TECHNOLOGY AND DISTRIBUTION AS ORGANIZATIONAL ELEMENTS WITHIN INTERNATIONAL STRATEGIC ALLIANCES

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1. INTRODUCTION

An increasingly prevalent form of international business organization is the strategic alliance, a species of joint venture in which two or more firms of differing nationalities contract for the joint exploitation of technology and other

1 Jorde and Teece define a strategic alliance as:

a bilateral or multilateral relationship characterized by the commitment of two or more partner firms to a common goal. A strategic alliance typically includes a constellation of agreements involving (1) technology swaps, (2) joint R&D or co-development, and/or (3) the sharing of complementary assets, such as where one party does manufacturing and the other distribution for a co-developed product.


2 In certain strategic alliances each participating firm contributes core technology. In others, the firms may shift roles. The alliance between Honeywell (USA) and NEC (Japan) originally depended on Honeywell’s core computer technology. Ultimately, relative technological strength shifted so that Honeywell sought a technology transfer from NEC. Louise Kehoe & Yoko Shibata, NEC-Honeywell Pact to Fight IBM, FIN. TIMES, Oct. 21, 1983, at 33; NEC Licenses Computer Technology to Honeywell, JAPAN ECON. J., Oct. 25, 1983, at 10.

In some sense, both firms will always contribute technology to the
assets in particular national territories. These alliances can be distinguished from entity joint ventures, as they do not involve the formation and joint ownership of a legally separate firm which exploits the shared technology. Rather, the participating firms coordinate joint activity within limits structured by a series of agreements.

Frequently one participating firm in an international strategic alliance (“ISA”) will provide a distinctive technological innovation; the second firm will contribute complementary

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5 In late 1983, AT&T (USA) and Olivetti (Italy) entered an alliance in which AT&T purchased a 25 percent equity stake in Olivetti for $260 million. The agreement enabled AT&T to benefit from Olivetti’s distribution channels throughout Europe for AT&T’s personal computers. AT&T, in turn, agreed to market some of Olivetti’s office products in the United States. Merrill Brown, AT&T to Buy 25% of Olivetti, WASH. POST, Dec. 22, 1983, at D1; James Buxton, Olivetti Teams with a Colossus,_FIN. TIMES, Dec. 22, 1983, sec. I, at 10. Additionally, the alliance called for joint development of products, cross-licensing of selected hardware lines for domestic manufacturing, and access for Olivetti to AT&T’s Bell Laboratories’ research and development product. Id. The alliance also anticipated the development of interface hardware and software, which would allow communications and networking of various AT&T and Olivetti product lines. AT&T to Acquire 25% of Olivetti for $260M; Product Reciprocity Seen, ELECTRONIC NEWS, Dec. 26, 1983, at 1.

4 In an entity joint venture, the two joint venture partners establish an independent corporation. The joint venture partners are the stockholders of the joint venture entity, which then operates the business. To the extent that a participant firm interacts with the joint venture entity, it does so on a formal third-party basis. Entity joint ventures are traditionally distinguished from “contract” joint ventures; ISAs are contract joint ventures.

6 In March 1990, United Technologies’ Pratt & Whitney subsidiary and Daimler-Benz’ Motoren- und Turbinen-Union (MTU) announced that they were integrating their commercial and general aviation engine R&D, manufacturing and marketing. Jet Maker, Daimler Expand Ties-Deal May Help Germans Develop Commercial Aircraft Industry, SAN FRANCISCO CHRON., Mar. 28, 1990, at C3. Although this is a contract-based alliance, the firms established a joint governing body called the Executive Advisory Board to manage those programs jointly pursued by MTU and Pratt & Whitney. See Stanley W. Kandebo, United Technologies, Daimler-Benz Sign Agreement Linking Pratt & Whitney, MTU, AVIATION WK. & SPACE TECH., Mar. 18, 1991, at 29.

These are called “structural agreements” in this Article.

7 See Thomas F. Villeneuve & Daniel M. Kaufman, Creating Successful
Technology-Based Corporate Partnering Arrangements, 9 COMPUTER LAW. 10 (1992) [hereinafter Villeneuve & Kaufman].

8 In alliances involving small, innovating companies, a larger industrial company typically provides equity or debt capital, or directly funds research and development. Villeneuve & Kaufman, supra note 7, at 10.

9 When the Honeywell/NEC alliance was originally formed, NEC operated as Honeywell's sales agent. NEC boosted Honeywell's profits and increased Honeywell's share of the Asian computer market. With Allies Like These . . ., ECONOMIST, Nov. 19, 1988, at 75.

10 Villeneuve and Kaufman list the following objectives for firms entering strategic alliances: funding, validation, risk sharing, access to technology and expertise, access to distribution channels and customer bases, access to manufacturing capacity and second-source arrangements, creation of manufacturing capacity, preventing competition, and prelude to acquisition. Villeneuve & Kaufman, supra note 7, at 11-13.

11 See Id. at 11.


13 See Jorde & Teece, supra note 1, at 55.

14 Sequoia Systems Inc., a manufacturer of fault-tolerant computers, has entered into alliances with Hewlett-Packard and Samsung. Mark McLaughlin, Sequoia Systems: Hitting All the Right Numbers, BOSTON GLOBE, June 16, 1991, at 80. A small Boston-area telecommunications firm has reportedly established alliances with over 40 other companies. Josh Hyatt, It's All Who You Know; Faced With Brutal Competition, Smaller Tech Firms Turn to Alliances with Bigger Partners, BOSTON GLOBE, June 21, 1992, at 37; see also Villeneuve & Kaufman, supra note 7, at 10.

15 Compton reports that IBM has invested over $500 million in more than three dozen alliances. See Compton, supra note 12, at 864 (citing Evelyn Richards, IBM Alliances: Bid to Regain Control; Computer Giant Counters Slippage by Assembling Family of Innovative Firms, WASH. POST, July 7, 1991, at H1).
and perhaps troublesome, effect on firms possessing proprietary technology; competitor firms may be linked through a common alliance partner, permitting unauthorized diffusion of technological advantages.\(^{16}\)

Strategic alliances, unlike traditional joint ventures, do not rely on the constitution of a separate legal entity to resolve latent questions of governance.\(^{17}\) The ISA participants must engineer non-entity structures\(^ {18}\) which can resolve operational and strategic control disputes\(^ {19}\) and which place limitations

\(^{16}\) Network analysis is appropriate for analyzing these questions. The existence of ISAs may accelerate general technological diffusion.

There are also potential antitrust aspects that merit exploration. Stable cartels may result from the intersection of strategic alliances. See infra notes 81-84 and accompanying text; see also Jorde & Teece, supra note 1, at 59.


\(^{18}\) Villeneuve and Kaufman observe:

Most [strategic alliances] are done in the form of a purely contractual relationship. Occasionally, it may be advantageous to create a formal partnership or separate corporate entity for tax, accounting, cultural or liability limitation reasons, but creation of a separate entity usually is dictated more by the desire to ensure management and operational independence. In fact, except where the parties intend to create a new truly independent business, separate entities are generally more trouble than they are worth.

Villeneuve & Kaufman, supra note 7, at 11.

\(^{19}\) The “relational contract” school established by Macneil distinguishes between classical contracting, used for discrete market exchanges, and relational contracting, which applies to longer-term arrangements through which parties deal repeatedly. See Ian R. Macneil, Contracts: Adjustment of Long-Term Economic Relations under Classical, Neoclassical, and Relational Contract Law, 72 NW. U. L. REV. 854 (1978) [hereinafter, Macneil, Adjustment of Economic Relations]; Ian R. Macneil, The Many Futures of Contracts, 47 S. CAL. L. REV. 691 (1974). Contracts entered within the context of a continuing relationship are less subject to opportunistic breaches, as the contracting parties are unlikely to risk the destruction of the future benefits realizable by maintaining the relation. See Macneil, Adjustment of Economic Relations, supra at 887. International strategic
on any alliance participant's unilateral discretion as part of the overall organizational design. Control and its corresponding limits may be explicitly addressed by the parties, by either contractual specification or by resort to extracontractual mechanisms. The resolution of control issues may also be imputed by operation of national law.

ISAs, as complex structures, demonstrate a great variety of features, with multiple relations between the alliance partners. This complexity largely frustrates meaningful classification. Rather than seek to describe the entire range of ISA variants, this Article will focus its attention on two alliances are clearly situated toward the "relational" pole on Macneil's relational/classical axis. See generally Salbu, infra note 20.


In their model, Klein and Leffler explicitly assume that transactors "rely solely on the threat of termination of the business relationship for enforcement of contractual promises." Benjamin Klein & Keith B. Leffler, The Role of Market Forces in Assuring Contractual Performance, 89 J. POL. ECON. 615, 616 (1981) (footnote omitted). Reputations and brand names function as "private devices which provide incentives that assure contract performance in the absence of any third-party enforcer." Id. at 616 (citations omitted).


The school of relational contracts suggests that courts should provide missing terms and otherwise impute obligations to the parties to the relationship with an eye both to fairness and to the maintenance of the relationship. See Macneil, Adjustment of Economic Relations, supra note 19, at 875-76, 886-88.

See, e.g., Compton, supra note 12, app. A, at 879-94.

