Structuring Cooperative Relationships Between Organizations

Ring, Peter Smith; Van De Ven, Andrew H. Strategic Management Journal; Oct 1992; 13, 7; ProQuest Central pg. 483

Strategic Management Journal, Vol. 13, 483-498 (1992)

STRUCTURING COOPERATIVE RELATIONSHIPS BETWEEN ORGANIZATIONS

PETER SMITH RING

College of Business Administration, Loyola Marymount University, Los Angeles, California, U.S.A.

ANDREW H. VAN DE VEN

Curtis L. Carlson School of Management, University of Minnesota, Minneapolis, Minnesota, U.S.A.

Alliances and similar cooperative efforts are receiving increased attention in the strategic management literature. These relationships differ in significant ways from those governed by markets or hierarchies, and pose very different issues for researchers and managers. In this paper we address alternative forms of governance in cases where multiple organizations repeatedly cooperate. We explore their characteristics and follow this with a discussion of criteria which we believe bear on the choice of governance: risk and reliance on trust. We offer propositions on relationships between these criteria and the choice of governance mechanisms. In the concluding section of the paper we explore the implications of our analysis for managers and scholars.

Rapid changes in technology, the competitive environment, firm strategies and other pressures are prompting many firms to seek continuing cooperative relationships with other firms. These joint efforts are seen as expeditious ways to keep pace, especially when the firm is seeking unique and pioneering resources. But why are firms engaging in such repeated, contract-based transactions of idiosyncratic assets with the same organization when received theory (see, generally, Coase, 1937; Williamson, 1975, 1985) predicts that they should be using hierarchical arrangements? Powell (1987) suggests that these firms are pursuing a diverse set of business objectives that require cooperation because they involve reciprocal dependencies.1 The contract-

Key words: Governance structures, relational contracts, recurrent contracts, reliance on trust, contract risk

0143-2095/92/080483-16\$08.00 © 1992 by John Wiley & Sons, Ltd.

based governance forms employed in pursuing these diverse business objectives include strategic alliances (e.g. James, 1985), partnerships (e.g. Perlmutter and Heenan, 1986), coalitions (e.g. Porter and Fuller, 1986), franchises (e.g. Friedlander and Gurney, 1981), research consortia (Ouchi and Kremen-Bolton, 1988), and various forms of network organizations (e.g. Eccles and Crane, 1987; Jarillo, 1988; Lincoln, 1990; Powell, 1990).²

Comparative analysis of the mechanisms avail-

single organization, and gaining synergy by combining the strengths and overcoming the weaknesses of firms in undertaking a venture that is much broader and deeper than a simple supplier relationship, marketing joint venture, or technology licensing arrangement. Similar arrangements appear to be employed by organizations that contract out in 'restructuring' or in 'downsizing' their operations (e.g. Cameron, K., Freeman, and Misha, 1991; Richardson, 1988; Sutton and D'Aunno, 1989) or by governmental agencies engaged in the privatization of public services (e.g. Bryson and Ring, 1990).

² Our argument in this paper is solely with the adequacy of the TCE literature in treating these interorganizational relationships. Gray (1990) and Oliver (1990), however, provide excellent reviews of the adequacy of the interorganizational relations (IR) literature in dealing with these emerging forms.

Received 2 July 1990 Final revision received 24 February 1992

¹ These business objectives include gaining access to new technologies or markets, benefiting from economies of scale in joint research, production, and/or marketing, gaining complementary skills by tapping into sources of know-how located outside the boundaries of the firm, sharing the risks for activities that are beyond the scope or capability of a

able to govern these kinds of business relationships has been undertaken by scholars working within a branch of institutional economics that is now known as transaction cost economics (TCE) (see, generally, Williamson, 1975, 1985). Briefly, TCE analysis of governance structure alternatives explores the following fundamental question: when does a manager pursuing the kinds of business objectives described above use the market, rely on her own organization, or use a mixed-mode relationship?

TCE researchers operate on an assumption that in answering this question, managers will be motivated solely by efficiency considerations; that is, they will select the least costly of these alternatives, taking account of the combined effects of transaction and production costs (e.g. Williamson, 1985: 61). Other motivations, such as equitable outcomes, are understated in these analyses. TCE analysis also assumes that economic actors are opportunistic. The implications of trusting behavior in designing governance mechanisms are generally ignored.

Williamson (1991: 269) has pointed out that 'transaction cost economics has been criticized because it deals with polar forms—markets and hierarchies—to the neglect of intermediate or hybrid forms.' More pointedly, Stinchcombe (1990: 198) notes that:

[a] common danger with the ideal-type method [employed in TCE literature] is that one of the types, usually the most interesting, is defined residually, by contrast with an empty ideal-type into which few empirical observations fall. This means not only that intermediate cases are misanalyzed, but that even the poles of contract and hierarchy are poorly defined (emphasis added).

Although cognizant of alternative modes of governance, the tendency to emphasize markets and hierarchies in the formulation of the governance question leaves a significant void in our understanding of alternatives. This is especially the case in our understanding of alternative forms for the governance of repeated transactions of highly idiosyncratic assets under conditions of uncertainty, and small numbers bargaining, such as biotechnology research, transnational joint ventures, or extractive resources exploration. TCE theorists argue that these kinds of transactions are best governed by hierarchy because

it solves many of the problems associated with opportunistic behavior by the parties. Stinchcombe (1990), however, provides a compelling counter-argument: that when deemed necessary, contracts can be constructed to simulate hierarchies.

