STRATEGIC ALLIANCES AND CORPORATE SOCIAL CAPITAL*

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ABSTRACT

Strategic alliances developed and propagated as formalized interorganizational relationships, particularly among firms in international business systems. These cooperative arrangements seek to achieve organizational objectives better through collaboration than through competition, but alliances also generate problems at several levels of analysis. Theory and research have likewise proliferated to explain various dimensions of alliance behavior. After presenting a typology of diverse governance forms, we review recent analyses of alliance formation, implementation management, performance outcomes and societal consequences of collaborative activities. Throughout we emphasize how alliance networks serve as corporate social capital to further both the individual and collective objectives of partners. We conclude with some speculations about future directions for theory construction and empirical research on strategic alliances.

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In this essay, we seek to explain the formation, implementation, and consequences of strategic alliances among autonomous actors in an organizational field, with a special emphasis on network structures of corporate social capital, and strategic cooperation between economic actors in international business contexts. We review the recent theoretical and empirical research literatures on strategic alliances and the globalization of competition and cooperation. After presenting definitions of the core concepts (strategic alliances, organizational field networks, trust, corporate social capital, and intangible investments), we examine the purposes and motives of organizations entering into strategic alliances, and driving forces behind this process.

Next, we analyze the implementation processes and problems encountered in managing alliances, particularly building partner trust and safeguarding against opportunism. We look at the contexts of diverse business systems that affect the implementation and performance of strategic alliances. Then we turn to the consequences of strategic alliances, including: the transformation of various kinds of organizational capital (human, financial, cultural, social); outcomes for both an alliance and its partner organizations; their impacts on the division of labor within organizational fields; and consequences at the societal level. Finally, we conclude with some speculations about future directions for theory construction and research on strategic alliances. Our view of international strategic alliances is ultimately rooted in the debate about the influence of business globalization on corporate strategic decisions to compete or cooperate, and the impacts of local and global business environments on shaping international business partnerships.

CORE CONCEPTS

This section briefly defines five core concepts central to this article: strategic alliances, organizational field networks, interorganizational trust, corporate social capital, and intangible assets.

Strategic Alliances. Several interorganizational formations emerge when organizations search for new efficiencies and competitive advantages while avoiding both market uncertainties and hierarchical rigidities. The classification in Table 1 presents thirteen basic forms of interorganizational relations appearing in the theoretical and research literatures. The principal dimension ordering this classification is that, from bottom to top, collaborating firms experience increasing integration and formalization in the governance of their interorganizational relationships. Governance refers to combinations of legal and social control mechanisms for coordinating and safeguarding the alliance partners' resource contributions, administrative responsibilities, and division of rewards from their joint activities. At the bottom of Table 1 are pure market transactions requiring no obligation for recurrent cooperation, coordination, or collaboration among the anonymous exchanging parties. At the top are hierarchical authority relations in which one firm takes full control, absorbing another's assets and personnel into a unitary enterprise. In between these extremes of market and hierarchy are eleven general strategic alliance forms, or "hybrids" that combine varying degrees of market interaction and bureaucratic integration (Williamson 1975).

A strategic alliance involves at least two partner firms that: (1) remain legally independent after the alliance is formed; (2) share benefits and managerial control over the performance of assigned tasks; and (3) make continuing contributions in one or more strategic areas, such as technology or products (Yoshino and Rangan 1995:5). These three criteria imply

that strategic alliances create interdependence between autonomous economic units, bringing new benefits to the partners in the form of intangible assets, and obligating them to make continuing contributions to their partnership. Child and Faulkner (1998:5) clarified the adjective "strategic": Alliances "are often 'strategic' in the sense that they have been formed as a direct response to major strategic challenges or opportunities which the partner firms face." Different alliance forms represent different approaches that partner firms adopt to control their dependence on the alliance and on other partners. The strategic alliance forms in Table 1 are also associated with different legal forms, which enable firms to control the resources allocation and the distribution of benefits among the partners. See Knoke (2001: 121-128) for further discussion, examples, and source references.

Organizational Field Networks. An organizational field consists of "those organizations that, in the aggregate, constitute a recognized area of institutional life: key suppliers, resource and product consumers, regulatory agencies, and other organizations that produce similar services or products" (DiMaggio and Powell 1983:148). At any time, a particular organizational field may contain numerous alliance networks that compete against rival alliances and traditional single firms. The overarching structure of the field's alliance networks varies according to the degree of overlap or separation among each strategic alliance's partner firms. By simultaneously taking into consideration the entire set of strategic alliances among all organizations in a field, encompassing both their present and absent ties, a macro-level phenomenon emerges: the organizational field network, or "field-net" for short (Kenis and Knoke 1999). A familiar example of an organizational field is the pop music sector, consisting of bands, talent agencies, recording studios, radio stations, publishers and distributors, concert halls, tour promoters, and fan clubs. A field-net is defined as the configuration of

interorganizational relations among all the organizations that are members of an organizational field.

Interorganizational Trust. At the firm level of analysis, trust is associated with positive experiences and expectations of the transacting parties, and usually reduces the perceived risks in undertaking future transactions. At the interorganizational level, trust provides a basis for one firm to achieve some degree of social control over another's behavior under conditions of high uncertainty. To the extent that trust substitutes for more formal control mechanisms, such as written contracts, an alliance can reduce or avoid paying several types of transaction costs, such as searching for information about potential partners and monitoring to ensure that each party meets its obligations (Gulati 1995a:88-91). Far less costly protections are available by basing collaborations on a self-enforcing foundation of interfirm trust.

Two perspectives regarding interorganizational trust differ in their relative emphasis on the predominance of objective and subjective elements in the relationship. A business-risk view stresses that partners' trust is based on confidence in the predictability of their expectations, which are hedged by such formal contractual means as insurance against violations (Luhmann 1979). An alternative psychological conceptualization emphasizes trust as confidence in another's goodwill, of faith in the partner's moral integrity (Ring and Van de Ven 1994). The social psychological explanation of trust is rooted in basic social exchange principles, including conformity to such norms as reciprocity, commitment, forbearance, cooperation, and obligations to repay debts.

Corporate Social Capital. The past decade experienced a marked resurgence of theoretical interest in social capital, in the form of interpersonal relationships, as a resource for instrumental actions both by individuals and organizations to realize their interests. Coleman

(1990) defined social capital as social-structural relations that are assets or resources which facilitate actions by individuals in a specific social system. A person's social capital is not completely interchangeable or exchangeable under every condition: "Unlike other forms of capital, social capital inheres in the structure of relations between persons and among persons. It is lodged neither in individuals nor in physical implements of production" (Coleman 1990:302). Social capital is jointly owned by the parties to a relation, with no exclusive property rights for individuals. The formation of network relationships is intimately related to the creation of social capital. However, networks and social capital are closely related, but not identical, concepts. If a relation proves not to be beneficial for attaining an actor's goals and turn instead into constraints that impede performance, then it constitutes a social liability (Leenders and Gabbay 1999:3).

Corporate social capital also originates in macro-level processes that are more than aggregated interpersonal ties. Interorganizational networks can generate corporate social capital in the form of organizational prestige, reputation, status, and brand name recognition. For example, companies making philanthropic contributions to health, welfare, and artistic nonprofit organizations gain prominence and legitimacy in their local community as good corporate citizens (Galaskiewicz and Bielefeld 1998). A network of donation ties provides an invaluable strategic advantage in helping firms to weather uncertainties of the marketplace. In some perspectives, corporate trustworthiness constitutes a fundamental type of organizational social capital, a strong-tie relationship between a firm and the members of an organizational field. A company builds and reinforces a widespread reputation among its peers for fair dealing and impeccable reliability in keeping its promises about quality, safety, and service. Reputed trustworthiness signals to potential partners that an organization is unlikely to behave

opportunistically because "such behavior would destroy its reputation, thus making the total outcome of the opportunistic behavior undesirable" (Jarillo 1988:37).

Intangible Assets. The analysis of macro-level processes in the business literature emphasizes the concept of intangible assets that firms accumulate by using their human resources and labor. Webster (1999) conceptualized three types of investment in intangible assets: knowledge capital (intangible assets which improve the human understanding of the market and the profit opportunities); capacity capital (intangible assets which raise the maximum level of production through employment of new organization and labor technologies); and control capital (intangible assets that enable firms to control their input markets, the quality and quantity of work efforts, and the output markets). The latter can also be divided into rent-seeking capital (dictating prices to suppliers), organization capital (controlling the work flow), and market access capital (controlling output prices and the level of demand) (Webster 1999:14). Analysts consider firms' intangible investments as enabling them to reduce competition in order to increase the profits from their activities and the potential for appropriation of financial capital through market and nonmarket transactions. The fundamental bases of intangible capital include the individual and collective skills, capabilities, and understandings used by a firm to influence and control its relations with other firms, business partners, consumers, and governmental regulators.

THE FORMATION OF STRATEGIC ALLIANCES

While many analysts regard strategic alliances as recent phenomena, interorganizational linkages have existed since the origins of the firm as a production unit. Some examples include

firm and entrepreneur ties to credit institutions such as banks; to trade associations such as the early Dutch Guilds; and to suppliers of raw materials, such as family farms, individual producers, and craftsmen. Contemporary firms' networks typically include diverse organizations, such as suppliers, buyers, competitors, regulatory authorities, financial and credit institutions, that together comprise the "economic organization of production" (Ghoshal and Bartlett 1990). Lorange and Roos (1993) likewise referred to multinational corporations (MNCs) as "networks of alliances" that cross national borders and industrial sectors. Dicken (1994) described these production networks as a mix of intra- and interfirm structures of relationships, shaped by different degrees and forms of power and influence over inputs, throughputs, and outputs.

Strategic alliances are not only trading partnerships that enhance the effectiveness of the participating firms' competitive strategies by providing for mutual resource exchanges (technologies, skills, or products). They are also new business forms that enable the partners to enhance and control their business relationships in various ways. Successful alliance operations require enormous inputs of physical and intangible resources: management skills, production technologies, employee motivation, adaptiveness, innovativeness, and the partners' capacities to set aside direct pursuit of their individual business interests while sharing both the benefits and risks of collaboration.

Strategic Alliances as Hybrid Forms. As we noted in the core concept section, analysts widely recognize that alliances are hybrid organizational forms or hybrid arrangements between firms that blend hierarchical and market elements (Auster 1994; Olk 1999). They encompass both short-term project-based, and long-term equity-based, cooperation between firms with varying degrees of vertical integration and interdependence. Whenever legal or economic

constraints prevent a firm from using hierarchy or full ownership as a solution, it may opt to enter into an alliance to counteract certain market forces that threaten its well-being (Anderson and Gatignon 1986; Hennart 1991). To a some extent, alliances combine the assets and capabilities with the uncertainties and liabilities of all partners. Following transaction cost logic, we might expect that a strategic alliance would attempt to combine these components in a collective and cooperative manner because a hybrid form essentially attempts to solve individual organizational problems in a collective way, while allowing firms to remain in relative control of their separate organizational resources.

