (potentially) required resources. When firms are confronted with high levels of unpredictability, they need to create and maintain structures that can quickly extract and filter required information from the environment and channel it to the focal firm. Firms need to remain responsive and flexible so that they can adapt quickly, while at the same time developing new initiatives. Firms in unpredictable environments thus require⁵ organic egonetworks since these have a higher information collecting and processing capacity (Galbraith, 1973) than do mechanistic structures, are more fluid, and allow the firm to adapt quickly and continually to changes in its environment. In a highly unpredictable environment the egonetwork should be large and heterogeneous. Relationships may be short-lived as changes in the environment may render them unproductive. In such environments, organic egonetworks are much more effective than mechanistic egonetworks.

The traditional approach to dealing with environmental uncertainty is to establish buffer departments within the firm. For example, a purchasing department can buffer the technical core by stockpiling raw material and supplies. A newer approach is to drop most of the internal buffers and instead be more connected to customers and suppliers. Rather than creating buffer departments within the firm, potential buffers are effectively maintained by means of the firm's egonetwork. Predictability of the environment is thus increased.

Although capturing different processes, environmental *complexity* leads to structures similar to that in case of environmental unpredictability—they often move in tandem. Complexity drives forces of mutual adjustment. Moreover, environmental complexity creates a greater need for information on more different parties. For this purpose, firms require a larger volume of ties than do organizations in simple environments. Organic networks are preferable because of their high information gathering and processing capacity.

Another reason for firms to engage in many (weak) ties in a complex environment is that it places the firm in a more central position in the industry's network. The

firm's central position conveys information to the environment that presents the organization in a favorable light (Stuart, 1999) and increases the firm's status. Proven firm trustworthiness and reliability in interactions travels fast through a highly interconnected network. This is critical in complex environments (cf. Podolny 1994) and, in turn, enhances the organic character of the focal firm's egonetwork.

Proposition 1a: (Network-Environment). The more mechanistic (rather than organic) a firms' egonetwork, the more a predictable and simple (rather than unpredictable and complex) competitive environment will be established.

Proposition 1b: (Environment-Network). The more unpredictable or complex a firm's competitive environment, the more an organic (rather than mechanistic) egonetwork is required.

Social Network - Strategy

Various business strategies have been identified in the literature. For the purpose of this paper we consider Porter's (1980) two⁶ generic strategies: cost leadership and differentiation. A cost leadership strategy suggests an internal orientation whereby a firm focuses on operating practices, equipment, and labor costs that deliver the lowest costs in that industry. A low-cost producer must find and exploit *all* potential sources of cost advantage, often including the production of standard products and operating economies of scale. A cost leadership strategy requires aggressive construction of efficient scale facilities, vigorous pursuit of cost reductions from experience curve effects, tight cost and overhead control, avoidance of marginal customer accounts, and cost minimization in the functional areas. In effect, cost leaders shave costs off every element in the value chain. After successfully implementing this strategy, the costs of the cost leader are lower than those of other competitors, delivering above-average profits. The cost leadership strategy is closely related to what Miles & Snow (1978, 1994) and Nicholson et al. (1990) term the 'defender' strategy.

A differentiation strategy allows the products of a firm to meet the needs of some customers in the market place better than others. The company adds perceived value to a product and is then able to charge a price that is higher than the average. The concept which underlines this strategy is market segmentation. Differentiation entails achieving industry-wide recognition of different and superior products and services compared to competitors. By creating customer loyalty and price inelasticity, this strategy erects competitive barriers to entry, provides higher margins, and reduces the power of buyers who feel they lack substitute products (Porter, 1980). Producers following this strategy incur higher costs than competitors do—the relative advantage is derived from the product's above average pricing. The differentiation strategy is closely related to what Miles & Snow (1978, 1994) and Nicholson et al. (1990) term the 'prospector' strategy and requires a proactive external orientation.