Attempts to type the immense variety of complex strategic arrangements are subject to unavoidable arbitrariness. Compton, for example, sets up six "basic variants:" (1) cross-licensing agreements, (2) joint marketing, distribution, and sales agreements, (3) joint product development agreements, (4) traditional joint ventures, (5) consortia and (6) strategic alliances. Compton, supra note 12, at 864-68.
archetypal relations frequently found in ISAs: the Joint Production Relation and the Distribution Relation. These relations are common basic elements of ISAs; any particular ISA, however, will involve several relations. Recognize that these elements are Platonically sketched at their functional limits; there may likely not be any actual ISA whose component relations precisely match these features.

The Joint Production Relation involves the transfer of proprietary technology in order to coordinate the sharing of production responsibility between the two participating firms within an ISA. Assume one firm ("Firm USA") produces supercomputers with proprietary technology. Firm USA may enter into an alliance with a second firm ("Firm Japan"); under which Firm USA transfers its technology to Firm Japan, enabling Firm Japan to produce supercomputers in Japan.

The Joint Production Relation will have a characteristic legal form, with both contract and property aspects. The contract aspect of the Joint Production Relation involves Firm USA's affirmative obligation to transfer the technology and Firm Japan's obligation of non-disclosure. The property aspect involves Firm Japan's legitimate use of the technology owned by Firm USA (legally embodied in the assignment of national intellectual property interests); it may also invest rights in Firm Japan to act against third-party infringers.

The Distribution Relation involves one firm operating as an exclusive distributor of the output of the other firm for a particular national market. Firm USA, the supercomputer manufacturer, may enter into an alliance with Firm Japan, perhaps itself a producer of computers, by which Firm USA grants Firm Japan the exclusive right to distribute certain of Firm USA's products in the Japanese national territory.

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26 A third elemental form found within many ISAs is the Joint Product Development Relation, whereby the two participants jointly develop a new technology that will be jointly owned. This joint-ownership feature positions these alliances closer to equity joint ventures.

27 The technology transfer aspect distinguishes the Joint Production Relation from common supplier relationships.

28 Were this the entire relationship between Firm USA and Firm Japan, we would describe it as a simple exclusive distributorship; an ISA anticipates greater organizational complexity. Perhaps Firm USA would reciprocally distribute Firm Japan's products within the United States or the two firms might jointly develop new lines of products for other markets. The point is
The Distribution Relation within an ISA is also likely to have a specific legal form, with both a contract aspect and a property aspect. The principal contract features are both negative (disabling) and positive. Firm USA grants Firm Japan the exclusive right to distribute the supercomputers within the Japanese territory. Thus, Firm USA is contractually disabled from appointing another firm to distribute within the Japanese territory, and in many cases, is itself disabled from servicing that territory. Firm USA is also bound to supply Firm Japan with products. Firm Japan, in turn, is bound to diligently promote sales of Firm USA's products within the Japanese territory.

Second, there is the property aspect of the Distribution Relation. Firm USA will grant Firm Japan trademark rights for Firm USA's products, enabling Firm Japan to utilize existing consumer goodwill in order to effectively market the products. Technical information will also be provided to Firm Japan to enable it to fulfill the support and service functions associated with the sale of Firm USA's products.

This Article will emphasize the role of extracontractual assurances for continued performance and cooperation of the participants during the life-cycle of the ISA. Judicial contract enforcement does have some value in binding the participants to the ISA. I stress the extracontractual features because the respective obligations will likely fall within the interstices of two legal systems and because of

that an exclusive national distributorship is a typical elemental feature of an ISA.

ISAs display a characteristic life-cycle. There is a clearly demarcated period of formation and start-up, followed by operation, and termination. The termination may be planned or catastrophic, and may be cooperative or non-cooperative. Catastrophic, non-cooperative terminations are described as “alliance failure” in this Article; the prospect of alliance failure, I argue, is critical for understanding the organization of an ISA. See infra text in Section 4.

General Electric (USA) won a temporary restraining order against MTU, its alliance partner, to block MTU from entering into a competing alliance with Pratt & Whitney. See infra note 120.

Because ISAs involve the coordination of complex economic activity across national boundaries, there are multiple, and often competing, legal regimes in play. No one regime fully controls the ISA relationship. See infra text in Section 2.2.
the presence of other enforcement uncertainties. This establishes a significant arena for possible opportunistic hold-up by one party or the other, a problem magnified in a transnational setting by the inevitable legal ambiguities and unavoidable presence of specification gaps associated with complexity.

Given the inadequacy of reliable enforcement of stipulated contractual obligations under national legal systems, as well as a conceivable reluctance by ISA participants to engage the judicial process, I will argue that ISAs rely heavily on extracontractual mechanisms as a means of ensuring reliability of performance and overall cooperation. Specifically, I will examine the extracontractual aspects of (1) the licensing of technology from one firm to the other that underlies the Joint Production Relation, and (2) the corresponding allocation between the two firms of distribution rights to particular national markets that underlies the Distribution Relation.

Both the licensing of technology and the allocation of national distribution rights operate to bond the two firms participating in the alliance, thus ensuring continued performance and cooperation as well as depressing the probability of an opportunistic breach. Although both license agreements and distributorship agreements are typically normal contracts in that they are sets of consensual undertakings, they both have significant extracontractual

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32 These uncertainties include hostility to enforcement of foreign judgments, fairness concerns with respect to foreign persons, conflicts of law issues and the possibility of judicial indifference due to the attenuation of any particular nationality of an ISA. See infra text in Section 2.2.

33 Even were contract enforcement assuredly available, parties to an ISA might value the alternative provided by extracontractual assurances to avoid litigation. Extracontractual mechanisms may be thought of as a form of alternative dispute resolution.

34 The exchange of technology between the firms participating in the alliance operates to assure performance and cooperation. Thus, the license serves as a “technology bond.” See infra text in Section 5.1.

35 See infra text in Section 5.2.

36 I associate the normal contract aspects of these agreements as yielding the traditional contract remedies of restitution, damages or mandated (specific) performance under a particular national legal regime. See infra text in Section 2.2.

My use of the terms “contract” and “contractual” differs, for example, from the more encompassing definition of Macaulay, who defines contract (for purposes of distinguishing non-contractual devices) as involving two
The model of an ISA examined in this Article is characterized by the following features: (1) a licensor firm, in the example Firm USA, which has developed and which continues to “own” (at least in the legal sense) the core technology; (2) a licensee firm, in the example Firm Japan, which provides a mix of capital, inputs and services (typically including distribution services) to be used to develop and exploit the core technology in specific national markets; and (3) a complex, non-entity structure, by which the two firms coordinate their respective contributions and through which they distribute the economic fruits of their collaboration. This structure includes (a) the licensing of the technology, formalizing the Joint Production Relation, and/or (b) the explicit allocation of particular national markets and the licensing of national trademarks, formalizing the Distribution Relation.

The extra-contractual features are associated with different remedies or with self-help. For example, an injunction forbidding continued exploitation of a licensed technology is based more on the ownership of the underlying property right than on pure contract notions, even when the remedy addresses a scenario of contractual breach. A grantor of an exclusive distributorship which reasserts control of a territory by appointing a new distributor is exercising self-help. See infra Section 3.1.

Complexity refers both to the number of underlying economic relations between the ISA participants and to the multiplicity of structural agreements constituting the ISA. See infra text in Section 3.1.

Motorola (USA) licensed microchip technology to Toshiba (Japan) as part of its alliance. See infra note 111.

AT&T and Olivetti allocated national markets for certain products. AT&T distributed Olivetti office machines in the United States and Olivetti distributed AT&T computers in certain Western European nations. See supra note 3.

See supra note 1.

See supra note 22, at 56. I consider arrangements which provide for legal sanctions other than traditional contract remedies to be extracontractual devices. See infra note 94.
2. HYBRID ORGANIZATIONS IN AN INTERNATIONAL SETTING

2.1. Organizational Theory Aspects

There are several competing theories which account for the existence of complex economic institutions, such as firms. Chief of these, at least in current intellectual vogue, is transaction cost theory, an analytic framework synthesized and advanced by Oliver Williamson. While Williamson only gives passing attention to hybrid organizations, such as ISAs, others (notably Jean-Francois Hennart, in the case of equity joint ventures) have applied transaction cost theory to explain the existence of hybrids.

Coase first posed the institutional question in terms of transactions: why certain transactions are executed across markets and why others are internalized within the unitary firm. The focus of Coase’s inquiry is the phenomena of “transaction costs,” deadweight losses associated with the coordination of factors. The principle of minimizing transactions costs is the intellectual link between a theory of the firm and a theory of the market. The institutional question, as viewed by Coase, is markedly bipolar: transactions are coordinated either through market exchange or within unitary firms.

Organizational hybrids, such as ISAs, where two firms retain their identities but subject certain transactions between

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42 Transaction cost theory is offered as an alternative to other theories of the firm. These other theories include explanations rooted in class struggle (a view that firms exist to extend hierarchy for its own sake), technology (a view that firms permit realization of economies of scale) and monopoly power (that firms are suited to suppress competition through horizontal and vertical integration). See Oliver Williamson, THE ECONOMIC INSTITUTIONS OF CAPITALISM 1 (1985) [hereinafter ECONOMIC INSTITUTIONS].

43 See generally Williamson, ECONOMIC INSTITUTIONS, supra note 42.

44 ISAs and joint ventures are classified as “hybrids” because they have certain attributes of firms, yet the contrasting interests of their principals remain unsuppressed. Likewise, their governance and control can be thought of as a “hybrid” of command (through an internal hierarchy) and bargaining.