This collective and cooperative conceptualization of strategic alliances does not undermine the individual organization's surge for power and control. An asymmetry exists in organizational abilities to exert power and control over another organization and its resources (Oliver 1990). This differential influence on the partner's choices arises because alliance partners occupy unique market positions, possess unequal technological and innovative capacities, own diverse tangible and tacit assets, and control firm-specific resources. Effective cooperation requires mutual recognition of these differences and a serious commitment by the partners not to take advantage of one another when opportunities arise. Institutionalizing cooperative agreements is very problematic because it requires new structures, routines, and organizational practices to emerge from routine interactions and transactions between firms and their employees. Strategic alliances as an organizational form stand intermediate to individual firms and more complex social formations such as organizational fields and communities of economic actors.

In structuration theory, an alliance's structural properties as a socioeconomic formation are considered both a medium and an outcome of the organizational practices comprising a

hybrid system (Buchko 1994). This structuration duality stems, first, from the rules and resources constituting the member firms' properties; and second, from the strategic and responsive behavior of partner organizations. The partners' initial interfirm relations eventually become organized as distinct practices within their alliance structure. The structuration duality is exhibited in the dynamics of: (1) interfirm relations following practices; (2) routines and practices following relations; and (3) simultaneous outcomes from the interactions between partner organizations (Giddens 1979). The ambiguities arising from this duality are major sources of the numerous uncertainties and mistrust among alliance managers, who must engage in relationships without established rules, while simultaneously trying to institutionalize rules as the partnership's objectives emerge. The duality dilemma is one reason why many business alliances initially resort to a contractual relationship with equity participation.

Strategic Motives, Intents, and Choices. Firms undertake strategic alliances for many reasons: to enhance their productive capacities, to reduce uncertainties in their internal structures and external environments, to acquire competitive advantages that enables them to increase profits, or to gain future business opportunities that will allow them to command higher market values for their outputs (Webster 1999). Partners choose a specific alliance form not only to achieve greater control, but also for more operational flexibility and realization of market potential. Their expectation is that flexibility will result from reaching out for new skills, knowledge, and markets through shared investment risks.

The strategic motives for organizations to engage in alliance formation vary according to firm-specific characteristics and the multiple environmental factors. As summarized in Table 2, this diversity has triggered the development of several classification schemes in the theoretical literature. Doz and Hamel (1999) suggested that cooperation between potential rivals and firms

with complementary goods and services is among the most important factors in selecting partners for global strategic alliances. Co-specialization is another major factor that allows partners to focus on their core competencies while pooling unique corporate resources. Partners create new opportunities for learning and internalization of tacit, collective, and embedded skills through strategic alliances (Doz and Hamel 1999:5). We examine these issues in the outcomes section below.

Diverse motivations for engaging in domestic joint ventures, suggested by Zajac (1990), also apply to international strategic alliances. These motives include: acquiring means of distribution, pre-empting competitors, gaining access to new technologies, diversifying into new businesses, obtaining economies of scale, achieving vertical integration, and overcoming legal or regulatory barriers. Bleeke and Ernst (1993) summarize the generic needs of firms seeking alliance as cash, scale, skills, access, or their combinations. Such motivational diversity characterizes alliance formation in many industries, and theorists have proposed several explanatory schemes to classify and analyze the range of collaborative solutions adopted by firms. The level of cooperation between businesses seems much less influenced by internalized costs and benefits than by: the history of the partnering firms' relationships; the current market positions of each firm; their joint resource capabilities; and informational asymmetries relative to firms engaging in arm's-length market transactions (Dietrich 1994). In other words, forming business networks and contractual or relational alliances is driven less by firms' retrospective economic rationalities than by their strategic intentions. Two or more autonomous organizations decide to form an alliance for an emerging joint purpose. Therefore, their decision to collaborate cannot be determined in a rational way by the purpose itself, nor by the current environmental pressures that compel them to cooperate. On the contrary, these factors merely help firms to

construct post-facto justifications and rationalizations about their collaboration decision. A decision to cooperate is not a responsive action, but is fundamentally a strategic intent, which aims at improving the future circumstances for each individual firm and their partnership as a whole.

A fundamental contrast between strategic and operational decisions is that the latter are based on transaction cost calculations, while strategic choices are determined by the perceived benefits from future activities. A firm's strategic decisions are driven not only by evaluations of its present circumstances, but also by expectations about its future outcomes. Strategic decisions involve both company policies and the resource investments necessary for their implementation, treating the perceived future benefits as expected returns on those investments. Strategic alliances challenge the neoclassical economic assumption of interfirm competition, because they are driven not by expected direct impact on costs, profits, and other tangible benefits, but by indirect positive outcomes from their accumulated intangible assets and corporate social capital. They lock competitors in cooperative ventures where the partners share both the risks and the benefits resulting from their collective activity. The transaction cost concept longer provides a sufficient explanation of organizational behavior because the firms pay relational costs arising from all their joint efforts to build bridges to span the partnership's uncertainties. Relational costs in an alliance are not merely expenditures necessary to maintain informal relations with business partners, but additionally include the commitments and investments the partners commit to their risky and uncertain venture. Relational costs to each firm arise from potential negative impacts on a company's profits, occurring because the partners must strategically adjust their other business relations and operations to accommodate the new alliance. Participation in an alliance may require a firm to reorganize, reduce, or terminate other business relations in order to

oblige a new partner's interests. This post-decision adjustment leads to foreclosures of some future business opportunities and their associated loss of potential benefits and profits.

Deciding to enter a strategic alliance and selecting a specific governance form also conveys organizational power implications. These choices are shaped by the distribution of economic power along the production chain within and outside the partnering firms. Pressures to form alliance derive from processes inside and outside organizations. Researchers have found that alliance forms vary with the firms' market positions (leader vs. follower) and the strategic importance of collaborations within each parent firms' portfolios (core vs. peripheral business) (Lorange and Roos 1993). Firms tend zealously to protect their core businesses and, are thus more willing to enter alliances involving peripheral activities which offer wider scope for organizational learning and less vulnerability from sharing confidential information. Lorange and Roos also offered examples of how large firms use joint ownership to restructure their poorly performing business segments. In such instances, the partnership generates instrumental value by allowing the dominant firm to undertake radical changes its portfolio's peripheral activities.

The following subsections discuss three sets of factors affecting the formation of strategic alliances: national and international business environment, industrial processes occurring outside of the firm, and specific organizational circumstances. Globalization processes influence these factors in profound ways, which cannot be considered in isolation from globalization drivers and a systemic perspective on national business systems.

Business Environment Factors. Alliance formation is broadly shaped by general economic conditions and the institutional frameworks in countries of operation, including legal requirements, macro-economic policies, price controls, financial capital markets, distribution

channels, and methods of contract enforcement. Doz, Olk and Ring (2000) conceptualized these environmental pressures as coming from the emergence of new firms, from increased competition in products and technologies, and from institutional changes associated with government regulation. Strategic alliance theorists typically discuss broad environmental forces in the context of a specific business system, such as a market economy, a centrally planned economy, or a transition economy. Henderson and Appelbaum (1992) develop a typology of economic systems based on two dichotomies: market vs. central planning and ideological vs. rational state coordination of economic activities. Their macro-level analysis emphasized how various state interventions shape the institutional business environment, the public policy and legal framework, and the allocation of economic resources. State regulatory activity affects firms' freedom to form business coalitions and joint ventures. Thus, government intervention provides the major constraints and opportunities for strategic alliance formation. Alliances often require formal approval by national governments, particularly in adhering to antimonopoly or antitrust regulations. Likewise, some research and development (R&D) alliances originate as government-funded projects that may include heavy state supervision. Government regulatory policies may constrain the permissible legal governance structures that alliances can assume. Tax incentives and international trade regimes established by foreign governments can also directly affect domestic firms' decisions whether to enter into long-term overseas business relationships.

Empirical researchers have conducted little comparative research explaining the impact of state interventions on alliance formation. Most investigations of state privatization and economic liberalization policies emphasized only the creation of general economic investment opportunities, without ascertaining whether individual firms or strategic alliances were more

likely to seize such opportunities. Unfortunately, regulation theorists remain steadily focused on macro-level dynamics, while corporate governance researchers explore the strategic management practices of individual corporations. Thus, the meso-level is ripe for analytic development. Another neglected researched area is private-sector partnerships with government agencies. Strategic collaborations with governments are in the business-press hype, particularly regarding large global infrastructure projects such as energy, water supply, or telecom systems. Particularly in less-developed countries, or in the defense sector in all countries, government procurement, general funding, and other state initiatives are a major factor in the proliferation of MNC linkages with local firms. Government policies undoubtedly exert profound direct and indirect impacts on corporate investment decisions and equity commitments by foreign and domestic firms to international joint ventures (IJVs).

Another country-specific systemic feature shaping coordinated action patterns is the complex set of relations among corporations, business associations, local and central governments, and elite universities. Italian industrial districts are just one renown instance where historically rooted local business communities display dense interfirm relationships, based on simultaneous competition and cooperation, where alliance ties occur both within and extend well beyond the district boundaries. To explain this phenomenon, Mizruchi and Schwartz (1987) mentioned the development theory relationship between the structure of national business communities and economic development. Their core proposition is that businesses take distinct institutional forms at different stages of economic development. Although cooperative ventures occur at all developmental stages, business strategic alliances were a globalization phenomenon that emerged only after the Second World War.

Theorists generally recognize that firm responses to state regulatory interventions vary widely across national cultures. Two salient examples are the Korean chaebol and the Japanese keiretsu, distinctive alliances forms that evolved from such traditional societal institutions as the extended family and the industrial cluster (Amin 1992; Gerlach 1992). Another consensus is that both multinational corporations and international strategic alliance networks usually seek to overcome, circumvent, or subvert the regulatory mechanisms established by national governments (Dicken 1994). Prime examples are intrafirm exchanges among MNC subsidiaries that escape the attention of state authorities, and informal contractual arrangements between strategic partners that go unfiled with national regulatory agencies.

Industrial Factors. The preceding subsection argued that the general business environment, including the business system and government interventions, indirectly affects strategic alliance formation. However, the industrial context of alliances exerts stronger direct impacts on interfirm relationships. The intensity of industry competition and the social organization of specific product markets powerfully influences whether firm decide to internalize certain activities, to compete for greater market share, to cooperate with other firms for particular strategic advantages, or to internationalize by entering foreign markets. The importance of industrial contexts lies in how leading supply chains spread across different subsectors and which economic transactions occur among connected firms. Extreme contrasts are industries with long-established oligopolies or duopolies and industries with low barriers to entry and high rates of new firm creation.

Industries may be classified along numerous dimensions, such as resource consumption levels, capital investment, labor scarcity, knowledge intensity, and technological innovation. This multidimensionality means that potentially many industry factors drive organizational

strategies in seeking alliances for comparative advantage. The diversity of organizations within an industry derives in part from the individual firms' strategic choices. A decision about which activities to internalize or subcontract depends on both industrial context and individual firm characteristics.