Contingency propositions. Given the strategy's emphasis on efficiency and cost control, firms pursuing the strategy of *cost leadership* can not afford to maintain a large network. The transaction costs associated with the maintenance of a high volume of ties renders cost leadership unfeasible. In addition, firms pursuing a cost leadership strategy prefer a low number of large volume suppliers to a larger number of small volume suppliers. By purchasing at high volumes, suppliers can be forced into giving strong price cuts. Moreover, the costs associated with controlling and handling many small sized suppliers are high, compared to the costs associated with larger suppliers.

Cost leadership requires that product lines remain rather stable and that innovations deal mainly with the production processes in the internal organization—focus is on process innovation, rather than on product innovation. Non-varying products and procedures reduce the need to maintain a large, stable, volume of ties.

In sum, the successful pursuit of a cost leadership strategy requires firms to create and maintain a mechanistic network. For a *differentiation* strategy an organic network is more fitting—new product development and adaptation to (external) demands on quality require a firm to be more flexible. A differentiation strategy is based on the firm's ambition to distinguish itself from the competition. For that, the firm needs to be proactive in the development of product, process, technical and

market knowledge, and technology. When following a differentiation strategy, firms require a wider variety of scarce resources than do organizations pursuing the strategy of cost leadership. The firm's egonetwork provides the resources essential to the timely and successful achievement of these goals.

Proposition 2a: (Network-Strategy). The more organic (rather than mechanistic) a firm's egonetwork, the more a differentiation strategy (rather than a cost leadership strategy) is required.

Proposition 2b: (Strategy-Network). When a firm pursues a differentiation strategy (rather than a cost leadership strategy) an organic (rather than mechanistic) egonetwork is required.

Social Network – Strategic Reference Points

Strategic reference point (SRP) theory postulates that a firm's choice of strategic reference points can help achieve strategic alignment capable of leading to improved performance (Fiegenbaum, Hart, & Schendel, 1996). Two dimensions that spread the strategic space that managers must recognize and operate within are the *internal* and *external* dimensions (Fiegenbaum et al., 1996). The internal dimension includes strategic input (e.g., cost reduction, quality improvement, and new product development) and output (e.g., sales, profitability, and growth). The external reference dimension includes competitors, customers, and other stakeholders (such as suppliers, shareholders, and government agencies). SRP's represent the organization's subjective perception of its competitive position, which affects strategic decisions taken by the organization.

Contingency propositions. When a firm employs an internal reference point, it benchmarks its performance against its own internal targets. Firms with an internal reference first aim to achieve such goals as manufacturing excellence, the creation of technical knowledge, the development of process technology, and product development speed.

Firms with an external reference first aim at customer and shareholder satisfaction, and benchmark against the achievements of their competitors.

Successful employment of internal reference points requires stable relationships with buyers, suppliers, and strategic partners. A firm can not allow itself to focus on the development of expert capabilities and new technology without trusting that its partners will be interested in it in the foreseeable future. Moreover, internal development often requires external parties to collaborate with—these parties should be willing to invest in a long-term relationship and be trustworthy as to prevent spillover. External reference points, on the other hand, require a firm to extract much information about customers and competitors from the market place. Mechanistic networks are an ineffective means for this goal. The high information gathering and processing capacity of organic networks, on the other hand, makes them greatly suited for this endeavor.

Internal reference points and mechanistic egonetworks combine well, because internal reference points require the levels of stability and trust that mechanistic networks provide. Conversely, external reference points and mechanistic egonetworks do not combine, because the information purchasing power of mechanistic networks is too low for the firm to successfully strategize on external benchmarks. In organic networks relatively higher investments in monitoring external constituencies are necessary, therefore internal reference points are less feasible.

Proposition 3a: (Network-SRP). When a firm pursues an organic (rather than mechanistic) egonetwork an emphasis on internal (rather than external) strategic reference points is required.

Proposition 3b: (SRP-Networks). When a firm emphasizes external (rather than internal) strategic reference points an organic (rather than mechanistic) egonetwork is required.