45 See Hennart, Theory of Equity Joint Ventures, supra note 2.


48 Williamson, ECONOMIC INSTITUTIONS, supra note 42, at 6-7.
them to a quasi-hierarchical governance structure, are not anticipated by Coase in his 1937 work. If the existence of ISAs is explained by transaction cost differentials, ISAs must be superior to both (i) market exchange and (ii) unitary firm alternatives in certain circumstances. What these circumstances are, of course, awaits further theoretical elaboration.

The transaction cost approach was expanded and its explanatory power significantly enhanced by the work of Oliver Williamson. Williamson views the firm as one of a set of possible institutional relationships structured in order to reduce the hazards of idiosyncratic bargaining that inevitably arise in various "small-numbers" circumstances, such as asset specificity and long-term commercial dealings. According to Williamson, firms and complex contracts exist as responses to "opportunism," a tendency of human behavior arising in small-numbers conditions, in the presence of bounded rationality. By bounded rationality, Williamson is specifying a behavioral assumption: that human actors (and their institutions) seek to rationally maximize, but do so subject to certain cognitive limits. These limits are exceeded, for example, by the presence of situational complexity and uncertainty.

Were rationality unbounded, there would be no contractual difficulties, as the parties would be able to foresee all possible contingencies and could stipulate appropriate adjustments. It is the presence of bounded rationality that creates the potential for market failure. Parties are not able ex ante to adequately foresee conditions that may arise after the contract is stipulated. Further, the parties cannot adequately anticipate strategic moves which may be made ex post by their counterpart. The limits of bounded rationality may suggest the

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49 Williamson notes that the notion of transaction cost differentials as the chief determinant of institutional form, as initially formulated, was rather vacuous, and perhaps tautological. Id. at 4. Williamson's inquiries focus on why transaction cost differentials (between alternative institutional arrangements) arise.

50 "Bounded rationality is the cognitive assumption on which transaction cost economics relies." Id. at 45.

51 OLIVER WILLIAMSON, MARKETS AND HIERARCHIES: ANALYSIS AND ANTITRUST IMPLICATIONS 23-24 (1975) [hereinafter MARKETS AND HIERARCHIES].

52 WILLIAMSON, ECONOMIC INSTITUTIONS, supra note 42, at 30-31.
use of firms.\footnote{53} Cognitive limits are quite likely to be exceeded by the demands of coordination necessary to exploit complex technologies across national and cultural lines. A transaction cost explanation for the existence of ISAs may well rest on how this particular institutional governance structure addresses the problem of bounded rationality.

The second major behavioral assumption contained in Williamson's synthesis is that of "opportunism," which Williamson defines as "self-interest seeking with guile."\footnote{54} Opportunism is the tendency of human actors to depart from rules, a "troublesome source of 'behavioral' uncertainty in economic transactions"\footnote{55} that must be addressed in designing institutional relationships.

Some transactions are more vulnerable than others to *ex post* opportunism; it is these transactions that can most benefit from *ex ante* safeguards against opportunism, such as the making of credible commitments or the institution of superior governance structures, such as firms. While Williamson feels that opportunism is (at least operationally) a general characteristic, he admits that the tendency toward opportunism is variably distributed over human actors.\footnote{56} This variability

\footnote{53} According to Williamson:

If . . . it is very costly or impossible to identify future contingencies and specify, *ex ante*, appropriate adaptations thereto, long-term contracts may be supplanted by internal organization. Recourse to the latter permits adaptations to uncertainty to be accomplished by administrative processes in a sequential fashion. Thus, rather than attempt to anticipate all possible contingencies from the outset, the future is permitted to unfold. Internal organization in this way economizes on the bounded rationality attributes of decision makers in circumstances in which prices are not "sufficient statistics" and uncertainty is substantial.

\textit{Williamson, Markets and Hierarchies, supra note 51, at 9.}

\footnote{54} \textit{Williamson, Economic Institutions, supra note 42, at 47.}

\footnote{55} \emph{Id.} at 49.

\footnote{56} Williamson states:

It is not necessary, moreover, that all parties be given to opportunism in identical degree. Indeed, problems of economic organization are compounded if the propensity to behave opportunistically is known to vary among members of the contracting population, since now gains can be realized by expending resources to discriminate among types.

\textit{Id.} at 48.
greatly compounds the effect of opportunism on transactional dealings.

The problem of opportunism (that is, knowing how opportunism is distributed) is likely to be even more significant when coordinating international exchanges. A party is less likely to know its counterpart well, i.e., have specific knowledge about the propensity to opportunism, and is less likely to be able to forecast its counterpart’s behavior (as it lacks experience with others of the contractor’s "national type" from which it can draw inferences).

Further, international transactions may give rise to more occasions for opportunistic behavior. Parties which deal at a distance are less able to monitor performance. Reputational concerns are attenuated with distant contractors. Thus, opportunism-minimizing is a likely determinant for multinational structures in general, and ISAs in particular.

ISAs frequently involve substantial investment in physical and human assets that are transaction-specific. The uniqueness of the particular technology and services provided by each party is likely to give rise to conditions of bilateral monopoly at some point after the initial structuring of the relationship. These factors alone suggest only that market exchanges are subject to failure and that some alternative form of governance is likely to be superior; they do not yet demonstrate why the ISA form (or any other hybrid organization) should be more viable than internalization (through merger/acquisition) to a unitary firm.

Market failures associated with informational exchanges (such as technology transfers) frequently arise, resulting from what Arrow defines as the "fundamental paradox" of information. The value of any proprietary information “for the purchaser is not known until he has the information, but then he has in effect acquired it without cost.” According to Arrow, “the critical impact of information on the optimal allocation of risk bearing is not merely its presence or absence but its inequality among economic agents.” For Williamson, it is not

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58 According to Arrow, “the critical impact of information on the optimal allocation of risk bearing is not merely its presence or absence but its inequality among economic agents.” Kenneth Arrow, The Organization of Economic Activity, in The Analysis and Evaluation of Public
information asymmetry alone, but asymmetry coupled with (1) the high cost of establishing information parity and (2) opportunism that create market failures.\textsuperscript{59}

Because of the occasion for Williamsonian opportunism associated with informational exchanges, alternative governance structures are suggested. Arrow's "paradox" is likely to be present in the exchanges underlying ISAs. An innovator will possess far greater knowledge about the subject technology; a potential alliance partner offering distribution services, for example, will far better know the local market. These specific information asymmetries may be addressed by using hybrid organizational forms.\textsuperscript{60}

Organizational hybrids, including ISAs, can be located on an organizational continuum that extends between exchange (freely bargained coordination of factors through markets) and the integrated organization.\textsuperscript{61} Transaction cost theory suggests that coordination by exchange is generally more efficient, but when markets fail (where transaction costs are high) internalization is often the superior institutional structure. The existence of organizational hybrids featuring joint ownership and control, such as ISAs, is less easily explained.\textsuperscript{62}

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\textsuperscript{59} \textbf{Williamson, Markets and Hierarchies, supra note 51, at 31.} 
\textsuperscript{60} See \textit{infra} text accompanying notes 69 to 77 for the discussion of Hennart's analysis of reciprocal informational market failures as a determinant of joint ventures. 
\textsuperscript{61} Karl Llewellyn observed in 1931 that the "exchange spectrum" ran the full gamut from pure market to hierarchy. Karl Llewellyn, \textit{What Price Contract? An Essay in Perspective}, 40 \textit{Yale L.J.} 704, 727 (1931).

According to Williamson: The focus [of transaction cost study of economic institutions] runs the gamut from discrete market exchange at the one extreme to centralized hierarchical organization at the other, with myriad mixed or intermediate modes filing the range in between. The changing character of economic organization over time-within and between markets and hierarchies is of particular interest. 
\textbf{Williamson, Economic Institutions, supra note 42, at 16.} 
\textsuperscript{62} Williamson notes that critics of transaction cost economics have objected to its emphasis on the polar forms of markets and hierarchies to the neglect of hybrids. Oliver E. Williamson, \textit{Comparative Economic Organization: The Analysis of Discrete Structural Alternatives}, 36 \textit{Admin.}
Within hybrid organizations, free exchange is at least in part abandoned (perhaps due to concerns about opportunism), but neither does total internalization result. Rather, the two sponsoring firms remain independent in their larger missions, but operate a specific pooling of assets through a joint governance structure and share claim to the resulting residual. For transaction cost theory the greater challenge is not showing which markets fail and why they do so, but showing why a mixed or complex structure (such as an ISA) is transaction cost minimizing when compared to the unitary firm.

Jean-François Hennart applies the transaction cost framework to model a theory of equity joint ventures. Although both equity joint ventures and ISAs are organizational hybrids, they are quite different structures, whether viewed from formal, financial or governance perspectives; equity joint ventures are defined by Hennart as "aris[ing] whenever two or more sponsors bring given assets to an independent legal entity and are paid for some or all of their contribution from the profits earned by the entity ...."

Hennart's theoretical work, however, has significant implications for a more general transaction cost model for the existence of hybrid organizations, including strategic alliances. According to Hennart, there are four reasons for the existence of a joint venture, each of which may be necessary but is not alone sufficient. These are (1) accessing economies of scale and diversifying risk, (2) overcoming entry barriers, (3) pooling complementary bits of knowledge, and (4) allaying xenophobic reactions.