Analysts generally recognize that, due to technical or economic rationales, firms are more vulnerable when closely tied up to a dominant partner (e.g., Pennings 1994). Technology plays a significant role in setting organizational field boundaries and shaping internal structures. Among the competing technologies in a specific industry, some are core and leading while others are supporting. Rapid technological changes, or the abrupt emergence of a competence-destroying technology, can radically restructure an entire organizational field's competitive and collaborative alignments. The private and governmental sources of technology research funding, and R&D expenditure levels in general, differ markedly across industries. Cross-border technology alliances benefit directly from these differences. In most national economies, indirect subsidization takes place as governments fund R&D. Many instances of R&D consortia include government agencies as active participants, and rely on government funding through procurement contracts. Despite comparative advantages of countries and differences in population living standards, the structures of several globalized industries bears strikingly similar patterns of market growth and market potential. Examples are the accelerated pace of growth in global mobile telecommunications, pharmaceuticals, computers, and consumer electronics.

Organizational Factors. The diversity of organizations in an organizational field stems from such company-specific properties as their sizes, visible and tacit assets, collaborative histories, ownership forms, corporate social capital networks, product ranges and diversification, market shares, and market penetration through distribution channels. Given such diversity,

propensities to participate in strategic alliances should vary across firms operating within the same organizational field. An important conceptualization of business networks includes two organizational formations, one based on interfirm skills embedded in organizational fields, and the other centered around a single dominant corporate group (Reve 1988). In the first case, the similarities and complementarities of skills, capabilities, constraints and strategic objectives determine the matching of partners in an emergent formation (Doz, Olk and Ring 2000). Corporate social capital influences alliance creation, as new ties build on existing interfirm relations (Walker, Kogut and Shan 1997; Gulati 1998:300). For example, an analysis of 97 global chemical industry firms found that joint ventures and research agreements increased with greater technical capital (patents), commercial capital (assets) and social capital (prior centrality in the network of technical ties). Firms with these accumulated advantages "enjoy superior opportunities to form linkages and are likely to occupy central positions in the industry network; new entrants are likely to be relegated to the periphery of the industry" (Ahuja 2000a:322). However, capital-poor firms might still form interfirm linkages if they could generate radical technological breakthroughs, as indicated by number of citations to their patents.

In the second situation, alliance formation processes are shaped primarily by a dominant corporation (national or multinational). Dicken (1994) suggested that MNCs, with their complex headquarter-subsidiary relationships, have established new foundations for business networks and multifirm alliances. Therefore, the subunit coordination taking place inside an MNC provides a convenient blueprint for coordinating complex alliance networks. This dynamic is one reason why alliance analysts can never resolve the debate over control and resource allocation processes. International strategic alliances typically involve at least one large firm with the capacity to stretch its activities across national borders. The MNC literature well

describes how foreign investors integrate with domestic companies in joint ventures and supplier networks, producing the so-called "deepening effect" of globalization, that is, a domestic spill-over from foreign investments. Foreign investors also facilitate local companies' integration into global production and distribution chains, creating business opportunities for local firms. In addition, MNCs help to develop domestic markets, generate demand and competition, thereby restructuring existing relations within the markets they penetrate. However, studies of equity joint ventures make clear that huge discrepancies occur between the objectives of foreign and domestic firms. Domestic firms typically seek opportunities to improve their export capabilities, while foreign firms desire greater access to the host country's markets (Buckley and Casson 1988; Pan and Li 1998). This tension over incompatible objectives, capabilities, and constraints among international joint venture partners is a crucial reason why partnering firms often seek equity controls to safeguard their alliance risks.

A substantial difference between an MNC and a strategic alliance lies in the concept of shared control. Metaphorically, CEOs describe the alliance management problem by referring to the old logic of the octopus and the new logic of the network, where a different kind of interdependence emerges (Lorange and Roos 1993). The octopus symbolizes classical management control from the center, while the network metaphor requires decentralized organizational structures and management processes to facilitate shared control. Strategic interdependence is one salient feature of successful alliances in dynamic markets (Sanchez 1994).

Globalization Drivers and Commodity Chains. Some analysts believe the main trigger of recent globalization processes was the substantial accumulation of capital and its internationalization in the 1970s, which enabled corporations and business leaders in advanced

capitalist economies to establish cross-national interlocking directorates and complex formal networks for multinational financial lending (Mizruchi and Schwartz 1987). However, this contemporary view is contradicted by some MNCs operating for more than a century, such as United Kingdom-registered firms Tate and Lyle (sugar industry) and P&O (transportation). Accelerating technological changes in recent decades, by enhancing the conditions for standardizing production and international market expansion, encouraged the proliferation of national and international strategic alliances.

Market globalization transforms the nature of corporate operations. Competitive and strategic advantages now derive from companies' capacities to cooperate with other firms; to form business networks with suppliers and buyers; to reap economies of scale; and to share costs and benefits with partners in geographically and culturally distant locations. Globalization forces are among the key drivers forcing corporations to explore alternative ways of gaining and preserving competitive advantages. These factors include: heightened competitive pressures on a global scale; shorter product life-cycles and rapid technological change; emergence of new competitors; personnel recruitment and placement practices that extend corporate social capital across national boundaries; and increased demand by global firms for systemic solutions. Long-term strategies based on win-win scenarios enable them to leverage their outputs for a broader commercial application across different locations and market segments (Lorange and Roos 1993). According to Zajac's survey of MNC leaders, strategic alliances were considered a viable alternative to mergers and internalization strategies by the majority of respondents (Zajac 1990).

The motives and drivers cumulatively explain the rapid increase of international strategic alliances in many global economic sectors (e.g., car manufacturing, airlines, aircraft, tourism, telecommunications, computers, apparel, footwear, consumer durables). Traditional global

commodity chains are producer-driven and comprised of four segments: raw material supply network, production network, export network, and marketing network (Gereffi 1990). Each segment and the entire commodity chain consists of interlinked firms, representing an input-output structure with spatial dispersion and concentration of units, and a governance structure to coordinate the entire production system (Gereffi 1994). Gereffi identified two divergent governance forms: the traditional producer-driven commodity chain and the buyer-driven commodity chain. The former has more linear ties and is based on repetitive transactions and long-term contracts where the producers become push-factors moving their products towards the final retail market. In contrast, the buyer-driven chain has multiple backward and forward linkages and resembles a strategic alliance structure with complex logistics pulled by the retail sector with buyer-driven orders. The selection of firms for such chains is very much determined by whether the coordinator role is dominated by producers or buyers, by the wider environmental constraints and opportunities faced by individual firms, and varies across industry contexts. Thus, the globalization of commodity chains has stimulated complex economies of scale and scope that foster increasing rates of strategic alliance formation.

THE IMPLEMENTATION OF STRATEGIC ALLIANCES

Alliance implementation issues include the choice of governance mechanisms, enhancing trust and reciprocity between partners, managing the integration of project staffs from different organizational cultures, and resolving conflicts that arise among partners with divergent expectations about and contributions to their collaboration.

Relational Contracting. Some firms engaging in repeated long-term transactions may attempt to use hierarchical governance forms to safeguard the specific assets that evolve during their exchanges (Haugland 1999). Hierarchical governance mechanisms include empowering one firm's decisions over another's; creating a neutral body with authority and power to control specific issues; and implementing standard operating procedures within the alliance. As an alternative to hierarchical governance, Haugland (1999) proposed that relational contracting could counteract the uncertainties associated with arm's-length contracts. Relational governance forms rely on such diverse coordination mechanisms as reciprocity norms, interorganizational trust, and social capital embedded in multiplex exchanges and social interactions. As a theoretical perspective, the concord that implicitly underlies relational contracting contrasts with the opportunism explicitly presumed in both agency theory and transaction cost economics (Borsch 1994). Relational contracting embraces not only unspecifiable terms and conditions in complex and open-ended contracts, but also collective interorganizational strategies for eliminating rivalry through tacit coordination. Pursuing a collective strategy typically depends on unanticipated future conditions that cannot be explicitly written into formal contractual agreements. Hence, successful strategies require basic trust, mutual understanding, unrestricted learning, and interorganizational knowledge-sharing to achieve a high level of joint decision making at both strategic and operational levels. Doz, Olk and Ring (2000) operationalized these processes as "open solicitation" and "seeking domain consensus," where the relational partners continually elaborate on their mutual objectives, capabilities, resources, and tasks. Achieving a well-documented consensus would then serve as a foundation on which relationally contracted firms could subsequently announce and implement a formal strategic alliance. A central issue remains how best to manage the balance between interdependence and control, with the

alternative strategic alliance governance forms discussed above serving as particularly important mechanisms for resolving conflicts and preserving the partners' relationship (Harrigan 1988a; Haugland 1999). Social capital, in the form of interpersonal and interorganizational trust, is indispensable to reducing the costs of negotiations between partners. Moreover, many analysts treat trust as both an alliance outcome variable and a predictor of alliance success (Olk and Earley 2000).

Managing Alliance Formation. Once organizations decide to form a strategic alliance, the partners face serious challenges of turning their good intentions into a viable enterprise at all levels, from routine activities to strategic policies. This implementation phase typically requires that two autonomous firms pool some human resources and material assets; develop a practical governance structure with sufficient power and control; and learn how to cooperate for mutual benefit. The inevitable misunderstandings and conflicts arising in a collaborative undertaking demand that partner firms and their employees master new management skills, especially coping with complex lateral relationships spanning legally autonomous entities. When two firms simply attempt to work together according to an agreement, the clean authority lines of a corporation hierarchy typically are supplanted with disorderly parallel command-and-report systems. The managers delegated by the partners to implement the joint project may be initially uncertain about who is really in control and possesses final decision making authority. Careful attention must be paid to selecting staff and leaders for liaison management, "the required continual linkages among partners and between partners and the alliance" (Mockler 1999:144). Creating a formal separate subsidiary having its own board of directors and internal authority hierarchy, with equity stakes legally dividing ownership and control among the partners, may help to clarify the venture partners' ultimate rights and expectations vis-à-vis one another. But, even the most

meticulous contractual safeguards provide no guarantees against the uncertainties, ambiguities, and disputes that constantly surface during daily operations. Several social control processes, such interorganizational trust, reciprocity, and confidence (Das and Teng 1998), loom large as mechanisms for sustaining alliances during their precarious implementation phase.