Competitive System - Performance

Competitive strategy is about the management of firm performance. The complementarities or congruencies of Reference points, Environment, Network structure, and Strategy structure are expected to be associated with high performance. The mere presence of a certain strategy or egonetwork structure will not likely

produce success in its own right. Neither strategies nor structures by themselves will be adequate to ensure good performance. For example, cost leadership requires a more mechanistic egonetwork; an unpredictable environment compels organizations to maintain more organic network structures. Cost leadership in an unpredictable environment thus is not sustained by the same network characteristics. A match between network structure and strategy will be inadequate if either conflicts with the firm's competitive environment. Proposition 4a suggests that firms perform better to the extent that all elements of the framework (Reference Points, Environment, Strategy, and Network structure) are mutually congruent.⁷

Proposition 4a. (Competitive framework – Performance) The better the fit between the firm's egonetwork and the firm's competitive system, the higher the firm's performance.⁸

Proposition 4a also accentuates Porter's statement that firms can not successfully simultaneously pursue both a cost leadership strategy and a differentiation strategy. Since the former requires a mechanistic egonetwork and the latter calls for an organic egonetwork structure, firms in pursuit of both strategies truly get 'stuck in the middle' and find themselves with network configurations unfitting with either strategy. From Proposition 4a, it follows that sustained high performance in this situation is unlikely.

Table 2 collapses propositions 1 through 3, and shows how the elements of the RENS-P framework fit together.

TABLE 2.
Propositions 1-3 Taken Together

Network	Mechanistic	Organic
Environment	simple predictable	complex unpredictable
Strategy	cost leadership	differentiation
Reference points	internal	external

In this paper we have suggested that a firm's egonetwork is affected by various pressures (such as the environment the firm operates in or the strategy it follows), but also that firms have a degree of control over the structure of their egonetworks, the (choice of) environment they are active in, and the strategy they pursue. Low performers are incited to adapt these elements into a more congruent whole. When a firm's environment and egonetwork match, but are incongruent with the firm's strategy, a firm can increase its performance by adapting its strategy. By actively crafting a firm's egonetwork, strategy, reference points, and environment a firm can create fit among the elements or maintain its fit. When conditions change, such as when competition changes, new technology is introduced, customer demands change, or new products are introduced to the market, an active process of incremental change along the elements of the RENS-P framework can maintain or increase their fit. As Miles & Snow (1994) argue, fit is a not a state, but a process.

Proposition 4b: (Performance – Competitive system). When a firm is dissatisfied with its current performance, it will look to change its present configuration of the elements of RENS-P.

CORPORATE SOCIAL CAPITAL AND LIABILITY

Unpredictable or complex environments yield/require organic egonetworks. An organic structure is also expected/required when a differentiation strategy is pursued. A hostile environment or the pursuit of a strategy of cost leadership will force firms to maintain a more mechanistic structure.

Propositions 4a and 4b suggest that a particular network structure can be beneficial to organizational performance in one situation, but hinder performance in another. Organic structures enhance a firm's performance in environments characterized by high uncertainty, but may be much less beneficial (or even obstructive) to firms in a highly stable and simple environment. Since we argue that organizational performance is conditional on the alignment of the firm's competitive system and its egonetwork, these propositions suggest under what conditions egonetworks provide the organization with social capital or social liability.

In the introduction section we formulated that social capital and social structure are related but different entities. From the four propositions it indeed follows that the same social structure may be beneficial in one situation, but impeding in another—cost leaders benefit from a mechanistic egonetwork, but differentiators are obstructed by such a structure. Equating social structure with social capital suggests that more is better. When a differentiation strategy is followed, firms may indeed draw advantages from an increased volume of inter-organizational linkages. For cost leaders, however, increasing the volume of their interfirm relationships also increases operational costs, which may threaten the firm's cost effectiveness. Our discussion thus suggests that social capital is not fruitfully and generalizably measured by the volume of ties maintained by a firm—in some situations an increased number of ties yields increased social capital, in other situations does it yield increased social liability.