Hennart argues that all joint ventures (but his reasoning would seem to apply to all hybrid organizations) are devices to bypass inefficient markets for intermediate inputs. Among

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8 Hennart, Theory of Equity Joint Ventures, supra note 2, at 361-62.

9 Id. at 363.

10 Id. at 364. "The presence of inefficiencies in intermediate markets is
the categories of market failures explored by Hennart are those involving the following intermediate markets: (1) capital, (2) marketing/country-specific knowledge, (3) tacit technology, (4) distribution, (5) nationality, and (6) intermediate inputs. Market failures can justify the existence of equity links, but, as Hennart explicitly recognizes, a transaction cost theory of hybrid organizations must explain why firms choose to form a hybrid (joint governance) as opposed to internalizing (through a merger/acquisition).

Hennart explains the existence of certain joint ventures to the simultaneous failure of at least two markets. Thus, a complex governance structure can be expected, for example, where one firm is to provide technology and the other a distribution network, as the long-term provision of both of these inputs are susceptible to Williamsonian opportunism.

Information, according to Hennart, is often sold in inefficient markets. Patented information is not subject to Arrow's "paradox," as its content is disclosed in the patent filing. However, important ancillary knowledge (necessary to exploit a particular technology) may not be disclosed, and this information may be subject to exchange failure. Further, much "tacit knowledge" is embodied in employees; it cannot be transferred without the transfer of specific personnel.
Distribution services are also subject to market failure. First, there are often a small number of potential suppliers of distribution services. Second, there is substantial up-front investment to be made in developing distribution structures, giving rise to a specific asset. Finally, distributors have local knowledge (about their territories), which is difficult to price. When both technology markets and distribution markets fail, a hybrid structure can be anticipated.

Joint ventures, according to Hennart, are used to acquire assets which have two principal characteristics: (1) they are firm-specific, in the sense that they cannot be easily dissociated from the firm itself, and (2) they are public goods, in the sense that they can be shared at low marginal cost. If assets are public goods, it is more expensive to replicate them than to acquire them, but if they are also firm-specific, they may be difficult to acquire without also acquiring the other assets of the firm. Hennart's theory argues that a hybrid structure may permit a shared use of these value-enhancing assets while avoiding an unnecessary or undesired takeover of extraneous assets bound within a firm.

While Hennart does not address ISAs in his work, the two essential conditions he identifies are likely to be present in the instances of ISAs. For example, the transfer of technology across national boundaries, a common element of ISAs is both subject to market failure and to the shared use

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73 See Hennart, Theory of Equity Joint Ventures, supra note 2, at 367-68.

74 Id. at 371. Hennart cites the example of a distribution system as a firm-specific public good:

Distribution is often a public good, as it has zero or low marginal cost: once a channel is organized the additional cost of using it for similar or complementary products is small, or even negative if the new products 'fill in' a line. In some cases, distribution assets are also firm-specific, in the sense that they could not be sold independently from the rest of the firm's operations: if vertical integration between manufacturing and distribution is efficient, then the distribution assets of the firm to be acquired will be linked to the manufacturing plants, and the two must be bought as a package . . . . A [joint venture] in this case offers distinct advantages, since it allows vertical integration into distribution without the need to acquire the linked manufacturing assets.

Id. at 371-72.

75 Indeed, Hennart focuses on equity joint ventures, explicitly excluding complex contractual structures from his theory. Id. at 361.

76 Arrow's "paradox" argues that technology markets fail because a
ISAs have certain market-like features in that the two participating firms continue to conduct discrete exchanges with each other while maintaining formally independent roles. On the other hand, certain organization-like features are introduced as well. Contractual limits are placed on the terms of exchange, and overall limitations are set to govern activity with potentially rival firms. Within their areas of respective unilateral authority, the firms utilize their existing internal hierarchies to coordinate performance.

ISAs constitute a formal, continuing and strategically important relationship between two participating firms that transcends normal third-party contracting. Within an alliance, the prospect of the realization of significant business advantages is linked to the maintenance of a broad area of cooperation and coordination. ISAs also constitute explicit strategies for different national markets, including the suppression, in whole or in part, of competition between the participating firms in specific markets. As such, ISAs have

purchaser of technology cannot calculate its value without having the technology revealed, after which it is no longer essential that the purchaser pay. Patents, which ensure an innovator of an economic return notwithstanding disclosure, is only a partial solution to Arrow's paradox. See supra notes 57-58 and accompanying text.

Technology is, to a certain extent, a public good, in that it can be shared with others without increasing its cost. There is some diminishment to the provider of an exclusive technology, however, in that the introduction of competition reduces economic rents.

Alliances often contain long-term supply arrangements, which control intrafirm bargaining. Royalty provisions in license agreements also tend to lock payment rates.

The effect of the non-competition obligations implicit in an international strategic alliance are considerable.

There are potential control problems here as well, even when a participating firm can operate without interference from its partner. The agents and employees of a firm may not pursue "alliance business" as effectively as they perform "firm business," particularly if the incentive structures attenuate loyalty. Stock options and other equity mechanisms are likely to distort agent behavior, as there may be a greater return on devoting energies to "firm business."

Williamson and others tend to understate imperfect competition explanations for the existence of complex organizational structures. Imperfect competition explanations are less easily resisted in the international setting, where discrete national markets are visibly maintained.
International strategic alliances attracted the attention of antitrust scholars and policy makers, in the United States, a debate continues as to whether the competitive benefits of ISAs outweigh their alleged harm to competition.

2.2. Contractual Aspects

For a number of structural reasons, parties to an ISA are unlikely to rely seriously on the law of contract to assure reliable performance from their counterparts. The notion that managers ignore formal contract protection and construct extra-contractual structures to assure performance has been observed in other complex contractual settings. In complex organizational structures the law of contract frequently approaches irrelevancy; special factors present in the case of ISAs make this even more so. As will be argued below, ISAs consist of a set of "structural agreements," some of which, when considered singly, may well be vigorous and enforceable contracts under traditional national law. The argument about the irrelevancy of contract rather addresses the ISA relationship in whole.

As ISAs straddle national boundaries, resort to a particular national legal system is likely to be unreliable in comprehensively resolving unanticipated controversies. This is so because there exists more than one domestic legal system

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Pitofsky, among others, has argued that the suppression of potential competition is the principal anticompetitive concern in alliances. See Robert Pitofsky, A Framework for Antitrust Analysis of Joint Ventures, 54 Antitrust L.J. 893, 898 (1985).

See Jorde & Teece, supra note 1; see also Symposium: Joint Ventures, Including Strategic Alliances, to Develop Computer Technology, 61 Antitrust L.J. 859 (1993).


See generally Macaulay, supra note 22 (relations between manufacturers and their suppliers); Hadfield, infra note 107 (franchising).
which can assert potential authority over the alliance.\footnote{The respective national courts of both contractors can plausibly claim a role in resolving a dispute. In addition, other national courts, such as those of the particular markets serviced by the alliance, can assert authority, based on the site of the performance of contract obligations.} Multiple jurisdictions create possibilities of substantive conflict of laws, as the rival legal systems will often provide for different and strategically competing results.\footnote{This is particularly the case where a domestic legal result is mandatory, in that the affected parties cannot consensually elect to avoid its operation by stipulation (e.g., worker protection guaranteed by a labor code).} The prospect of conflicting law in turn creates substantial additional legal uncertainty for the ISA beyond that encountered by a purely domestic contractual structure.

The conflict of laws scenario anticipates two legal systems vying to operate; an equally plausible and no less troublesome scenario is \textit{indifference} on the part of the various national legal systems to resolving controversies or filling gaps. This may be simply the result of the attenuation of any particular nationality to characterize a transnational organization; an ISA, with its multiple participants of differing nationalities, is arguably even more "state-less" than is the multinational enterprise. Alternatively, legal indifference may be driven by an equitable reluctance of a national court to give effect to specific legal imputations where one party is foreign to the source legal system and cannot plausibly be said to have "elected" to have gaps filled accordingly.

Further, an alliance, while in some sense a unitary organization, is formed, as will be discussed below, not by a single organizational instrument, like a corporate charter or a partnership agreement that is authorized under a single domestic legal regime. Rather, an ISA consists of a series of "structural agreements" entered between the parties. These agreements may, according to their respective terms, appeal to different legal systems to resolve ensuing controversies, thus implicating multiple jurisdictions over the ISA relation.\footnote{Structuring an ISA through multiple agreements, which in turn appeal to differing national legal systems, is not necessarily the result of sloppy legal advice. Certain structural agreements, such as licenses of specific national intellectual property rights, must be governed by the appropriate national law. Contracts which have a strong locational nexus, such as leases of realty or employment agreements, are mandatorily governed by the law...}
Finally, multiple legal systems give rise to knotty enforcement problems. Even were a national court to provide a clear resolution of a dispute, the winning party will often have considerable difficulties in persuading the courts of another nation to give the judgment legal effect. This is particularly true for specific performance remedies, which are precisely the most desired remedies for guaranteeing satisfactory cooperation.