Generating trust among alliance participants is crucial to overcoming competitive rivals' initial suspicions about possible partner opportunism, which may prevent effective implementation of their collaborative agreement. Imbalances in organizational power, indicated by disparities in the resources contributed and controlled by each partner organization, can impede trust creation due to the partners' unequal capacities to fulfil their obligations (Goel 1994; Chaudhuri 1995; Brousseau and Quelin 1996; Lin and Germain 1998). Pairs of organizations that share similar or complementary characteristics are more likely to develop strong trust relations. When partners have little in common, tacit understandings and taken-for-granted assumptions may be rudely violated. For example, many cross-border alliances, undertaken between foreign partners to gain entry into local markets, are allegedly fraught with pitfalls stemming from incompatible national cultures (Lewis 1990:253-278; Lorange and Roos 1993:177-204; Bleeke and Ernst 1993). Initial alliances among previously inexperienced partners ("virgin ties") often begin with formal contractual linkages that expose the partners only to small risks. Because both organizations still have few grounds for trusting one another, equity-based contracts predominate as legal protections against potential opportunism (so-called "hostage-taking" purportedly limits each firm's capacity to act in disregard of the partner's interests). Once both partners gain mutual confidence through continual testing, then "informal psychological contracts increasingly compensate or substitute for formal contractual safeguards as reliance on trust among parties increases over time" (Ring and Van de Ven 1994:105).

Repeated strategic alliances among experienced partners are more likely to rely on interorganizational trust than on formal safeguards against potential partner opportunism.

Prior Alliances. This substitution process was succinctly summarized by Gulati's (1995a) affirmative answer to his question, "Does familiarity breed trust?" Because strong-tie trust relations can counteract firms' fears of the partner's betrayal of confidence, governing alliances through legal documents yields to relations governed by interorganizational trust. Reduced transaction and monitoring costs make informal social control the preferred cost-effective alternative to both market pricing and hierarchical authority. Using a 1980-89 panel of 166 corporations operating in three worldwide sectors (U.S., Japanese, and European new materials, industrial automation, and automotive products firms), Gulati (1995b) conducted event-history analyses on a variety of dyadic alliances ranging from licensing agreements to closely intertwined equity joint ventures. He found strong evidence that formal equity-sharing agreements decreased with the existence and frequency of prior ties to a partner. Domestic alliances less often involved equity mechanisms than did international agreements, supporting claims that trust relations are more difficult to sustain cross-culturally. Strategically interdependent firms (i.e., companies operating in complementary market niches) formed alliances more often than did firms possessing similar resources and capabilities. Previously allied firms were more likely to engage in subsequent partnerships, suggesting that over time, each firm acquired more information and built greater confidence in its partner. However, beyond a certain point, additional alliances reduced the likelihood of future ties, perhaps reflecting fears of losing autonomy by becoming overly dependent on a partner. (See also Walker, Kogut and Shan 1997; Gulati and Gargiulo 1999.) Indirect connections within the social network of prior alliances also shaped the alliance formation process: previously unconnected

firms were more likely to ally if both were tied to a common third-party, but their chances of partnering diminished with greater path distances. Gulati (1995b: 644) concluded that "the social network of indirect ties is an effective referral mechanism for bringing firms together and that dense co-location in an alliance network enhances mutual confidence as firms become aware of the possible negative reputational consequences of their own or others' opportunistic behavior." His results reflected a logic of clique-like cohesion rather than status-competition among structurally equivalent organizations.

Trust and Reciprocity. Andrea Larson's (1992) ethnographic exploration of dyadic alliances illuminated the role of trust and reciprocity norms during the alliance implementation phase. She conducted in-depth interviews in the mid-1980s with informants from seven partnerships created by four small entrepreneurial companies (a telephone distributor, a retail clothing company, a computer firm, and a manufacturer of environmental support systems). Although mutual economic gain was a necessary incentive for an alliance to emerge, sustaining the relationship required a trial period, lasting between six and 18 months, during which the partners incrementally built stable and predictable structures to govern their collaboration. Key features of this critical trial phase were the institutionalization of implicit and explicit rules and procedures, and the evolution of clear expectations that became taken-for-granted by managers in both companies. As a relationship solidified over time, organizational actions grew more integrated and mutually controlled through intertwined operational, strategic, and social mechanisms. In the absence of formal contracts, trust and moral obligations protected each partner from the other's potential opportunism. The manager of supplier relations for the computer firm described the process by which embedded social ties shaped economic behavior. "It's like working with your own factory. There is full trust. When we call to say, 'Don't worry

about cost,' they know what we mean. They trust us to pay and we trust them to give us a reasonable price" (Larson 1992:95).

Strong trust and reciprocity norms proved to be crucial for successful implementation, which distinguished alliances from more typical arm's-length exchanges. As strategic alliances entered their mature phase, both firms' reputations and identities grew closely enmeshed through their economic transactions. This complex fusion of mutually reinforcing social and economic processes created a distinctive network mode of interorganizational control. Involving neither market-based prices nor hierarchical commands, "social control encompasses self-regulation with a moral dimension in combination with control as jointly determined by and diffused across multiple partners" (Larson 1992: 91). However, alliance forms of governance were evidently risky, as four of the seven partnerships subsequently either declined or were terminated. Explaining the conditions under which alliances persist or dissolve is a key challenge for organizational sociology theory and research.

STRATEGIC ALLIANCES OUTCOMES

Although organizations form strategic alliances for diverse motives, and partners generally expect to benefit from their collaboration, analysts encounter difficulties in untangling the impact of environmental, economic, organizational, and interorganizational factors on alliance outcomes and consequences. Authors of "how to" guides typically trumpet the alleged positive consequences of joint ventures and equity arrangements (e.g., Triantis 1999; Wolf 2000). Empirical researchers generally appear more pessimistic about partners' abilities to overcome the inherent tensions between competition and cooperation to achieve lasting results.

For example, Das and Teng (1998:493) observed that "the essentially fickle and tentative nature of partner cooperation should not be overlooked" because it renders many strategic alliances "fundamentally self-defeating, unstable, and transitional in nature" (see also Inkpen and Beamish 1997). Conceptual and measurement problems plague performance and productivity assessments, whether using objective outcome indicators (e.g., financial gains, innovations) or subjective indicators (e.g., partner satisfaction with the collaboration). Evaluating international alliances is especially complicated, because firms from different countries and cultures generally apply divergent success criteria (Si and Bruton 1999; Yan and Zeng 1999). Despite such operational difficulties, researchers have investigated a variety of factors affecting several dimensions of strategic alliance consequences. The following discussion of alliance outcomes is organized under four headings: (1) survival and termination of strategic alliances; (2) achieving alliance learning objectives; (3) alliance impacts on the partners; and (4) societal consequences.

Survival and Termination. One difficulty in assessing performance outcomes is that most interorganizational collaborations are intentionally short-lived affairs, designed to achieve only limited purposes. A fundamental performance question is, how long do strategic alliances survive beyond their formal announcement before eventual termination? A collaborative agreement may terminate through complete project dissolution, either before or after achieving its formal objectives; by a joint venture's acquisition by one of its partners; or through an organizational merger of the parent firms. Researchers have investigated several factors that may affect the survival rates and end states of various types of alliances.

Most analysts found high levels of strategic alliance instability and dissolution, with failure rates approaching 50 percent (Harrigan 1988b; Kogut 1988; Dacin, Hitt and Levitas 1997). Alliances in the technologically volatile telecommunication industry exhibit an "alarming

tendency to fall apart due to fickle behavior of members" (Curwen 1999:141). Bleeke and Ernst (1993) used unpublished reports and interviews with insiders of top companies in the U.S., Europe and Japan to determine that, among 49 cross-border alliances, 51 percent were successful for both partners while 33 percent resulted in failure for both. Success meant that the partners achieved their own strategic objectives and recovered their financial capital costs. An event history analysis of 186 joint ventures among U.S. and Japanese electronics firms between 1979-1988 found a 43 percent dissolution rate, with an average life span of less than five years (Park and Ungson 1997). International joint ventures are purportedly more vulnerable to misunderstandings arising from incompatible national and corporate cultures, resulting in high managerial conflicts and early terminations (see also Lin and Germain 1998; Simonin 1999; Steensma and Lyles 2000). However, contrary to expectations, Park and Ungson found that U.S.-Japanese electronics joint ventures lasted longer and were less likely to dissolve than domestic alliances between American firms. They suggested that reciprocity norms and anticipated economic benefits from IJVs, which dispose firms "toward potential cooperation in anticipation of building better relationships, may in fact negate such destabilizing influences as cross-cultural differences" (Park and Ungson 1997:294). As institutions originating in a strong trust-based culture, Japanese corporations could more easily economize on transaction costs (less monitoring and safeguarding against partner opportunism), resulting in more enduring joint ventures than those formed between Western corporations.

Analysts disagree whether project acquisition, or the internalization of a joint venture by one of the partners, should be treated as an alliance failure or a successful realization of the acquiring organization's personnel and capital investments. The widespread assumption that instability is equivalent to collaborative failure may be inaccurate. Data on 272 terminated IJVs

revealed frequent equity transfers between the parent firms, reflecting the ultimate owner's strategic intentions from the start of the venture (Reuer 1997). Firms may treat alliances as low-cost, low-risk mechanisms for exploring possible future purchases. Agreements gradually evolve into a direct sale as one company gains greater business experience relative to its collaborator. Similarly, some firms may anticipate divesting business lines they no longer want to pursue, and thus view an alliance as a device to tempt a prospective buyout bidder. More than 80 percent of the international alliances studied by Bleeke and Ernst ended in acquisitions, usually by the stronger partner (1995:97). Among the important factors explaining this outcome were firm size, frequency of interorganizational communication, board of directors power, the relative size of partner contributions, and inequalities in distributing the benefits produced by the partnership.

A complete merger between organizations represents an extreme outcome of a strategic alliance. Partnerships may serve as a transitional phase ("courtship") in which potential mates explore the feasibility of fusing their identities into a new enterprise. By enabling two courting organizations to observe one another's business activities from the inside, alliances familiarize top managers with both corporate cultures and reveal the potential for performance improvements by combining operations (Nanda and Williamson 1995). The recent history of the global information sector reveals that interconnected firms in a dense alliance network among the world's largest corporations participate in periodic formal integration among the key players (Knoke 2001). For example, America Online's 1999 mergers with Netscape and then with Time Warner were preceded by numerous research and marketing collaborations among these protagonists and their close sector allies. However, Hagedoorn and Sadowski (1999) argued that transitions from strategic technology alliances to acquisitions and mergers rarely occur. Just 2.6

percent of 6,425 alliances from 1970-1993 could be directly linked to such transformations. The authors concluded that strategic technology partnering is a distinct mode of governance which is unconnected to subsequent merger (for other views of this sector's dynamics, see Hennart and Reddy 1997; Jamison 1998).