In addition, we suggest that it is not the volume of ties per se, which provides differentiators with above-normal performance—it is also the strength and longevity of the ties and diversity of parties with whom relationships are maintained. In other words, the structural configuration of a firm's egonetwork has a stronger effect on organizational performance than does volume of ties separately. In order to understand which network structure bestows firms with social capital, we have to consider all aspects of the network rather than just one structural aspect. Moreover, one needs to take into account the fit of the firm's egonetwork configuration with its competitive system (and the internal fit of the elements within this system) in order to draw conclusions about (or predict) the effect of networks on organizational performance.

DISCUSSION

Our primary objective in this paper has been to identify effects of interfirm relationships on firm performance. Drawing on the (extended) strategic management paradigm Reference points-Environment-Networks-Strategy-Performance, we propose that the (positive or negative) effect of inter-organizational structures is contingent upon the fit of the firm's egonetwork. When fit among all elements in the

system is high, a firm has met a necessary condition for high performance. When fit lacks, the ability of a firm to obtain above-normal performance is impeded. The normative framework we have discussed here advances the theory of firm-level social capital by identifying the contingent nature of the effect of interfirm networks on performance. A firm that has achieved an aligned system of strategy, environment, and reference points, supported by a congruent egonetwork configuration can benefit from substantial social capital. However, if the firm's egonetwork is not congruent with, for example, the strategy pursued by the firm, the firm's performance will likely be negatively affected. The firm's egonetwork then brings social liability to the firm.

Although the propositions are voiced in absolute terms, the environmental dimensions we distinguish in this paper are of a relative quality. No environment can truly be characterized as, for example, being 'complex but predictable.' These dimensions should be interpreted as relating to the *extent* to which an environment is complex/predictable. The same holds for the conceptualization 'mechanistic' and 'organic' networks. These two types are extremes of a continuum. A network can seldom be said to be completely 'mechanistic,' it can, however, be said that a network is fairly mechanistic or that it is of a more mechanistic nature than is another network. Moreover, the organicity of an egonetwork should be considered in terms of the nature of the industry the focal firm belongs to. For example, by their nature, retail businesses have a larger average number of ties than do firms in the defense industry. Mechanistic networks in the defense industry thus involve a considerably smaller number of ties than do mechanistic retail egonetworks.⁹ We only argue, for example, that when environments become increasingly unpredictable, egonetworks of a more organic nature are preferable.

Our framework has several implications. It suggests that the effects of structural network attributes on organizational performance can not be fully understood without taking into account the firm's competitive system. Conversely, the RESP elements of the strategic management paradigm can not be fully understood without the study of the network context maintained by the firm. In effect, this paper calls for a contingency approach to the study of networks and organizational performance. Some scholars have already taken up the challenge to consider contingent effects

under which networks provide social capital or social liability to members of the firm (e.g., Burt, 1997; Higgins & Nohria, 1999; Adler & Kwon, 2000; Hansen et. al., 2001).

Leenders & Gabbay (1999b) propose to guide social capital research by discussing the contingency question: which social structure, for whom, for which goals, where, and when? We will discuss some implications of our arguments by briefly addressing these questions below.

Which Social Structure

In this paper we view social capital and social liability as related to the outcomes of networks, rather than as a structural characteristic of the network. Moreover, social capital does not follow from one single structural feature, but from a set of features. In this paper we have confined ourselves to the volume, diversity, strength, and longevity of relationships. A firm pursuing cost leadership with a small network of weak short-lived ties can not expect the same social capital returns from its egonetwork as a cost leader with a small network with homogeneous, strong, and stable ties. In effect, it is the combination of strength, longevity, diversity, and volume of relationships, in conjunction with the firm's strategy, environment, and reference points that allows for high performance or, when alignment lacks, that impedes success.

Other network characteristics can be added to this framework, such as the multiplexity of ties (Uzzi & Gillespie, 1999), network segmentation (cf. Porter, 1998), and the overlap of personal and firm-level (institutionalized) relationships (Galaskiewicz & Zaheer, 1999; Knoke, 1999; Pennings & Lee, 1999).

For Whom

Within an industry network, some firms perform better than do other firms. The search for contingencies that determine the effects of networks on firm performance suggests that the same network structure need not bring the same effects to every firm. Firms with similar networks may be involved in dissimilar task environments, which may not be supported by similar structures. By the same token, firms with

internally oriented reference points also need different network structures from those with an external focus.