3. THE ORGANIZATION OF INTERNATIONAL STRATEGIC ALLIANCES

3.1. Structural Agreements and Relational Contracts

“Structural agreements” are the central accords running between the firms participating in a strategic alliance. Structural agreements formalize the mutual obligations of the ISA participants with respect to specific economic relations between them. Together, they provide for a limited transfer of the use of the core technology and for the distribution of the economic benefits flowing from the joint exploitation of that technology. These ex ante understandings are typically memorialized by what resemble contracts, but there are substantial legal and economic differences between these structural agreements and those relationships entered between independent, non-repeat dealing parties using analogous legal forms. These agreements are described as “structural” in that they define an elastic framework upon which the parties will engage in multiple exchange transactions over a long run.

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89 A license agreement is thus an essential feature of the model of the ISA discussed in this Article.

88 The sharing of gains and profits may be structured through simultaneous exchanges of various factors between the two parties, and may be formalized by various agreements governing these transactions, including the formal license agreement (which may or may not provide for royalty payments.) Other examples of structural agreements between the ISA parties include supply contracts, management services contracts, financings (debt and equity), leases, promotional services and output agreements.

87 Strategic alliances are typically formed by a number of structural agreements. See infra notes 101-02 and accompanying text.

86 “Classical contracting,” in Macneil’s terms, governs these relationships. See Macneil, Adjustment of Economic Relations, supra note 19, at 855.
Typically, one or more key terms in the agreement will remain unspecified or "open."93

The term "contract" implies the creation of legal obligations that give rise to certain remedies in a court.94 While certain of the structural agreements constituting an ISA are likely to be viewed by some national legal systems as contracts giving rise to judicial recourse, they are principally self-executing consensual structures that can function, albeit less perfectly, even in the absence of the possibility of traditional contract remedies.95 A major design goal determining the structure of ISAs is enforcement self-reliance, the erection of mechanisms capable of providing performance assurances independently of effective access to national contract enforcement.96

The key structural agreement of an ISA is likely to be a technology license that underlies the Joint Production Relation. Here the assumption of enforcement self-reliance must be somewhat qualified; a license will be generally effective under a national legal system to convey a partial interest in a piece of intellectual property.97 Thus, to return to our example, Firm USA will largely look to property rights in structuring the Joint Production Relation with Firm Japan.

That a license is effective as a property conveyance implies (a) the licensee [Firm Japan] has the right to use the property within the national [Japanese] territory, (b) the licensee [Firm Japan] has the right to block other users of the technology, (c) the licensor [Firm USA] retains a continuing interest in the residuary, and (d), to a limited extent, the licensor [Firm USA] has the ability to block continued licensee [Firm Japan] use of the technology in the event of licensee [Firm Japan] default.

93 "Open" terms may include discrete economic terms, such as prices, shares and physical quantities, and may include non-identified areas of responsibility or authority.

94 These traditional contract remedies include restitution, damages (especially in the Anglo-American tradition) and mandated (specific) performance.

95 See supra text in Section 2.2.

96 See supra note 22.

97 This follows the distinction between contract rights and property rights. The conveyance of property rights does not suffer from the same degree of ambiguity difficulties which afflicts contract. Intellectual property rights are by their nature national; that is, they are delimited to a specific national territory. Thus intellectual property rights are not subject either to competing legal systems (conflict of laws) or to judicial indifference.
As use of an item of intellectual property is delimited to a specific national territory, legal recourse to support these property rights is more likely to be available from a national court than it might be in resolving many other controversial aspects of the strategic alliance.

Pure "contract" aspects of a technology license, such as the right to recover royalties due, are on much shakier enforcement grounds. These contract features are more likely to demand international cooperation for effective enforcement (making enforcement less likely) and more apt to suffer from the risks of conflicting law and judicial indifference. Thus, in the event of breakdown of the Joint Production Relation between Firm USA and Firm Japan, Firm USA can anticipate an easier time blocking continued use by Firm Japan of Firm USA's technology than will Firm USA have in recovering any accrued but unpaid royalties from Firm Japan.

The term "relational contract" is also used in the literature to mark complex contracts and organizational hybrids. The structural agreements underlying strategic alliances clearly establish an ongoing relationship, and relational norms are arguably appropriate to their legal interpretation. My use of the term structural agreements emphasizes that these agreements not only define various rights and obligations to be performed throughout an ongoing relationship, but more importantly define areas of control and authority. In this sense structural agreements establish a hierarchy in which certain exchanges are subject to limited fiat. Thus, the hybrid organization defined by a set of structural agreements goes beyond the notion of relational contract developed by Macneil.

Further, the notion of relational contract typically describes a unitary instrument that addresses the totality of the economic relationship between the contractors, as in the example of long-term supply or output contracts. Strategic alliances, on the other hand, typically involve numerous structural agreements. This distinction between unitary

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88 See supra text in Section 2.2.
89 See supra note 19 (discussing the "relational contract" school of Macneil).
90 See Macneil, Adjustment of Economic Relations, supra note 19, at 889.
91 There often will be a "master agreement" that will explicitly relate the
relational contracts and the set of structural agreements constituting the ISA is more than purely formal. The choice to formally separate the various relations has substantial legal and organizational effects. Potentially offsetting rights and obligations may be effectively isolated from one another if embodied in distinct writings. The interplay of all the structural agreements, taken together, defines the "relationship" constituting the strategic alliance, the whole of which is quasi-organizational.

Structural agreements may be understood as default mechanisms, defining the positions the constituent firms would assume in the event that continuing negotiations over open terms *ex post* break down. This catastrophic break-down, after which the parties suspend general cooperation, is described herein as "alliance failure." To a certain extent, structural agreements serve to discourage (but in no sense eliminate) Williamsonian opportunism by channeling the parties' respective unilateral discretion and by locking them into a relationship. These structures function to resolve disputes in an environment where legal recourse is unlikely to be available.

3.2. Open Terms and the Distribution of Economic Benefits

The structural agreements establishing an ISA are inherently incomplete. The complexity of coordination

various structural contracts entered by the parties. Notwithstanding this formal feature, the various exchange relations (represented by the various structural agreements) stand alone in important respects.

102 Importantly, the technology license is memorialized in an independent instrument. As a technology license is, among other things, a conveyance of intellectual property under a specific national system, it has a firmer national grounding than does the overall structure created by the totality of agreements entered into by the parties to the alliance.

103 *See infra* text in Section 3.2.

104 *See infra* text in Section 4. Macneil makes a similar distinction between "disruptive" and "non-disruptive" disputes. *See* Macneil, *Adjustment of Economic Relations*, supra note 19, at 876-77. Alliance failure is a disruptive dispute.

105 This Article will emphasize the role played by those agreements which license technology and which allocate particular national territories.

required in executing an ISA will necessarily render contracting-by-specification a practical impossibility. Further, the parties to an ISA cannot hope to adequately anticipate the environmental changes which will occur during the term of the alliance, let alone forecast the moves which will be taken by rival firms in strategic competition with the alliance. Therefore, \textit{ex ante} specification cannot address all contingencies.\textsuperscript{107}

Typically, one or more key terms in the various structural agreements, such as price, are left open by design.\textsuperscript{108} The open term may, however, be bounded by defined limits, escalator mechanisms or reference to an external benchmark. Implicitly additional terms, such as the quantum of effort to be exerted by the distributing firm in marketing a product,\textsuperscript{109}

\begin{flushright}
\textit{Interactions Between Express and Implied Contract Terms, 73 CAL. L. REV. 261 (1985).}
\end{flushright}

\textsuperscript{107} It may be useful, then, to think of these incomplete structural agreements as "constitutional," outlining the broad objectives of the cooperation and creating a context for resolving conflicts. \textit{See} Gillian K. Hadfield, \textit{Problematic Relations: Franchising and the Law of Incomplete Contracts}, 42 STAN. L. REV. 927, 979 (1990).

\textsuperscript{108} Early contract theory was concerned with terms \textit{inadvertently} left open by the parties. In this circumstance an appropriate judicial response would be to impose terms that the parties (conceivably) could have adopted had they considered the neglected contingency. \textit{Id.} at 927. More recent thinking has recognized that many terms in complex contractual relationships are deliberately left open by the parties in order to preserve flexibility.

Often, contracts are necessarily and intentionally incomplete because mutual desires for flexible, but bounded, responses to uncertain future conditions limit the scope and precision of verifiable terms. Moreover, incomplete contracts often exist deeply embedded in an ongoing relationship. The parties are not strangers; much of their interaction takes place "off the contract," mediated not by visible terms enforceable by a court, but by a particular balance of cooperation and coercion, communication and strategy.

\textit{Id.} at 927-28.

Imputation of open terms by a court is not necessarily appropriate where the parties intended to work out eventually arising controversies within the dynamics of an ongoing relationship. (Perhaps a better case for judicial intervention can be made where the relationship has ceased.) In any event, as will be argued later in this Article, the possibility of judicial imputation as a response to incomplete contracting is less likely in the case of international strategic alliances. The parties may be said, with greater confidence, to have intended to work things out left to their own devices.

\textsuperscript{109} Analogous freedoms of movement have been explored in the principal/agent literature. \textit{See}, e.g., E. Fama, \textit{Agency Problems and the Theory of the Firm}, 88 J. POL. ECON. 288, 295 (1980);
are also left open. Specifying one open term (again, such as price) does not complete the agreement or eliminate the risk of opportunism if other terms remain open. Terms that remain open may be used for unilateral compensating or negating moves, readjusting the distribution of economic benefits.