Achieving Learning Objectives. Many organizations enter alliances with great anticipation about learning from their partners, whether as the primary goal or as a derivative of other objectives, such as creating new products and technologies or penetrating into new markets. Organizational learning occurs when a firm acquires, assimilates, and applies new information, knowledge, and skills that enhance its long-run performance and competitive advantage. Strategic alliances can operate as institutionalized channels for transferring and creating new organizational capacities. Learning may occur either through exploitation as one organization acquires another's know-how, or through common experience as partners learn synergically while implementing a collaborative agreement (Tsang 1999). The first dynamic connotes competition, while the latter process implies greater mutuality and interdependence. Routine interactions among the allied organizations' human agents inevitably results in some transfer of technologies and diffusion of managerial practices across company boundaries. Organizational learning evolves continually across successive alliance implementation stages as different managerial skills and behaviors become relevant. Factors shaping basic organizational learning capacity include "the nature of the shared business activity, the type of knowledge jointly developed, and the firm's reward system" (Lei, Slocum and Pitts 1997:210).

Although substantial organizational enlightenment may occur through vicarious learning and imitation of a more sophisticated partner, R&D collaborations typically require mutual experiential learning activities to synthesize original knowledge, which then becomes the venture

owners' joint intellectual property. Whether organizational learning involves acquiring routine or extraordinary knowledge, transaction cost analysts caution that alliance participants risk potential opportunism from their partner's unrestricted access to proprietary secrets and patented processes. The competitive-cooperative tensions inherent in learning alliances may escalate into a "learning race," where one organizations tries to out-learn a partner while protecting against theft of capabilities (Khanna, Gulati and Nohria 1998; Gulati, Nohria and Zaheer 2000). Races occur when the private benefits captured by one organization after learning from a partner exceed future benefits from maintaining their collaboration. Hence, the frequent erection of legal and administrative safeguards to protect collaborators during their initial projects when familiarity and trust are low. Repeated collaborations should enhance mutual learning experiences as interorganizational trust emerges to substitute for formal protections against the fear of being ripped off. A study of 212 alliances in six manufacturing and service industries found that higher levels of relational capital (social capital based on trust, respect and friendship) and integrative conflict resolution mechanisms (ensuring fairness and procedural justice) increased both corporate learning and protection of proprietary assets (Kale, Singh and Perlmutter 2000).

Organizational success in achieving alliance learning objectives depends on several dimensions of knowledge and organizational structure. In particular, both organizations' absorptive capacities--their interwoven human resources, finance capital, social capital, and organizational belief systems--constrain their effective information processing, acquisition of partner expertise, and adoption of innovations. A study of 151 international alliances among middle and large high-tech firms examined knowledge ambiguity, which hinders the clarity and easy transferability of marketing skills and know-how back to the parent companies (Simonin

1999). The most significant determinant of knowledge transferability was tacitness, defined as knowledge "which cannot be easily communicated and shared, is highly personal and deeply root in action and in an individual's involvement with a specific context" (Simonin 1999:469). Moreover, the impacts of partner cultural distance, asset specificity, and past experience on knowledge ambiguity were moderated by alliance duration, firm size, and collaborative experience. An exploratory study of network formation in 53 R&D consortia (Doz, Olk and Ring 2000) found that tacit learning was more strongly connected to similar interests of the partners, and was unrelated to solicitation and consensus-seeking processes during the alliance formation period. Thus, the partners' attitudes and needs had stronger influence on their learning capabilities than did their interactions prior to entering the alliance. A study of 947 foreign investments by 386 Italian mining and manufacturing firms found that "resort to joint venture rises if technological opportunities in the industrial environment, tacit skills and competencies constitute an important source of competitive advantage for the firm" (Mutinelli and Piscitello 1998:503). Firms in high-tech sectors, where innovation plays an increasing role in competition, frequently use joint ventures to complement their internal R&D resources and exchange knowledge among firms.

Case studies of learning in specific industries have identified some factors that aid or thwart innovation and knowledge transfer among alliance partners. For example, Toyota and General Motors converted a faltering GM auto assembly plant in Fremont, California, into the New United Motor Manufacturing Inc. (NUMMI), enabling GM to learn about Japanese management techniques while Toyota gained a stronger foothold in the U.S. auto market (Adler 1993). The extensively documented NUMMI case demonstrated that large productivity gains could be achieved with an American workforce. Absenteeism and employee grievance rates fell

sharply as workers learned to build higher-quality vehicles with fewer labor hours than other GM plants. A similar transfer of quality control practices from a Japanese partner enabled British Steel Strip Products (BSSP) to boost its performance by reducing scrap and steel losses (Collinson 1999). By highlighting differences in how the two firms developed and deployed specialist knowledge to improve quality control at mill sites, the BSSP experience underscored the difficulties in transferring deeply embedded know-how, which is "highly dependent on broader contextual factors (knowledge resources, organizational structure, culture, etc.) to operate effectively." Another cross-border joint venture, between automakers British Rover and Japanese Honda from 1980 to 1994, failed because Rover learned little from the relationship and grew increasingly dependent on the productive capacity controlled by its dominant partner (Pilkington 1996). Embedded internal constraints on knowledge exchange and organizational learning, arising from the firms' incompatible organizational structures and corporate cultures, ultimately doomed this collaboration among unequals.

Alliance Impacts on Partners. Apart from the immediate outcomes of formal collaborative activities, strategic alliances may also affect the partnering organizations' performances and survival chances. Some analysts seek to link alliance characteristics to various firm economic indicators such as stock prices, profits, productivity, market shares. A more difficult task is to demonstrate that alliances produce substantial nonfinancial, or transformational, outcomes such as enhanced organizational credibility (Human and Provan 1997). For example, do firms involved in certain types of collaborations gain in perceived legitimacy, trustworthiness, and reputation for quality within their organizational fields? A considerable empirical problem is how to detect the consequences of relatively small alliances for their much large parent organizations.

One outcome hypothesis attracting recent research attention is that strategic alliances contribute to superior production performance by the parents. A study of the chemicals industry found that the impact of indirect alliance ties on patenting was moderated by the number of a firm's direct ties, but increasing structural holes had a negative effect on innovation (Ahuja 2000b). Research on 142 Canadian biotechnology startup firms from 1991-1996 found that their initial performances were enhanced by establishing alliance networks that provided access to "diverse information and capabilities with minimum costs of redundancy, conflict, and complexity," gave more opportunities to learn from established rivals, but avoided risky intra-alliance rivalries (Baum, Calabrese and Silverman 2000:287). In particular, the startups' alliance networks boosted their innovativeness as measured by rates of patenting and R&D growth. A comparative study of alliance networks among 138 steel and 130 semiconductor firms from 1990-1994 found that the influence of network characteristics on firm performance varied with industry contexts (Rowley, Behrens and Krackhardt 2000). Specifically, strong ties (equity joint ventures and R&D alliances) increased return on assets in the steel industry, which emphasized exploiting existing technologies. But weak ties (marketing, licensing, and patent agreements) increased return on assets in the semiconductor industry, where exploring technological innovations dominated corporate strategies. Hence, how embeddedness affects performance depends on the network's purpose: "Interconnectedness among a firm's partners inhibits the firm's ability to gain access to multiple, nonredundant information sources. A densely interconnected ego network, however, furnishes the firm with access to redundant information sources, which provide a means for evaluating and improving the information received from each source" (Rowley et al., 2000:384).

In another analysis of semiconductor firms from 1985-1991, Stuart (2000) investigated the impact of alliances on innovation rates and economic growth. He measured innovation as the number of patents granted and growth as annual semiconductor sales. The crucial factors were not the size of each firm's alliance portfolio (number of alliances formed during the previous five years), but the resource profiles of its partners. Specifically, both innovation and sales rates increased substantially if a firm was connected to more technologically innovative and revenue-rich alliance partners. These effects were especially potent for younger and smaller firms, suggesting they benefited most from access to larger, well-endowed partners. The consistent interactions of size and age with large and innovative partners were consistent with sociological arguments that affiliations enhance corporate reputations: "they build public confidence in the value of an organization's products and services and facilitate the firm's efforts to attract risk averse customers. In this sense, gaining an alliance partner signals a firm's quality" (Stuart 2000:808). An important implication of Stuart's analysis is that firms derive advantage from their partners' corporate social capital, even if their strategic alliance fails to achieve its professed formal objectives. Again we see that defining alliance success and failure is fraught with ambiguities.

Another basic outcome hypothesis is that a strategic alliance increases a firm's equity value if the collaboration enhances the parent organizations' competitive advantages. Firms that transfer proprietary knowledge and pool specialized resources and employee skills into a joint R&D project sometimes achieve technological breakthroughs with widespread product applications that yield market windfalls for all partners. For example, collaborative research in the 1990s by personal computer and telephone companies developed digital subscriber line (DSL) technologies that permit high-speed Internet data transmission over regular lines (Schiesel

1998). These innovative modems gave phone companies advantages over cable system firms in the competitive scramble for corporate and consumer commerce. Several investigations uncovered positive impacts of alliances on corporate shareholder value. The average stock price response was positive on the day of announcements for 345 nonequity strategic alliances by 460 most high-tech firms from 1983-1992 (Chan, Kensinger, Keown and Martin 1997). Among alliances between firms within same industry, a bigger stock price jump occurred for technical than for marketing agreements, suggesting "that partnering firms from the same industry can better take advantage of technological complementarities" (p. 213). Similarly abnormal shareholder returns accompanied alliance announcements 240 IJVs (Prather and Min 1998; see also Balakrishan and Koza 1993; Koh and Venkatraman 1994). An analysis of more than 2,000 manufacturing joint ventures and licensing agreements found that prior experience with R&D and production joint ventures significantly boosted a firm's total stock prices following new alliance announcements, but licensing contracts had no financial impact (Anand and Khanna 2000). Another study, of two-day abnormal returns following 532 IJV announcements, found only a weak aggregate price response for the entire sample (Gupta and Misra 2000:91). However, stronger market price effects occurred among a subset of firms with repeated IJVs, indicating that "the deeper understanding of the characteristics of operating in a multinational context that comes with successive ventures, what we call organizational learning, is also rewarded by the market as an important source of value" (p. 100). Termination announcements for 215 IJVs also generated average positive abnormal gains; but, for a minority of parent firms, the shareholder wealth created at IJV formation was dissipated upon terminating the venture (Reuer 2000). Such notorious cases as Volvo's disastrous 1993 alliance and proposed merger with Renault, which temporarily destroyed more than $1 billion of Volvo shareholder value,

caution against concluding that strategic alliances invariably benefit their parent organizations (Bruner 1999). Researchers have much to learn about the specific environmental, organizational, and relational conditions under which interfirm collaborations produce positive economic outcomes for the partners.