For Which Goals

Different combinations of environment, strategy, reference points, and ego network may sustain alternative goals. For instance, a firm that highly regards its social value to the community may require and favor a large and diverse network to various parties, regardless of its business strategy. When different kinds of performance are considered, propositions 1 through 3 may need to be altered to accommodate for the particular goals pursued by the focal firm.

Where

Country- and region-specific environments shape the nature and intensity of competition and influence the dynamics of local industries. Managing superior performance requires a different organization of a firm's competitive system in different environmental settings (Ghoshal and Nohria, 1993).

Traditional North American management style considers interdependence as a constraint on competition. A group orientation is more favored and individualism is less favored in Asian cultures than in America or Northern Europe (cf. Dyer, 1997; Dyer and Singh, 1998). In Japan a firm's conduct will depend heavily on its relations with other firms. Numerous Japanese firms are interconnected through a *keiretsu* system in which they maintain longstanding links, which may or may not be reinforced by cross-shareholding. Each individual firm remains largely independent, but shares a normative structure of a common purpose. Common strategies are encouraged in this context. It is sometimes suggested that Western networks arise as a consequence of strategic decision whereas in Asia the strategic decisions arise as a consequence of the networks. The working of our framework will thus have a different temporal order in these cultures. In Asia, networks are formed first, strategy, reference points, and environment follow after that—fit is constructed on the basis of the existing network structure. This structure tends to remain stable over time. In North America and Europe, on the other hand, strategy may more often be

determined in advance, and egonetworks are adapted to be aligned with the chosen strategy.

When

Propositions 4a and b suggest that a firm's performance is contingent upon the fit among the elements in the entire RENS-P framework. While we argue that increased fit should increase a firm's performance, an important caveat is in order. Fit is a process that requires active shaping of all four system elements (reference points, environment, strategy, and networks). Incremental changes in any of the four elements usually do not pose any threats to a firm's capacity to maintain its fit.

Yet, when confronted with discontinuous change, firms may not be so quick or capable to respond and adapt to the new situation. When a radically new technology is introduced, for example, the change in the environment may be dramatic—the fit between the environment and a firm's egonetwork may falter. Since the alignment between the other elements may still be there, it can be very difficult for a firm to adjust to the new situation and reestablish system alignment. While the strive for overall alignment of the elements of our framework drives and enhances firm performance and is highly effective in times of incremental change in any of these elements, it can, by the same token, reduce a firm's ability to respond to discontinuous change. The structural and cultural inertia that may follow from the myopic goal of system alignment within the short run, can constrain a firm to its past and present and stunt organizational change (Tushman & O'Reilly, 1997). The network that provided the firm with social capital in the past, has then become a source of social liability, threatening the firm's performance. Only when a firm is able to actively and continuously manage its network, along with its reference points, strategy, and environment, is it able to generate both short-term and long-term above-normal performance.

CONCLUSION

Strategic management literature sees competition as fairly static. Strategies, ironically, often primarily result in short-term prescriptions. Yet actual competition,

actual industries, actual markets are dynamic and rest on the search for different strategies (Porter, 1998: 9). Thinking about competition and strategy at the company level has been dominated by what goes on *inside* companies. Social capital theory suggests that a good deal of competitive advantage (and disadvantage) resides *outside* companies—in the networks they create and maintain. In this paper we have attempted to combine the strategy and social capital literatures. The framework can hopefully help network researchers to understand better the positive and negative effects of interorganizational networks for the achievement of various organizational goals. It hopefully also assists scholars of strategy to incorporate richer portraits of organization environments and conduct, by incorporating social structure into the paradigm. The increasing popularity of the network perspective among researchers (e.g., Nohria & Eccles, 1992) and practitioners (e.g., Baker, 1994) underscores the significance of networks as contexts for strategic action and performance. However, before network thinking can more fundamentally influence organizational theory, we need to address how networks can be 'managed' or 'reengineered' by managers as to create social capital and facilitate the achievement of organizational goals. This requires the development of guidelines for the strategic design of networks, much as we now have for the design of organizations. The development of prescriptions for organizational design was based on the study of contingencies that accompanied specific design attributes. In a similar fashion, researchers need to consider the contingencies under which various network structures arise and benefit organizational performance (Madhavan, Koka, & Prescott 1998: 456; Leenders & Gabbay 1999b). We hope the present paper will have some value for this unfolding type of research.