The overall set of structural agreements operates to distribute any resulting gains and profits between the firms participating in the alliance. In unitary, fully-internalized organizations, residual economic benefits are distributed at the ownership level, typically in proportion to the capital stake each owner has in the firm. In vertical markets (the other end of the organizational continuum), specialized factors are priced in each discrete transaction through the dynamic process of bargaining; overall external profitability defines only one set of bounds for factor prices. Profit shares are mechanically determined by the bargained-out prices and quantities.

Within strategic alliances, overall profit shares are mapped by conducting continuous pricing negotiations over several factor categories. These categories correspond to the various underlying relational exchanges executed between the firms and between each firm and the exterior. For example, technology and trademark royalties, management services, and interest charges are all formal premises for distributing gains and profits. No single class of relational exchanges distributes the alliance's profits; rather, the conjunction of the various credits and charges divides the economic benefits between the alliance participants.

Transactions with third parties determine, in some sense, the overall profits to the alliance. Depending on the structure of the alliance, one party may have unilateral pricing discretion with respect to third parties, be they suppliers to or customers of the alliance. Since many of the terms to the various exchanges are likely to be left open *ex ante*, actual profit shares are effectively bargained for throughout the life-cycle of the alliance.\(^{110}\)

\(^{110}\) In the MTU-Pratt & Whitney alliance, the allocation of risk-bearing shares for each successive project is purposely left open, to be bargained out as specific projects are undertaken. *See* Kandebo, *supra* note 5, at 29 (indicating that the Pratt & Whitney-MTU agreement required a minimum ten percent effort commitment by the non-initiating party to enter a specific project).
As proprietary technology is the subject of strategic alliances, there will be monopoly rents to distribute between the parties. Formally, a strategic alliance represents partial integration of the constituent firms. This integration may be either horizontal, vertical, or both; thus, monopoly rents associated with the core technology may be magnified upon formation of the alliance.

A strategic alliance must include mechanisms which can reduce the risk that one party will opportunistically command all the joint profits from the alliance. In order to do so, factor prices must be confined, although not inflexibly, within some range which permits both parties to enjoy an ongoing share of the joint profits at some level of acceptability.

3.3. Specification, Control of Assets, and Authority

The contractual architecture specifies the elements or factors each firm will contribute to the alliance, and defines the ongoing, functional role of each of the participating firms. These performance obligations include tasks to be executed at the time the alliance is established and continuing or operational responsibilities and authority throughout the alliance's duration. Ideally, all essential tasks would be identified and allocated at the time of the formation of the alliance in order to delineate responsibility between the firms. This would include specifying *ex ante* all elements of technology controlled by the respective firms which should be contributed to the alliance and the terms of such access.

As noted above, however, this degree of specification is likely to be a physical and cognitive impossibility. The best the parties can hope to achieve is a broad definition of areas of responsibility, with the understanding that specific tasks...
identified during the life of the alliance should be performed by that firm within whose area of responsibility the specific task lies. Of course, these classifications are unlikely to be free from ambiguity or dispute.

Unassigned tasks, whether unspecified or unanticipated, present *ex post* occasions for opportunistic behavior. Either party may refuse to perform functionally essential tasks, thus forcing the other party to unilaterally bear the burden of performance or face the prospect of alliance failure. In some circumstances, a party may unilaterally seek to perform non-delegated tasks in order to assert responsibility and authority for a particular function. This too is a potential occasion for opportunism.

When functional control of specific assets is placed in the hands of a particular party, that party can unilaterally assure the performance of the functions associated with those assets without fear of delay. In the case of transferred technology, that party holding the bundle of intellectual property rights conceivably possesses both control of and authority to exploit the technology without requiring significant cooperation from the other party. Dividing control over specific assets, such as technology or distribution rights, can define the functional distribution of performance obligations and concentrate the authority to autonomously execute those tasks through one party's internalized hierarchy.

The distribution of control over specific assets often serves to specify the allocation of undefined tasks, thus protecting the party in control of the assets from vulnerability to opportunistically withheld cooperation. To return to our example, Firm Japan, as a licensee of Firm USA, can autonomously exploit Firm USA's technology (within the limits of the license's terms) once Firm USA's technology is transferred, without further need for cooperation from Firm USA.\(^ {114} \)

A conveyance of all rights to an asset would not protect the party who yields control of the asset from the risks of non-

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\(^ {114} \) Strictly speaking, this is a considerable exaggeration; technology transfers are rarely complete, and Firm Japan is likely to be dependent on Firm USA for valuable support, add-ons and enhancements, and innovation.
performance by another party. A division of property rights (such as the separation of ownership from control and use) can function to protect the parties not controlling the asset. 115 Moreover, the retention of residual ownership, such as the interest held by a licensor of a technology, and its associated power to recall the asset in case of hold-up, can protect the owner. Firm USA, notwithstanding the license to Firm Japan, continues to have a legal interest in the intellectual property embodying the technology that it could conceivably recall.

3.4. Allocation of National Markets

ISAs are designed to operate in specific national territories. Typically, certain territories are designated to be exploited by the alliance while other territories are reserved, either for exploitation by either or both parties, or for cooperation with other firms.

The territoriality of strategic alliances follows both from contractual specification and from the use of national property rights. Various structural agreements will specify and coordinate functions necessary for the alliance to tap specific national markets. A distribution agreement, such as the one between Firm USA and Firm Japan in the example, may provide one firm with the exclusive contractual right to service end-users within a national territory. Such a concession is often coupled to marketing and customer support obligations, and is often linked to non-competition provisions which restrict other firms from servicing the market concerned. 116 The alliance will customarily be obliged to supply the demands of the distributor-party to the extent necessary to satisfy the requirements of the particular market. 117 Similar territorial marketing rights are found in typical manufacturing licenses,

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115 Jean-Francois Hennart noted that his insight into reciprocal market failure as an underlying condition for equity joint ventures derives from his reflections on the landowner/sharecropper relationship, a classic division of title and use of real property rights. Informal conversation with Jean-Francois Hennart, Professor of International Business, University of Illinois (Dec. 1992).

116 These features may or may not be countenanced under a specific competition law (antitrust) regime.

117 This supply obligation may be memorialized in a separate supply agreement.
where the output is destined for particular national markets.

The conveyance of specific national intellectual property rights, such as patents and trademarks, can further enhance the demarcation of those markets to be serviced by the alliance. In order for a firm to effectively import, manufacture and/or market a product which incorporates nationally protected intellectual property rights, the firm must either own those rights or be a licensee. Once a firm holds those rights, it can proceed to unilaterally exploit the national markets if the necessary technological know-how has been transferred. Its output, however, might be blocked from those markets where it does not hold the appropriate national rights.

Thus, to continue with the example, the Distribution Relation between Firm USA and Firm Japan will be delimited to the Japanese territory, both contractually and by the use of national (in this case Japanese) intellectual property rights. Firm Japan will receive rights in Firm USA's Japanese trademarks; it will be effectively disabled from marketing Firm USA's products outside of Japan, as it will not have authorization to the appropriate trademarks for other territories.

4. THE PROSPECT OF ALLIANCE FAILURE AND ITS IMPACT ON ORGANIZATIONAL DESIGN

Alliances are more vulnerable to failure than are fully integrated organizations (i.e., firms). A firm withdraws from a business activity when its risk-adjusted profit expectations do not constitute an adequate return on capital. An alliance, on the other hand, will be constrained to cease its activity whenever any party withdraws. Any participant can be expected to do so when its profit expectations are insufficient,

118 For an example of the use of national intellectual property rights to clearly demarcate an exclusive distributorship, see Joined Cases 56 & 58/64, Etablissements Consten, S.A.R.L. v. Commission, 1966 E.C.R. 299 (voiding the trademark license agreements between the manufacturer and its exclusive distributor as they operated to segment the Community into national markets contrary to provisions of the EC's Treaty of Rome).

119 The use of intellectual property rights to block parallel imports (or, as they are more commonly and pejoratively known, "gray-market goods") is treated variously under different national legal regimes.
even if the overall activity pursued by the alliance remains adequately profitable.

Alternatively, a party may leave a profitable alliance if doing so permits it to pursue a more lucrative opportunity, such as entering another alliance involving similar technology. Likewise, business failure of either party may doom an otherwise profitable alliance. Finally, the alliance may end when one party acquires the other, and integrates the concerned assets and factors within a unitary organization.

Note the particular sensitivity of the international alliance: each party will evaluate the adequacy of its return according

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120 MTU and Pratt & Whitney first announced a technical cooperation alliance for commercial aircraft engines in early 1990. See Nicholas C. Kernstock & Jeffrey M. Lenorovitz, Daimler Benz, United Technologies Agree to Link MTU, Pratt Engine Units, AVIATION WK. & SPACE TECH., Apr. 2, 1990, at 20. General Electric (U.S.), which had a 25 year relationship with MTU, including an existing and prospective alliance, was incensed and sued Daimler-Benz (MTU’s parent) for $1,150 million. See Roderick Oram & Charles Leadbeater, GE Sues Daimler-Benz for $1.15bn, FIN. TIMES, Apr. 6, 1990, para. 1, at 1. GE announced that it would have to reevaluate its relationship with MTU in light of the Pratt & Whitney alliance; MTU was to be no longer considered as a potential risk-sharing partner for GE's new GE90 large turbine engine. See Kernstock & Lenorovitz, supra, at 20. A U.S. district court temporarily blocked MTU's entry into an alliance with Pratt & Whitney. See Judge Delays Pratt & Whitney Venture with MTU, AVIATION DAILY, May 14, 1990, at 298. In the ultimate settlement, MTU was blocked from any collaboration (including with Pratt & Whitney) for engines generating 50,000 to 70,000 pounds of thrust and was terminated from the GE90 program; MTU remained a partner with GE in the long-standing CF6 program. See Daimler’s MTU, Pratt & Whitney Formalise Agreement, Reuters, Mar. 11, 1991, available in LEXIS, Nexis Library, FINRPT File. MTU and Pratt & Whitney entered into a comprehensive alliance nine months after the settlement of the GE lawsuit. See GE, MTU, Settle Bigfan Breach of Contract Suit, AEROSPACE DAILY, May 24, 1990, at 324.