In contrast to robust research on the financial consequences of alliances for partner organizations, studies of noneconomic outcomes are relatively rarer. Typical subjective measures include informant ratings of performance and subjective satisfaction with the alliance partner. For example, Sim and Ali (1998) measured parental satisfaction with the extent to which 59 IJVs in Bangladesh fulfilled nine goals, weighted by each goal's importance. They found higher success ratings with past joint venture experience and greater cooperation (i.e., fewer disagreements over operating and policy issues). Saxton (1997), investigating 98 dyadic alliances in the chemicals and allied products industry in 1993, found that perceptions of initial and overall relationship satisfaction increased with higher partner reputation for management quality; with greater shared strategic decision making; and with greater strategic fit or similarities between the partners. "Results affirm that partner and relationship characteristics do matter and that alliances are economic actions embedded in a social structure" (p. 454). However, a prior partnership with another firm was linked only to initial satisfaction but not to longer term alliance benefits. One implication of the latter finding is that continued partnering may reflect inertia or institutionalization "as opposed to a reflection of mutual trust and commitment" (p. 455). Analysts tend to emphasize the positive consequences of alliance networks, while ignoring potential dark sides of interorganizational relations, specifically how social embeddedness may exert a drag on market efficiencies by locking partners into unproductive relations or blocking collaboration with other viable firms (Gulati, Nohria and

Zaheer 2000). For example, Sako (1992:239) speculated that a major disadvantage of obligatory contractual relations is "[r]igidity in changing order levels and trading partners [and] potential lack of market stimulus."

Societal Consequences. Researchers have paid least attention to the impacts of strategic alliances on the larger social systems in which they are embedded. Economists have sounded theoretical alarms about the increased anticompetitive consequences of cooperative endeavors, warning that partnerships can hinder efficient production, restrict market access, and reduce economic competition (Carlton and Salop 1995). In particular, multiple recurrent R&D projects among members of an alliance network may create opportunities for collusion by firms that simultaneously compete across multiple product markets (Vonortas 2000). Although alliance participation by foreign firms in domestic industries may safeguard against anticompetitive behavior, domestic firms sometimes set up joint ventures precisely to deter market entry (Zhao 1999). For example, airlines increasingly share production capacity such as existing physical facilities (terminals, counters, and ground crews) and code-sharing agreements (selling seats together on the same routes) which may open up new routes but can also involve sharing planes on routes already served individually by the partner firms (Oum and Park 1997). An alliance between an incumbent airline with excess capacity and an entrant to share expensive facilities at lower costs can appear efficient and competitive, but "may be made to discourage the entrant from building its own facility and entering at a larger, more competitive scale" (Chen and Ross 2000:328). By reducing the total capacity that might otherwise be constructed (thus keeping consumer prices higher through restricting supply), anticompetitive arrangements can reduce societal welfare even when the alliance partners do not directly compete. Negative impacts may

be especially flagrant where multinational firms use joint ventures with local firms as strategic devices to penetrate developing nations.

Similar qualms concern greater concentration within industries arising from the competitive advantages achieved by R&D alliances compared to firms that independently pursue R&D innovations. Powell's (1996) research on the biotech industry identified the institutional arrangements promoting technological breakthroughs in an organizational field with high uncertainty: "In sum, a network of collaborative ventures serves as a locus of innovation because it provides fast access to knowledge and resources that are otherwise unavailable, while also testing internal expertise and learning capabilities" (p. 208). However, a tendency to make too much of a good thing should be resisted. The superior economic efficiencies accruing to R&D alliance members may paradoxically contribute to less-competitive outcomes at the industry level, with consumers again paying higher prices. If alliance networks lead to concentration of R&D funding within an industry, rates of innovation may fall in the absence of competitors to spur exertions forward. Theoretically, competing R&D alliances should generate higher innovation rates and lower product prices than reliance a single R&D cartel (Kamien and Zang 1993). Hence, one solution might be for governments to broaden enforcement of antitrust policies to include situations where a single strategic alliance threatens to monopolize innovations in particular field.

CONCLUSIONS AND FUTURE DIRECTIONS

Strategic alliances are more than simple instrumental means for achieving collective goals directly benefiting the collaborators. They also constitute each partner firms' corporate

social capital, providing potential access to various assets controlled by other strategic alliance network members. Alliances provide opportunities for participants to tap into the resources, knowledge, and skills of their immediate partners in a portfolio of interfirm agreements. Further, given latent reachability across strong ties and possibilities for activating brokerage efforts to interconnect the partners of partners, these complex patterns of social capital embedded within an organizational field-net offer enormous potential for significantly leveraging its member firms' resource capabilities. Theoretical conjectures and empirical investigations of strategic alliances over the past two decades reveal an accelerating proliferation of these interorganizational phenomena. Arm's-length market exchanges may prove less efficient than alternative interfirm arrangements for carrying out many complex co-production processes, such as R&D on highly uncertain technologies, as well as for overcoming legal-political-cultural barriers to cross-national transactions. Current debates over the globalization of business systems emphasize how both local and international environments foster international joint venture partnerships, but these environments may also inhibit the full realization of benefits obtainable through such relationships. The images of mixed advantages and drawbacks accruing from collaborative enterprises reflect the current ambiguous state of knowledge about strategic alliance networks and their multidimensional consequences. In this concluding section, we summarize several basic themes in strategic alliance analysis and speculate where further theory and research efforts might make important contributions in uncovering detailed processes and mechanisms. We proceed using the same tripartite sequence as the main text: alliance formation, implementation, and outcomes.

Alliance Formation. Partner selection comprises the largest and richest body of empirical research. It seeks to explain who collaborates with whom, at what rates, for how long,

and deploying what governance forms (especially equity or nonequity ownership of joint enterprises). An important subset focuses on IJVs, with their added complexity of diverse cross-national cultures and legal-governmental systems. Analysis of alliance formation processes should feature more explicit contingency perspectives that explicitly identify how variations in business systems, industries, strategic alliance networks (organizational field nets), markets, and organizational attributes condition participation opportunities and organizational perceptions of collaborative efficacy. We also urge more study of innovative dynamics occurring at the strategic alliance network level; that is, not by examining the creation of new products and technologies, but explaining how tie-formation processes subsequently feedback to transform the global network structure itself. Some other fundamental questions whose conditional elaboration could be profitably pursued include:

Similarity versus complementarity in partner choice: Do likes attract, or are counterparts more prone to pair? If strategic alliances are primarily about gaining access to useful resources not possessed by an organization, then collaborating with complementary strengths and weaknesses presumably yields larger payoffs than affiliating with highly similar peers. But, which organizational attributes hold the keys to a more perfect union and under what conditions? Products, market positions, technologies, human resources, managerial styles, or more intangible elements such as reputation and institutional thought patterns? Perhaps curvilinear relationships are more plausible: both extremely similar and dissimilar organizations may have either nothing to learn from one another or is the gulf too wide to be effectively bridged?

The cultural gap: This issue is a corollary to the similarity-complementarity question, pitched at the IJV level. If the cultural assumptions and understandings of potential partners are too disparate, negotiations to form an alliance seem much less likely to succeed, compared to

situations of closer cultural ties. What factors, such as the domestic economic position and political power of a local firm, make efforts to overcome the cultural distance seem worthwhile to a MNC suitor? Do particular nations have cultural codes, equivalent to the trust-based cooperative norms of Japanese society, that foster and sustain higher cross-national collaboration rates?

Repeated connections: Researchers recognize a strong tendency for partners to repeat their alliances over time, but the conditions favoring persistence and desistence aren't fully understood. Brokerage processes, involving third-party introductions and vetting, are crucial social mechanisms for forging new (virgin) ties between unacquainted organizations. But, more needs to be learned about the characteristics and conditions favoring successful as well as failed match-making. The complementarity principle suggests that brokers will perform better if they serve to connect somewhat disparate, rather than highly similar, partners. For example, interlocking boards of directors may more effectively broker domestic strategic alliance partnership, but how can this integrative function operate in international arenas where such corporate social capital links are typically weaker or absent?

Network patterns and processes: Organizational field nets typically exhibit internally differentiated but malleable structures, with some actors occupying more central locations and controlling access to information and resources. Researchers can apply network principles to investigate important questions about alliance formation processes across several levels of analysis. At the micro-level of a firm, how do individual organizations' varied positions within the strategic alliance network facilitate or impede the construction of more diverse portfolios? Among the several alternative centrality conceptualizations, which measures yield greater explanatory accuracy in predicting new and repeat alliances? At the macro-level of a complete

field-net, how do changes in various structural dimensions alter alliance formation rates over time? Most intriguing, what cross-level conditional effects occur, involving interactions among firm attributes, ego-centric positions, and complete networks on collaborative dynamics?

Fusion or fission: Not all alliances are intentionally designed to achieve mutually beneficial outcomes for all parties. Some organizations may enter strategic alliances as cautious, lower-risk pathways for exploring opportunities for subsequent mergers, takeovers, or business-unit divestitures. Researchers need a deeper understanding of conditions promoting such manipulative behavior, with or without partner consent, and how such arrangements differ from collaborations intended to preserve partner autonomy. When are firms more disposed to form temporary alliances for controlled risk-assessment prior to taking the plunge into full-fledged corporate fusion or fission?

Developmental Dynamics. The period after an alliance announcement, from implementation to termination, is less thoroughly investigated. Analysts routinely stress the importance of trust as a crucial form of corporate social capital that is crucial to overcoming awkwardness and potential conflicts while partners attempt to turn their plans into practices. Power dynamics also come into play as project managers negotiate the practical allocation of authority, property rights, management responsibilities, and division of rewards or losses from the undertaking. We have little information about immanent failures during initial attempts to implement a formal agreement. What conditions lead to the abrupt breakdown of negotiations and discourage further efforts to relaunch a new partnership? Organizational researchers have conducted too few ethnographic studies to comprehend the full range of patterns and problems encountered by real alliance participants. What institutional, relational, and organizational features of a strategic alliance network push projects along increasingly cooperative or hostile

trajectories? In the absence of hierarchical controls, are agents' personal attributes or organizations' structural features more important for sustaining corporate trust and implementing quality working relations? What measures of absorptive capacity could enable researchers to test many interesting theoretical hypotheses about knowledge transfers between partners and learning processes occurring within projects? Organizational sociology needs more detailed explorations of alliance termination dynamics, particularly whether amicable or unpleasant conclusions produce lingering impacts for subsequent attempts to collaborate with the same or new partners.

Performance Outcomes. An impressive literature has accumulated about the performance outcomes of alliances and the parent organizations. Some empirical studies suggest that most collaborations are relatively short-lived, with many failing to achieve their formal objectives of R&D innovation, organizational learning, or foreign-market penetration. Other evidence indicates that the parent organizations often derive significant performance benefits, such as stock price boosts and sales growth following alliance announcements. This mixed evidence apparently has not dampened the accelerating reliance on strategic alliance, especially among global businesses. One implication is that corporate actors perceive other types of likely advantages, such as demonstrating conformity to institutional norms and reputational enhancement, which transcend achievement of ostensible alliance objectives. Greater research attention to identifying and measuring several "soft" performance indicators could enlarge our understanding of how participants subjectively evaluate their experiences more positively than seem implied by conventional indicators of alliance success or failure. Analysts should increasingly disentangle the relative impacts of organizational, relational, and environmental contexts on various performance measures. Theorists could construct more nuanced specifications of detailed social mechanisms that conditionally influence outcomes in strategic

alliance networks. For example, which formal governance structures interact with what organizational components to boost learning and knowledge transfer? How does the corporate social capital embedded in interfirm trust relations combine with social norms emerging from a collaboration to shape the distribution of outcome rewards among the partners? Finally, because analysts have paid so little attention to the unintended consequences of proliferating alliances at the societal and international levels, researchers have much to scrutinize.