In this study, we have emphasized alignment between reference points, environment, egonetwork, and strategy as an important condition to good firm performance. Is this alignment sufficient for good performance? No. It is a necessary condition, but not sufficient in its own right. Firms still need products of good quality for which sufficient customer demand exists; they need capable employees and an organizational culture that supports the organization's mission. The internal processes need to be sufficiently flexible or efficient. Without good product quality,

competitive pricing, and market demand, no firm can sustain above-normal performance, regardless of the fit among the elements in Figure 2. But the chances of achieving high performance should be considerably higher when fit is increased. Moreover, when fit is low, good and affordable products and the presence of motivated staff will not create (sustainable) high firm performance. Congruence between a firm's environment, strategy, reference points, and egonetwork is a necessary condition to the achievement and maintenance of above-normal performance.

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NOTES:

¹ A related and promising line of research is concerned with the interplay of networks of organizations with networks of individuals (e.g., Galaskiewicz and Zaheer, 1999; Gabbay & Leenders, 1999, 2001; Pennings & Lee, 1999).

² This list of references is nowhere near to being comprehensive, and it is not intended to be. Many of these papers include excellent comprehensive or focused literature reviews. For a reader searching for deeper insight in the relations between organizational networks and firm strategy and performance, these papers provide a useful start.

³ Important papers include Chandler, 1962; Steiner, 1979; Galbraith and Nathanson, 1979; Gupta & Govindarajan, 1984; Venkatraman and Camillus, 1984; Hrebiniak & Joyce, 1985; Miller, 1988; Venkatraman, 1989; Naman & Slevin, 1993; Miles and Snow, 1994; Luo and Park 2001. These papers deal with varying models of fit. Most deal, at least, with the fit between environment and firm strategy. Next to the variables regarded in the present paper (R, E, S, and N), one may choose to include additional variables in a normative model. Naman and Slevin (1993), for example, explicitly incorporate organization structure in their contingency model. They also provide an overview of the fit pairs considered in the pertinent literature (1993: 142). For the purpose of our paper, we have chosen to limit our focus to fit between Reference points, Environment, Network structure, and Strategy.

⁴ Miller uses the terms *intensity*, *extensiveness*, and *continuity*, with meaning similar to tie strength, diversity, and longevity. For clarity of exposition in the text we have used the same words as we use in this paper.

⁵ The unpredictability of a business environment has an asymmetric effect on the structural configurations of firm networks (cf. Mintzberg, 1979). When unpredictability is high, strong pressures on firms exist to maintain a large, diversified, volume of ties. However, the pressure on the structural configuration of a focal firm's egonetwork in a predictable environment, is much smaller. For example, although it may be more efficient to limit the number of ties maintained, the firm may still perform well with a large volume of inter-organizational ties. Other factors such as strategy and choice of reference points will have a strong effect on the networks of organizations in such environments—these factors are largely overridden when unpredictability is high.

⁶ The third generic strategy suggested by Porter, focus, is a special case of the other two.

⁷ As a result, in empirical testing of the importance of fit between pairs of elements in this framework, pairwise effects may not be statistically significant. Multivariate configurations

may offer more useful or complete explanations than those provided by simple bivariate descriptions (e.g., Dess, Lumpkin & Covin, 1997; Miles & Snow, 1994; Miller 1986, 1987; Miller & Mintzberg, 1984; Mintzberg, 1979).

⁸ A weakened version of this proposition reads ‘The better the fit between the firm’s egonetwork and the firm’s competitive system, the higher the chances of high firm performance.’ We will return to this in the Discussion section.

⁹ We thank John Naman for suggesting this example.