

STRATEGIC ALLIANCES & MODELS OF COLLABORATION¹

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Abstract

<i>Purpose of this paper</i>	The purpose of this paper is to engage in a comprehensive review of the research on strategic alliances in the last decade.
<i>Design/methodology/approach</i>	After presenting a typology of diverse alliance governance forms, we review recent analyses of alliance formation, implementation management, and performance outcomes of collaborative activities.
<i>Findings</i>	Strategic alliances developed and propagated as formalized interorganizational relationships. These cooperative arrangements represent new organizational formation that seeks to achieve organizational objectives better through collaboration than through competition.
<i>Practical implications (if applicable)</i>	The paper provides future research directions on partner selection, networks patterns and processes, understanding the integration in alliances through fusion, fission, and how to manage developmental dynamics.
<i>What is original/value of paper</i>	We conclude with some future directions for theory construction and empirical research.

Introduction

The international business literature has already acknowledged a number of positive outcomes for companies actively engaged in strategic alliances, such as higher return on equity, better return on investment, and higher success rates, compared with integration through mergers and acquisitions, or companies in the Fortune 500 list that avoid building inter-corporate relationships (Booz-Allen & Hamilton, 1999). At the same time, it is an acknowledge fact that there is little understanding among business executives regarding the formation processes, the dynamics and evolution of inter-corporate relations, and what are the factors that determine the success rate in strategic alliances (O'Farrell & Wood, 1999). Much of the fundamentals in this field were established with the seminal edited volume by Contractor and Lorange (1988) on Co-operative Strategies in International Business, with contributions from Buckley and Casson on a

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'theory of co-operation', Contractor and Lorange on 'the strategy and economic basis for cooperative ventures', Harrigan on 'partner asymmetries' - among other positional papers in the same volume. The research in the field was marked also by contributions from Cunningham & Calligan (1991) on 'competitiveness through networks of relationships', Hamel (1991) on 'inter-partner learning in strategic alliances', Auster (1994) on 'theoretical perspectives on inter-organisational linkages', Gulati (1995) on the relationship between repeated transactions and trust', Doz (1996) on the 'learning processes in strategic alliances', Little, et.al. (1998) on 'management of collaborations in technology based product markets'.

The issues of trust, partner selection, knowledge transfer through co-operative business ventures, complementarities and synergies between partners have dominated the scientific discourse. Some of the leading research questions explored were: why alliances are set-up (Gugler, 1992, Lei, 1993); the international context of cross—border strategic alliances (Snodgrass, 1993, Levinson & Asahi (1995), or how to achieve success in international strategic alliances (Bleeke and Ernst (eds.) 1993), Mohr and Spekman, 1994). In general the contributions to the field of inter-corporate strategic alliances focus either on an in-depth analysis of a selected narrow issue - such as the effect of knowledge ambiguity on technological knowledge transfer in strategic alliances (Simonin, 1999), and methodological issues of construct validity in measuring strategic alliance performance (Arino, 2003), or swiping generalizations of more general magnitude – such as Bensimon's executive guidelines (1. assimilate the competencies of your partner; 2. think of your partner as today's ally and tomorrow's competitor; 3. Share power and resources, but share information wisely; 4. structure your alliance carefully) (Bensimon, 1999).

In this paper, we seek to go beyond the current trends in the business and management literature on strategic alliances, and to explain the formation, implementation, and consequences of strategic alliances among autonomous actors in an organizational field. We review the recent theoretical and empirical research literatures on strategic alliances and the globalization of competition and cooperation. 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 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.

The Concepts of Strategic Alliances and Organisational Fields

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. 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 also Knoke 2001: 121-128)

Table 1. Varieties of Inter-organizational 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

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.

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).

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.

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.

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.

Strategic Alliances as Hybrid Forms. 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.

An asymmetry exists in organizational abilities to exert power and control over another organization and its resources (Oliver 1990). 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 partners. 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.

Strategic Motives, Intentions, 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.

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.

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-empting competitors
- Complementarity of goods and services to markets
- Co-specialization
- Overcoming legal / regulatory barriers
- Legitimation, bandwagon effect, following industry trends

Note: *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*

Ultimately, the variety of motives and drivers is enacted at four distinctive levels: organizational economic, strategic and political. While seeking partnerships firms try to address internal organizational problems, they consider economic benefits, engage in strategic positioning, or political maneuvering with governments and competitors. The motives to engage in strategic alliances listed in Table 2. therefore can be grouped in 4 different categories:

1. Organisational - Learning / Competence Building - various kinds of learning and internalisation of tacit, collective and embedded skills; restructuring; improving performance; acquiring means of distribution; recreating and extending supply links in order to adjust to environmental changes; complementarity of goods and services to markets; legitimation

2. Economic – Market- Cost- & Risk related - market seeking; cost sharing and pooling of resources; risk reduction and risk diversification; obtaining economies of scale; co-specialisation

3. Strategic - Competition Shaping / pre-emption / Product & Technology related: achieving vertical integration; achieving competitive advantage; diversifying into new business; gaining access to new technology; converging technology; R&D; developing new products and technologies; co-operation with potential rivals or pre-empting competitors; bandwagon effect and following industry trends

4. Political - Market development: developing technical standards; overcoming legal / regulatory barriers

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 no 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.

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. 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. 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 alliances with local firms.

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 renowned 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, Mizuchi 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).

Industrial Factors. The industrial context of alliances also exerts strong 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.

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.

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. Corporate social capital influences alliance creation, as new ties build on existing interfirm relations (Walker, Kogut and Shan 1997; Gulati 1998:300).

Alliance formation processes are also shaped by a dominant corporation (national or multinational). Dicken (1994) suggested that MNCs, with their complex headquarter-subsidary 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. Foreign investors 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. 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).

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). This governance form 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, 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, Oik 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 as 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). 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. 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.

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.

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.

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). 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). 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. 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. Repeated collaborations 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. In a survey with high-tech firms, 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.

Case studies of learning in specific industries have also identified factors that aid or thwart innovation and knowledge transfer among alliance partners. Embedded internal constraints on knowledge exchange and organizational learning, arising from the firms' incompatible organizational structures and corporate cultures, ultimately doomed 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 non-financial, 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 larger parent organizations.

One outcome hypothesis attracting recent research attention is that strategic alliances contribute to superior production performance by the parents. 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).

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. 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. 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).

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) found higher success ratings with past joint venture experience and greater cooperation. Saxton (1997) 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. However, a prior partnership with another firm was linked only to initial satisfaction but not to longer term alliance benefits. Continued partnering reflects inertia or

institutionalization “as opposed to a reflection of mutual trust and commitment” (Saxton, 1997: 455). Among negative consequences of alliance networks researchers identify the effect of social embeddedness on market efficiencies by locking partners into unproductive relations or blocking collaboration with other viable firms, and “rigidity in changing order levels and trading partners [and] potential lack of market stimulus.” (Gulati, Nohria & Zaheer 2000, Sako (1992:239).

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). 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. 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.

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 inter-firm 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 of a strategic alliance 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.

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: 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.

Regarding the issue of cultural distance a relevant question is whether particular nations have specific cultural codes, equivalent to the trust-based cooperative norms of Japanese society, that foster and sustain higher cross-national collaboration rates? Researchers also recognize a strong tendency for partners to repeat their alliances over time, but the conditions favoring persistence and desistance aren't fully understood. Brokerage processes, involving third-party introductions and vetting, are crucial social mechanisms for forging new 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.

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 important 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. 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.

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