121 Microgenics (USA) and Boehringer Mannheim GmbH (Germany) entered into a U.S. $6.5 million development and license agreement in 1988 which was extended and expanded by a U.S. $6 million agreement in 1989. See Microgenics and Boehringer Mannheim Announce Licensing Agreement, BUS. WIRE, INC., Aug. 9, 1988, available in LEXIS, Nexis Library, BWIRE File (discussing $6.5 million agreement); Microgenics Announces $6 Million Licensing and Development Agreement with Boehringer Mannheim, BUS. WIRE INC., Nov. 13, 1989, available in LEXIS, Nexis Library, BWIRE File (discussing $6 million extension of agreement). Boehringer subsequently acquired Microgenics. See Boehringer Mannheim and Microgenics Announce Intent to Merge, BUS. WIRE INC., Oct. 2, 1991, available in LEXIS, Nexis Library, BWIRE File. The strategic alliance may have served in this instance to solve Arrow's "paradox" by permitting Microgenics to signal its value to Boehringer without the exposure of disclosing its technology prior to securing compensation.
to its home standards, colored (at least) by the exchange performance (including volatility) of its currency of account.

Because ISAs require continued cooperation throughout their life-cycle in order to be successful, each party will be subject to a continual concern about the other party's participation. While opportunistic hold-ups are certainly a large area of concern, these are not the only forms of alliance failure that need to be anticipated by the parties. A good faith party may be constrained into seeking renegotiation of the basic economic terms of the alliance because of dire economic circumstances. Re-bargaining may save an alliance, as additional profit shares may keep the distressed party from withdrawing. Yielding to the claim of duress would preserve value for the performing partner. Re-bargaining is not, however, without its costs.

The possibility of alliance failure, therefore, is ever-present. Firms will enter into alliances only if (a) the probability of alliance failure is quite low and/or (b) its particular positional outcome in the event of alliance failure is tolerable. There is marked tension between these two conditions. An adequate "tolerability" of a projected positional outcome in the event of rupture lessens the incentive for a participating firm to maintain the alliance, and is thus destabilizing. The conflicting conditions can be reconciled by recalling that the decision to enter an alliance involves a comparison of alternative organizational forms.

The alliance entry decision is more complex than the usual firm versus market decision, because a party contemplating an alliance must evaluate non-entry against a probabilistically

\[122\] Klein et al. dispute Williamson's assertion that opportunism is meaningfully distinguished from simple self-seeking behavior by the presence of guile. Guile or not, a held-up party is likely to feel oppressed. Benjamin Klein ET AL., Vertical Integration, Appropriable Rents, and the Competitive Contracting Process, 21 J. LAW & ECON. 297, 302 (1978).

\[123\] The AT&T/Olivetti alliance was renegotiated several times prior to its dissolution. See Bannon infra note 140.

\[124\] NEC clearly benefitted from the technology transferred to it by Honeywell during the period of their alliance. See supra note 2.

\[125\] This, of course, is Williamson's famous insistence that "comparative economic organization never examines organization forms separately but always in relation to alternatives." See Williamson, Comparative Economic Organization: The Analysis of Discrete Structural Alternatives, supra note 62, at 289.
weighted alternative constructed from both cooperative and non-cooperative, post-alliance outcomes. It may be that both (a) cooperation within the alliance and (b) autonomous operation after alliance failure are superior alternatives to non-entry, thus promoting the initial entry into the alliance. Yet, at least for a period, the alliance alternative is significantly superior to alliance failure, thus promoting stability once the alliance is established.

Structural mechanisms can depress the possibility of alliance failure by providing incentives for the parties to remain committed to the alliance. Perhaps alliance failure, like death, is ultimately unavoidable; still the parties may well profit by delaying its occurrence and extending the productive life of the alliance, permitting each firm to achieve its particular financial and strategic objectives.

The various structural agreements will operate to allocate assets and factors should the strategic alliance fail. Provisions of the agreements may explicitly distribute the assets in the case of either general alliance failure or upon (contractually isolated) breaches of particular agreements. In either case there is an additional element of performance expected of the parties. At the time of the rupture they will be expected to yield up or reconvey those specific assets lying in their respective control in accord with the prior agreement.

A more likely case, however, is that alliance failure will mark the cessation of all cooperative behavior, including respect for the ex ante sorting out of assets, as the parties will instead seek to maximize their respective strategic positions and will resort (to the extent possible) to self-help. Most importantly, the parties may enter into active competition with one another in the factor and product markets upon alliance failure, for which certain assets previously devoted to the

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126 These incentives may be positive, in the sense of an enhanced return to be received from continued cooperation, or negative, in the sense of a penalty or cost to be borne. The “technology bonds”, see infra text in Section 5.1., incorporate both enhanced return for cooperation and costs in the event of rupture.

127 Full integration is the more common approach for permanent arrangements. Corporations nominally have perpetual life.

128 AT&T established an alliance with Italtel (Italy) which then entered into competition with AT&T’s prior alliance partner, Olivetti, in Italy, Olivetti’s “home” market. See Bannon infra note 140.
alliance, including most certainly the technology, are of considerable value.

In most cases, then, the structural agreements will specify a series of strategic positions occupied by the two firms vis-a-vis each other during all times within the life-cycle of the alliance as to the control of specific assets; it is from these positions that the firms will commence non-cooperative behavior in the event of alliance failure.

5. PLANNING FOR ALLIANCE FAILURE

5.1. Posting of Technology Bonds

Of critical importance in the international strategic alliance is the distribution of control over the core technology, especially in the event of alliance failure. The license agreement can be usefully thought of as providing a reciprocal "technology bond," which both the licensor and the licensee in some sense forfeit if alliance failure occurs. Technology licensing, as a form of partial conveyance of intellectual property, leaves control in a rather precarious position in the event of alliance failure. This ambiguous situation creates incentives for the two parties to resume cooperation.

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129 General Electric's main expressed concern about MTU's entry into an alliance with Pratt & Whitney was the passage of proprietary technology; GE alleged that information possessed by MTU would allow a competitor to build an engine matching GE's product. See Roderick Oram & Charles Leadbeater, GE Sues Daimler Benz for $1.15bn, FIN. TIMES, Apr. 6, 1990, at 1. GE likely feared the emergence of a viable trans-Atlantic rival. By entering into an alliance with German MTU, U.S. Pratt & Whitney was thought to have greater access to developing European markets.

130 Some assets, such as distribution systems, are by their nature subject to exclusive use in the sense that they may be unilaterally withheld from the emerging competitor. Other assets, such as transferred technology, are capable of joint use, in that neither competitor can autonomously block the use of the technology except by resort to a legal system.

131 The "technology bond" is thus an analogue of the "nonsalvageable asset" described by Klein and Leffler. See Klein & Leffler, supra note 22, at 627-29.

132 The less favorable (i.e. non-cooperative) outcome is a scorched-earth policy, where the technology is effectively destroyed as to a particular national territory. There are, of course, competitive scenarios where destruction of the technology is in the clear interest of one of the parties. This is to state the lesson that opportunism can never be entirely eliminated; its management has its costs too.
Recall that the definition of strategic alliance used in this article specifies that the legal ownership of the core technology remains in the hands of the licensor firm. Although the retention of ownership is relatively unambiguous from a legal perspective, it does not necessarily or even likely result in the return of full control of the core technology to the licensor in the event of alliance failure. The issue of control of the core technology upon alliance failure is in no way the same as the issue of operational control within the alliance since the latter is of concern only for cooperative outcomes.

The licensor may not control all the knowledge necessary to exploit the core technology in the foreign jurisdiction. “Tacit knowledge” (which typically includes operational knowledge within the foreign territory) is embodied in the individuals possessing it; to the extent that these individuals are agents (employees) of the licensee, it is impossible for the licensor to capture and utilize this often essential knowledge. To use our example, even were Firm USA able to recover all its conveyed rights from Firm Japan, it may not have sufficient knowledge to occupy Firm Japan’s role, particularly within the Japanese market. Firm Japan’s tacit knowledge may be inaccessible and largely incapable of reproduction.

Even if the core technology is protected by intellectual property rights, retraction by the owner may be difficult. The licensor might be able to terminate continued unilateral exploitation of the core technology by the licensee by prevailing in a national judicial contest based on its ownership of the intellectual property. But it is also true that the licensee may be able to block alternative use of the core technology on the part of the licensor, at least in the subject foreign territory, based on the allegedly continuing force of the repudiated license agreement. Firm Japan may be able to block Firm USA’s reassertion of control of the Japanese intellectual property rights that were the subject of the now, arguably voided, license, thus clouding Firm USA’s title. In the end, the licensor may prevail in recovering its rights in the technology, but not without experiencing a discouraging level of cost and,

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188 Anderson and Gatignon define operational control as “the ability to influence systems, methods and decisions.” Erin Anderson & Hubert Gatignon, Modes of Foreign Entry: A Transaction Cost Analysis and Propositions, J. INT’L BUS. STUD. 1, 3 (Fall 1986).
more importantly, harmful delay.