In conclusion, organizational sociology's collective understanding of the social organization and dynamics of strategic alliance behavior has come far over the past two decades. But, as this section indicates, we still have many more questions than answers. Fortunately, numerous opportunities abound for collaborative theorizing and analysis.

REFERENCES

Adler, Paul S. 1993. "The 'Learning Bureaucracy': New United Motor Manufacturing, Inc." Research in Organizational Behavior 15:111-194.

Agarwal, S. and S. Ramaswami. 1992. "Choice of Foreign Market Entry Mode: Impact of Ownership, Location and Internationalization Factors." Journal of International Business Studies 23:1-27.

Ahuja, Gautam. 2000a. "The Duality of Collaboration: Inducements and Opportunities in the Formation of Interfirm Linkages." Strategic Management Journal 21:317-343.

Ahuja, Gautam. 2000b. Collaborative Networks, Structural Holes, and Innovation: A Longitudinal Study." Administrative Science Quarterly 45:425-455.

Amin, A. 1992. "Big Firms Versus the Regions in the Single Market." In Cities and Regions in the New Europe: The Global-Local Interplay and Spatial Development Strategies, edited by M. Dunford and G. Kafkalas. London: Belhaven Press.

Anand, Bharat N. and Tarun Khanna. 2000. "Do Firms Learn to Create Value? The Case of Alliances." Strategic Management Journal 21:295-315.

Anderson, E. and Gatignon, H. 1986. "Models of Foreign Market Entry: A Transaction Cost Analysis and Propositions." Journal of International Business Studies 17:1-26.

Auster, Ellen R. 1994. "Macro and Strategic Perspectives on Interorganizational Linkages: A Comparative Analysis and Review with Suggestions for Reorientation." Advances in Strategic Management 10B:3-40.

Balakrishan, Srinivasan and Mitchell P. Koza. 1993. "Information Asymmetry, Adverse Selection and Joint-Ventures: Theory and Evidence." Journal of Economic Behavior and Organization 20:99-117.

Baum, Joel A. C., Tony Calabrese and Brian S. Silverman. 2000. "Don't Go It Alone: Alliance Network Composition and Startups' Performance in Canadian Biotechnology." Strategic Management Journal 21:267-294.

Bleeke, Joel and David Ernst. 1993. "The Way to Win in Cross-Border Alliances." Pp. 17-34 in Collaborating to Compete: Using Strategic Alliances and Acquisitions in the Global Marketplace, edited by Joel Bleek and David Ernst. New York: Wiley.

Bleeke, Joel and David Ernst. 1995. "Is Your Strategic Alliance Really a Sale?" Harvard Business Review 73(January):97-105.

Borsch, O. 1994. "The Process of Relational Contracting: Developing Trust-Based Strategic Alliances Among Small Business Enterprises." Advances in Strategic Management 10:113-136.

Brousseau, Eric and Bertrand Quelin. 1996. “Asset Specificity and Organizational Arrangements: The Case of the New Telecommunications Services Market.” Industrial and Corporate Change 5:1205-1230.

Bruner, Robert F. 1999. “An Analysis of Value Destruction and Recovery in the Alliance and Proposed Merger of Volvo and Renault.” Journal of Financial Economics 51:125-166.

Buchko, A. 1994. “Barriers to Strategic Transformation:Interorganizational Networks and Institutional Forces.” Advances in Strategic Management 10:81-106.

Buckley, P. and Casson, M. 1988. A Theory of Cooperation in International Business [special issue] Management International Review 19-38.

Carlton, Dennis W. and Steven C. Salop. 1995. “You Keep On Knocking But You Can’t Come In: Evaluating Restrictions on Access to Input Joint Ventures.” Working Paper 111. University of Chicago Center for the Study of the Economy and the State.

Chan, Su Han, John W. Kensinger, Arthur J. Keown and John D. Martin. 1997. “Do Strategic Alliances Create Value?” Journal of Financial Economics 46:199-221.

Chaudhuri, Prabal Ray. 1995. “Technological Asymmetry and Joint Product Development.” International Journal of Industrial Organization 13:23-39.

Chen, Zhiqi and Thomas W. Ross. 2000. “Strategic Alliances, Shared Facilities, and Entry Deterrence.” RAND Journal of Economics 31:326-344.

Child, John and David Faulkner. 1998. Strategies of Cooperation: Managing Alliances, Networks and Joint Ventures. New York: Oxford University Press.

Coleman, James S. 1990. Foundations of Social Theory. Cambridge, MA: Harvard University Press.

Collinson, Simon. 1999. “Knowledge Management Capabilities for Steel Markers: A British-Japanese Corporate Alliance for Organizational Learning.” Technology Analysis and Strategic Management 11:337-358.

Curwen, Peter. 1999. “Survival of the Fittest: Formation and Development of International Alliances in Telecommunications.” Info 1:141-158.

Dacin, M. Tina, Michael A. Hitt and Edward Levitas. 1997. “Selecting Partners for Successful International Alliances: Examination of U.S. and Korean Firms.” Journal of World Business 32:3-16.

Das, T.K. and Bing-Sheng Teng. 1998. “Between Trust and Control: Developing Confidence in Partner Cooperation in Alliances.” Academy of Management Review 23:491-512.

Dicken, Peter. 1994 “Global-Local Tensions: Firms and States in the Global Space-Economy” Advances in Strategic Management 10:217-247.

Dietrich, Michael. 1994. Transaction Cost Economics and Beyond: Towards a New Economics of the Firm. London: Routledge.

DiMaggio, Paul and Walter Powell. 1983. “The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields.” American Sociological Review 48:147-160.

Doz, Yves and Gary Hamel. 1999. Alliance Advantage: The Art of Creating Value Through Partnering. Boston, MA: Harvard Business School Press.

Doz, Yves L., Paul M. Olk and Peter Smith Ring. 2000. “Formation Processes of R&D Consortia: Which Path to Take? Where Does it Lead?” Strategic Management Journal 21:239-266.

Galaskiewicz, Joseph and Wolfgang Bielefeld. 1998. Nonprofit Organizations in an Age of Uncertainty. New York: Aldine de Gruyter.

Gereffi, Gary. 1990. “Commodity Chains and Footwear Exports in the Semiperiphery.” In Semiperipheral States in the World Economy, edited by William Martin. Westport, CT: Praeger.

Gereffi, Gary. 1994. “The Organization of Buyer-Driven Global Commodity Chains: How US Retailers Shape Overseas Production Networks.” In Commodity Chains and Global Capitalism, edited by Gary Gereffi and Miguel Korzeniewicz. Westport, CT: Praeger.

Gerlach, Michael L. 1992. Alliance Capitalism: The Social Organization of Japanese Business. Berkeley, CA: University of California Press.

Ghoshal, Sumantra and Christopher A. Bartlett. 1990. “The Multinational Corporation as an Interorganizational Network.” Academy of Management Review 15:603-625.

Giddens, Anthony. 1979. Central Problems in Social Theory: Action, Structure, and Contradiction in Social Analysis. Berkeley, CA: University of California Press.

Goel, Rajeev K. 1994. “Research Joint Ventures and Uncertain Innovation.” Economic Notes 23:266-274.

Gulati, Ranjay. 1995a. “Does Familiarity Breed Trust? The Implications of Repeated Ties for Contractual Choices in Alliances.” Academy of Management Journal 38:85-112.

Gulati, Ranjay. 1995b. “Social Structure and Alliance Formation Patterns: A Longitudinal Analysis.” Administrative Science Quarterly 40:619-652.

Gulati, Ranjay. 1998. “Alliances and Networks.” Strategic Management Journal 19:293-317.

Gulati, Ranjay and Martin Gargiulo. 1999. “Where Do Networks Come From?” American Journal of Sociology 104:1439-1493.

Gulati, Ranjay, Nitin Nohria and Akbar Zaheer. 2000. “Strategic Networks.” Strategic Management Journal 21:203-215.

Gupta, Atul and Lalatendu Misra. 2000. “The Value of Experiential Learning by Organizations: Evidence from International Joint Ventures.” Journal of Financial Research 23:77-102.

Hagedoorn, John and Bert Sadowski. 1999. “The Transition from Strategic Technology Alliances to Mergers and Acquisitions: An Exploratory Study.” Journal of Management Studies 36:87-107.

Harrigan, Katheine R. 1988a. “Joint Ventures and Competitive Strategy.” Strategic Management Journal 9:141-158.

Harrigan, Katherine R. 1988b. “Strategic Alliances and Partner Asymmetries.” Pp. 205-226 in Cooperative Strategies in International Business, edited by F. J. Contractor and P. Lorange. Lexington Books, Lexington MA.

Haugland, Sven. 1999. “Factors Influencing the Duration of International Buyer-Seller Relationships.” Journal of Business Research 46:273-280.

Henderson, Jeffrey and Richard P. Appelbaum. 1992. “Situating the State in the East Asian Development Process.” In States and Development in the Asian Pacific Rim, edited by Richard P. Applebaum and Jeffrey Henderson. Newbury Park, CA: Sage.

Hennart, Jean-Francois. 1991. “A Transaction Cost Theory of Joint Ventures: An Empirical Study of Japanese Subsidiaries in the United States.” Management Science 37:483-497.

Hennart, Jean-Francois and Sabine Reddy. 1997. “The Choice Between Mergers/Acquisitions and Joint Ventures: The Case of Japanese Investors in the United States.” Strategic Management Journal 18:1-12.

Human, Sherrie E. and Keith G. Provan. 1997. “An Emergent Theory of Structure and Outcomes in Small-Firm Strategic Manufacturing Networks.” Academy of Management Journal 40:368-403.

Inkpen, A. C. and P. W. Beamish. 1997. “Knowledge, Bargaining Power, and the Instability of International Joint Ventures.” Academy of Management Review 22:177-202.

Jamison, Mark A. 1998. “Emerging Patterns in Global Telecommunications Alliances and Mergers.” Industrial and Corporate Change 7: 695-713.

Jarillo, José Carlos. 1988. “On Strategic Networks.” Strategic Management Journal 9:31-41.

Kale, Prashant, Harbir Singh and Howard Perlmutter. 2000. "Learning and Protection of Proprietary Assets in Strategic Alliances: Building Relational Capital." Strategic Management Journal 21:217-237.

Kamien, Morton I. and Israel Zang. 1993. "Competing Research Joint Ventures." Journal of Economics and Management Strategy 2:23-40.

Kenis, Patrick and David Knoke. 1999. "A Network Theory of Organizations: How Field-Nets Shape Tie-Formation Rates." Paper presented to American Sociolgical Association Meetings, Chicago.