Moreover, the licensor will be vulnerable to competition from the licensee. Even if the licensee cannot perfectly substitute the withdrawn core technology, the intimate knowledge it already holds of the core technology (this knowledge is, of course, irreversibly transferred), as well as ancillary knowledge it possesses about the licensor and its strategies, gives the licensee a sizeable advantage in subsequent competition. Firm Japan, even if ultimately cut off from the use of Firm USA's technologies, will continue to possess significant competitive insights into Firm USA's strategies.

For these and other reasons, technology transfers within strategic alliances are often effectively irreversible. The dynamic nature of technological development further exaggerates this tendency; a licensing firm committing to a technology alliance may be exhausting all alternative opportunities to exploit the core technology, as its technological leadership in a specific target market may evaporate in the time elapsing to alliance failure. The licensor, once committed to an alliance, may be bound to a bargain, even if subsequent conditions render it a bad bargain. Alliance failure, in such circumstances, will mean that any prospect for exploiting the technology in the foreign territory will be lost.

The technology possessed by the alliance likely represents a valuable combination of technological elements provided by both firms. These synergistic economies are subject to loss in

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136 This extra-contractual consideration may be far more binding than any legal obligation arising from contract.

136 Many countries require that intellectual property be "worked" in order for protection to be extended. Such a requirement would put the licensor firm in a worse dilemma: its choices would be to (a) continue to support the alliance even though it may lose money doing so, (b) purchase cooperation (a release) from the licensee firm at a cost reflecting the opportunistic position or (c) see the core technology used at no cost by a rival firm, who would then occupy the market.
the event of alliance failure. The “technology bond” creates a mutual hostage situation, which underlies many instances of organizational stability. The sharing of technology can thus decrease the likelihood of one party exacting concessions from the other by threatening withdrawal from the alliance. This, in turn, increases participant confidence that the alliance will continue at least long enough to permit it to reach its relevant goals. The cooperation that proceeds from the mutual hostage situation does not necessarily prolong the life of the alliance; an acquisition of one alliance partner by the other is not an infrequent cooperative outcome which then eliminates the mutual hostage tension.

Further, to follow a non-cooperative scenario, the sharing of technology leaves both firms potentially better off in the event of alliance failure, or at least not appreciably worse off, than they would have been had they never entered the alliance. While these non-cooperative outcomes are generally less attractive than is the realization of a successful alliance, they may still constitute an improvement over the status quo ante. Again, putting legal complications aside, the shared technology is largely available for independent use by each of the former participants. It may well be that the utility of the technology acquired outweighs the loss of exclusivity of the technology exchanged, for it is only the exclusivity of use and not the use itself which is lost.

5.2. Competition in National Markets

ISAs involve the designation of specific national territories for joint exploitation. Implicitly, all other markets are reserved by the participants. These excluded markets may be currently serviced by either participant, by one participant and another firm in an alliance, by both firms in active competition, or by neither firm.

\[127 \text{ See infra text in Section 3.3.}\]

\[128 \text{ Conceivably, non-competition terms could be incorporated into the various structural agreements in order to divide the reserved markets between the participants. In many jurisdictions, however, such provisions would run afoul of national competition law. Even were they not to subject the former participants to penalties, the restrictions are likely to be deemed unenforceable by a national court asked to enforce them upon alliance failure.}\]
The firms may allocate tasks differentially within the various markets developed by the alliance. Typically, each firm would undertake distribution in those markets where it has a strong distributional infrastructure and a high degree of end-market goodwill, such as its respective home national market. Thus each participant may be a supplier as to some national markets and a distributor as to others; the Distribution Relation is frequently reciprocated.\textsuperscript{139}

Whatever the roles played by the respective participants, the serving of markets by the alliance is likely to produce greater economic benefit than would the alternative of both firms serving the market in vigorous competition. While an alliance may be viewed as procompetitive in certain circumstances, by introducing a new firm or new products to a market, in another sense it is inevitably anticompetitive in that the two parties to the alliance, whether actual market participants or potential entrants, agree themselves not to compete in that market. While one or both firms may not have been present in the particular market before the establishment of the alliance, they are both more likely to remain in the market after alliance failure in order to capitalize on the investments made and on the acquired local knowledge and goodwill.\textsuperscript{140}

A party controlling the necessary elements of technology can functionally service specific national markets upon alliance failure; legal impediments to serving these markets, however, may remain. The firm possessing the distribution channels utilized by the alliance and well-developed local goodwill has a substantial advantage in post-alliance competition. To the extent both firms enter a specific national market previously served by the alliance, the heightened competition is likely to

\textsuperscript{139} During the AT&T/Olivetti alliance, AT&T distributed Olivetti computers in the United States and Olivetti distributed AT&T telecommunications equipment in Europe. See Brown, supra note 3; Buxton, supra note 3.

\textsuperscript{140} After the rupture of the AT&T/Olivetti alliance, AT&T remained present in the Italian market, where it undertook an alliance with Italtel. Lisa Bannon, AT&T, Olivetti Headed for Divorce?, ELECTRONIC NEWS, July 17, 1989, at 15.

Likewise, NEC remained in the U.S. computer market after Honeywell pulled out of the computer development field, ending the NEC/Honeywell alliance. NEC to Take Full Control of Joint Venture with Honeywell, JAPAN ECON. NEWswire, Sept. 29, 1989.
reduce the enjoyment of rents associated with the technology. The prospect of this loss of rents provides a structural incentive to maintain cooperation, contributing to the stability of the alliance.\textsuperscript{141} It will be costly for Firm USA to replicate the distribution channels controlled by Firm Japan. Further, the ensuing competition between Firm USA and Firm Japan in the Japanese market will eliminate rents that the two firms could otherwise have enjoyed jointly.

6. CONCLUSION

A major concern afflicting business organizations operating across national boundaries is the availability of judicial enforcement to back up contractual commitments. The international enforcement problem is particularly acute for a complex organizational arrangement, such as an ISA, which relies on consensual agreements for internal ordering.

Notwithstanding these problems, ISAs do exist, which suggests that the participants have discovered (or devised) alternative, extra-contractual mechanisms to mutually assure the prospect of sufficient performance and continued cooperation.

In this Article, I have suggested that partial conveyances of intellectual property rights (technology licenses) operate to assure the cooperation of both parties, describing these mechanisms as "technology bonds."\textsuperscript{142} The licensee controls the use of the technology for specific national territories. Within this grant, the licensee can autonomously service these markets; it need not buy further cooperation from the licensor.

The licensor retains residual rights which permit it, in the case of a collapse of cooperation (alliance failure) to block the licensee's continued use of the technology. The licensor may not, however, be able to effectively recover the licensed rights in order to exploit them itself. Because of legal and factual uncertainty, the licensee may also be able to block the licensor's use of the technology. This mutual hostage situation encourages further cooperation,\textsuperscript{143} although that cooperation may involve a buyout by one party or the other in order to

\textsuperscript{141} Thus, distribution rights can also be thought of as a "bond."

\textsuperscript{142} See supra text in Section 5.1.

\textsuperscript{143} See supra text in Section 5.1.
liberate the technology.¹⁴⁴

Further, ISAs typically end up expressly dividing national markets, designating certain countries to be developed by the alliance and others to be reserved for unilateral and competitive service. Within those national markets served by the alliance, the participants may have different roles. Each participant may be given the primary distribution function for certain primary markets.¹⁴⁵

The cooperation structured by the entry of an ISA for a specific national market institutionalizes a suppression of competition; it is understood (and is often explicitly provided) that the participants will not themselves compete with the alliance in these territories. Alliance failure spells, therefore, not only a resumption of competition between the two firms, but perhaps the introduction of competition to a national market where none had existed before. Clearly the two parties collectively lose something under this scenario by parting ways; the value of the market under suppressed competition is a shared good that can only be realized through continued cooperation.

The participant operating as a distributor has a significant degree of control of the relevant national territory, as the supplier participant has likely underinvested in the territory during the alliance. Entry into this national market (even if the legal uncertainties surrounding ownership of the technology are clarified) after alliance failure is likely to be costly to a supplier firm, particularly if the supplier firm is foreign. This can act to further cement the relationship.

While I do not discount the possibility that participants in an ISA look to some extent to the potential of judicial enforcement provided by a national legal system to engender confidence as to their participation, I do believe that judicial enforcement plays a far lesser role in ISAs than it might in a complex domestic contractual organization. ISAs demonstrate that parties can adequately structure complex relationships without resorting to prepackaged corporate forms where

¹⁴⁴ NEC bought out Honeywell's interest in their alliance in order to consolidate control over former Honeywell technology. See supra note 140.

¹⁴⁵ As discussed in Section 3.4., the use of pieces of national intellectual property can further the demarcation of specific markets to be serviced by each of the participants. See supra text in Section 3.4.
important structural elements bind them to continued cooperation. As long as national legal systems provide certain property rights, ISAs can continue to function even in the presence of severe contractual uncertainty.