Khanna, Tarun, Ranjay Gulati and Nitin Nohria. 1998. "The Dynamics of Learning Alliances: Competition, Cooperation, and Relative Scope." Strategic Management Journal 19:193-210.

Knoke, David. 2001. Changing Organizations: Business Networks in the New Political Economy. Boulder, CO: Westview Press.

Kogut, Bruce. 1988. "A Study of the Life Cycle of Joint Ventures." Pp. 169-185 in Cooperative Strategies in International Business, edited by F. J. Contractor and P. Lorange. Lexington Books, Lexington MA.

Koh, Jeongsuk and N. Venkatraman. 1994. "Joint Venture Formations and Stock Market Reactions: An Assessment in the Information Technology Sector." In Information Technology and the Corporation of the 1990s, edited by Thomas J. Allen and Michael S. Scott Morton. New York: Oxford University Press.

Larson, Andrea. 1992. "Network Dyads in Entrepreneurial Settings: A Study of the Governance of Exchange Relationships." Administrative Science Quarterly 37:76-104.

Leenders, Roger Th. A. J. and Shaul M. Gabbay (eds.). 1999. Corporate Social Capital and Liability. Boston: Kluwer.

Lei, David, John W. Slocum, Jr. and Robert A. Pitts. 1997. "Building Cooperative Advantage: Managing Strategic Alliances to Promote Organizational Learning." Journal of World Business 32(3):203-223.

Lewis, Jordan D. 1990. Partnerships for Profit: Structuring and Managing Strategic Alliances. New York: Free Press.

Lin, Xiaohua and Richard Germain. 1998. "Sustaining Satisfactory Joint Venture Relationships: The Role of Conflict Resolution Strategy." Journal of International Business Studies 29:179-96.

Lorange, Peter and Johan Roos. 1993. Strategic Alliances: Formation, Implementation, and Evolution. Cambridge, MA: Blackwell Business.

Luhmann, Niklas. 1979. Trust and Power. Chichester, UK: Wiley.

Mizruchi, Mark S. and Michael Schwartz. 1987. "The Structural Analysis of Business: An Emerging Field." Pp. 3-21 in Intercorporate Relations, edited by Mark Mizruchi and Michael Schwartz. New York: Cambridge University Press.

Mockler, Robert J. 1999. Multinational Strategic Alliances. New York: Wiley.

Mutinelli, Marco and Lucia Piscitello. 1998. "The Entry Mode Choice of MNEs: An Evolutionary Approach." Research Policy 27:491-506.

Nanda, A. and P.J. Williamson. 1995. "Corporate Restructuring: How Joint Ventures Can Help Ease the Pain." Paris: INSEAD, Working Papers 95/82/EAC.

Oliver, Christine. 1990. "Determinants of Interorganizational Relationships: Integration and Future Directions." Academy of Management Review 15:241-65.

Olk, Paul M. 1999. "Explaining a Member Organization's Influence in an R&D Consortium: A Joint Test of the Dimensions of Task Characteristics and Organizing Routines and of the Level of Analysis." Journal of High Technology Management Research 10:123-146.

Olk, P.M. and C. Earley. 2000. "Interpersonal Relationships in International Strategic Alliances: Cross-Cultural Exchanges and Contextual Factors." In Perspectives of Cooperation: Confronting Complexity in Interorganizational Collaborations, edited by David Faulkner and Mark de Rond. Oxford University Press.

Oum, Tae Hoon and Jong-Hun Park. 1997. "Airline Alliances: Current Status, Policy Issues, and Future Directions." Journal of Air Transport Management 3:133-144.

Pan, Yigang and Xiaolian Li. 1998. "Alliance of Foreign Firms in Equity Joint Ventures in China." International Business Review 7:329-350.

Park, Seung Ho and Gerardo R. Ungson. 1997. "The Effect of National Culture, Organizational Complementarity, and Economic Motivation on Joint Venture Dissolution." Academy of Management Journal 40:279-307.

Pennings, Johannes. 1994. "Commentary: Recreating and Extending Buyer-Supplier Links Following International Expansion." Advances in Strategic Management 10:73-79.

Pilkington, Alan. 1996. "Learning from Joint Venture: The Rover-Honda Relationship." Business History 38:90-114.

Powell, Walter W. 1996. "Inter-organizational Collaboration in the Biotechnology Industry." Journal of Institutional and Theoretical Economics 152:197-216.

Prather, Larry J. and Jae Hoon Min. 1998. "Testing of the Positive-Multinational Network Hypothesis: Wealth Effects of International Joint Ventures in Emerging Markets." Multinational Finance Journal 2:151-165.

Reuer, Jeffrey J. 1997. "The Dynamics and Effectiveness of International Joint Ventures." Paris: INSEAD Working Paper 97/108/SM.

Reuer, Jeffrey J. 2000. "Parent Firm Performance across International Joint Venture Life-Cycle Stages." Journal of International Business Studies 31:1-20.

Reve, Torger. 1988. Toward a Theory of Strategic Management. Bergen: Norwegian Research Centre in Organization and Management.

Ring, Peter Smith and Andrew H. Van de Ven. 1994. "Developmental Processes of Cooperative Interorganizational Relationships." Academy of Management Journal 19:90-118.

Sako, Mari. 1992. Prices, Quality and Trust: Inter-firm Relations in Britain and Japan. Cambridge, UK: Cambridge University Press.

Sanchez, R. 1994. "Higher-order Organization and Commitment in Strategic Options Theory." Advances in Strategic Management 10:299-307.

Saxton, Todd. 1997. "The Effects of Partner and Relationship Characteristics on Alliance Outcomes." Academy of Management Journal 40:443-462.

Schiesel, Seth. 1998. "Venture Promises Far Faster Speeds for Internet Data." New York Times January 20:A1.

Si, Steven X. and Garry D. Bruton. 1999. "Knowledge Transfer in International Joint Ventures in Transitional Economies: The China Experience." Academy of Management Executive 13:83-90.

Sim, A. B. and Yunus Ali. 1998. "Performance of International Joint Ventures from Developing and Developed Countries: An Empirical Study in a Developing Country Context." Journal of World Business 33:357-377.

Simonin, Bernard L. 1999. "Transfer of Marketing Know-How in International Strategic Alliances: An Empirical Investigation of the Role and Antecedents of Knowledge Ambiguity." Journal of International Business Studies 30:463-490.

Steensma, H. Kevin and Marjorie A. Lyles. 2000. "Explaining IJV Survival in a Transitional Economy Through Social Exchange and Knowledge-Based Perspectives." Strategic Management Journal 21:831-851.

Stuart, Toby E. 2000. "Interorganizational Alliances and the Performance of Firms: A Study of Growth and Innovation Rates in a High-Technology Industry." Strategic Management Journal 21:791-811.

Triantis, John E. 1999. Creating Successful Acquisition and Joint Venture Projects: A Process and Team Approach. Westport, CT: Quorum.

Tsang, Eric W. K. 1999. "A Preliminary Typology of Learning in International Strategic Alliances." Journal of World Business 34:211-229.

Vonortas, Nicholas S. 2000. "Multimarket Contact and Inter-firm Cooperation in R&D." Journal of Evolutionary Economics 10:243-71.

Walker, Gordon, Bruce Kogut and Weijian Shan. 1997. "Social Capital, Structural Holes and the Formation of an Industry Network." Organization Science 8(2):109-125.

Webster, Elizabeth. 1999. The Economics of Intangible Investment. Cheltenham, UK: Edward Elgar.

Williamson, Oliver E. 1975. Markets and Hierarchies: Analysis and Antitrust Implications. New York: Free Press.

Wolf, Ronald Charles. 2000. Effective International Joint Venture Management: Practical Legal Insights for Successful Organization and Implementation. Armonk, NY: M.E. Sharpe.

Yan, Aimin and Ming Zeng. 1999. "International Joint Venture Instability: A Critique of Previous Research, a Reconceptualization, and Directions for Future Research." Journal of International Business Studies 30:397-414.

Yoshino, Michael Y. and U. Srinivasa Rangan. 1995. Strategic Alliances: An Entrepreneurial Approach to Globalization. Cambridge, MA: Harvard University Press.

Zajac, Edward J. 1990. "CEO's Views on Strategic Alliances." Paper presented at the Marketing Science Institute Conference on Managing Long-Run Relationships, Boston, MA.

Zhao, Shaoping. 1999. "Joint Ventures for Entry Deterrence." Managerial and Decision Economics 20:25-35.

Table 1. Varieties of Interorganizational Relations

HIERARCHICAL RELATIONS	Through acquisition or merger, one firm takes full control of another's assets and coordinates actions by the ownership rights mechanism
JOINT VENTURES	Two or more firms create a jointly owned legal organization that serves a limited purpose for its parents, such as R&D or marketing
EQUITY INVESTMENTS	A majority or minority equity holding by one firm through a direct stock purchase of shares in another firm
COOPERATIVES	A coalition of small enterprises that combine, coordinate, and manage their collective resources
R&D CONSORTIA	Inter-firm agreements for research and development collaboration, typically formed in fast-changing technological fields
STRATEGIC COOPERATIVE AGREEMENTS	Contractual business networks based on joint multi-party strategic control, with the partners collaborating over key strategic decisions and sharing responsibilities for performance outcomes
CARTELS	Large corporations collude to constrain competition by cooperatively controlling production and/or prices within a specific industry
FRANCHISING	A franchiser grants a franchisee the use of a brand-name identity within a geographic area, but retains control over pricing, marketing, and standardized service norms
LICENSING	One company grants another the right to use patented technologies or production processes in return for royalties and fees
SUBCONTRACTOR NETWORKS	Inter-linked firms where a subcontractor negotiates its suppliers' long-term prices, production runs, and delivery schedules
INDUSTRY STANDARDS GROUPS	Committees that seek the member organizations' agreements on the adoption of technical standards for manufacturing and trade
ACTION SETS	Short-lived organizational coalitions whose members coordinate their lobbying efforts to influence public policy making
MARKET RELATIONS	Arm's-length transactions between organizations coordinated only through the price mechanism

Table 2. Motives to Enter a Strategic Alliance

Market seeking
Acquiring means of distribution
Gaining access to new technology, and converging technology
Learning & internalization of tacit, collective and embedded skills
Obtaining economies of scale
Achieving vertical integration, recreating and extending supply links in order to adjust to environmental changes
Diversifying into new businesses
Restructuring, improving performance
Cost sharing, pooling of resources
Developing products, technologies, resources
Risk reduction & risk diversification
Developing technical standards
Achieving competitive advantage
Cooperation of potential rivals, or pre-emptying competitors
Complementarity of goods and services to markets
Co-specialization
Overcoming legal / regulatory barriers
Legitimation, bandwagon effect, following industry trends

Elaborated from Agarwal and Ramaswami 1992; Auster 1994; Doz and Hamel 1999; Doz, Olk and Ring 2000; Harrigan 1988a; Hennart 1991; Lorange and Roos 1993; Zajac 1990