Stinchcombe's argument points out that this substitution occurs through a 'network of contracts (1990: 236).' However, as Doz and Prahalad (1991: 148) note: '[t]he usefulness of transaction cost analysis for research on management processes is limited by. . .its primary focus on single transactions as units of analysis.' The cooperative arrangements that are emerging in many industries, however, involve repeated transactions between the same partners. In addition, although managers invariably confront the make or buy decision in dynamic contexts, facing real time constraints, TCE analysis is static.³

Thus, although TCE provides a sound theoretical foundation for the exploration of market versus hierarchical mechanisms for solving strategic dependencies, it suffers from not adequately exploring other available governance structures, repeated transactions, the dynamic evolution of governance and transactions, and the key roles of trust and equity in any interorganizational relationship. We seek to partially fill these shortcomings in this paper. We focus our attention on recurrent and relational contracting, and the inherent flexibility they provide parties

⁴ Although beyond the scope of this paper, we would argue that the agency theory, for many of the same reasons, has left a similar void in our understanding of the governance of transactions within the hierarchy. We will touch briefly on the implications of our argument as they relate to internal governance in the concluding section of the paper.

³ A broader discussion of mergers is beyond the scope of this paper (e.g. Berg, Duncan and Friedman, 1983; Harrigan, 1985, 1986; Killing, 1983; Walsh and Ellwood, 1991). Time constraints may explain why, contrary to the logic of TCE, firms acquire (or merge with) other firms to obtain assets that are not idiosyncratic and will not be transacted for repeatedly under conditions of uncertainty. As pointed out by a reviewer of earlier drafts of this manuscript, acquiring the whole when only a part is sought is inherently inefficient. The static approach of TCE masks the conflict inherent in many mergers: they provide a relatively faster, more certain, and sometimes less expensive way of achieving the kinds of business objectives Powell (1987) identifies, but at the risk of diverted management attention, increased organizational complexity and (more often than not) greater investment. We argue that recognition of this conflict ultimately will lead managers to consider relational contracting as an alternative means of meeting these kinds of needs.

who can rely on trust in governing risk in transactions. Indeed, relational contracting is manifest in the extremely wide variety of new forms governing repeated transactions among organizations (e.g. Dore, 1983).

We begin with an analysis of the characteristics of alternative governance mechanisms. We then outline criteria which we believe bear on the choice of governance. This is followed by a discussion of relationships between these criteria and the choice of governance mechanisms. In the concluding section of the paper we explore the implications of our analysis for managers and scholars.

ALTERNATIVE FORMS FOR GOVERNING TRANSACTIONS

The characteristics of two polar forms for governing transactions—market-based discrete contracts and hierarchies—have been the focus of intense scholarly interest by institutional economists (Commons, 1934, 1950; Coase, 1937; Williamson, 1975, 1981), organizational sociologists (Barney, 1990; Granovetter, 1985; Oliver, 1990; White, 1981), lawyers (Goldberg, 1980; Klein, 1982; Macneil, 1974, 1978, 1980) and strategic management and organizational theorists (Barney and Ouchi, 1986; Donaldson, 1990; Hill and Kim, 1988; Hill, 1990; Jones and Hill, 1988). A very brief review of these characteristics is instructive because they provide the basis for exploring alternative frameworks for governing transactions. In Table 1, some of the more distinguishing characteristics of a broader set of alternative governance mechanisms are outlined. In this paper we explore the advantages of recurrent and relational contracts, which, we will argue, can provide transacting parties with an ability to avoid many of the liabilities caused by the use of discrete contracting and/or hierarchies as governance mechanisms.

Market-based transactions can be simply characterized as discrete contracts: relatively short-term, bargaining relationships between highly autonomous buyers and sellers designed to facilitate an economically efficient transfer of property rights. The conditions associated with these transactions are 'sharp in;' that is, they are accompanied by a clear-cut, complete, and monetized agreement. They are also 'sharp out,' i.e., the seller's debt of performance and the

buyer's debt of payment are unambiguous. Since the property, products, or services exchanged here tend towards the non-specific, and can be transacted among many traders, the competitive marketplace and classical contract law provide efficient safeguards to the parties for governing these transactions (Macneil, 1978; Williamson, 1985). When individuals contract on behalf of their organizations, they require some security that the terms of their transactions will be enforceable. The laws of contract enable transacting parties to appeal to the state's powers of coercion. Should conflict arise among the parties, ultimate security is provided by the state which enforces the terms of such a contract, if it is judged to be lawful.

In such imperfectly competitive market circumstances, parties to a bargaining transaction are assumed to be equal and legally free. Thus, social relations between parties tend to be limited as developing them can be costly. If they do exist, social relations between the parties have come to be viewed by many scholars as atomized and irrelevant (e.g. Williamson, 1985: 69). Indeed, as Adam Smith observed in 1776, social atomization is a prerequisite to perfect competition.

In contrast, hierarchical or managerial transactions usually deal with the production of wealth or the rationing of resources among superiors and subordinates. Commons (1950) pointed out that a lawful managerial transaction requires legal ownership of property, obtained through bargaining transactions. While the law of bargining transactions in markets sets up an ethical ideal of persuasion between individuals who are legally equal and free, the law of managerial transactions rests on the legal right of the owner to issue commands to laborers and on the correlative duty of obedience by the laborers to the commands of owners (Commons, 1950: 54).

Williamson (1975, 1985) proposes that where transactions have highly uncertain outcomes, recur frequently, and require unique or transaction-specific investments, they can be performed most efficiently within hierarchies. When conflict arises, it is resolved by resort to the authority or fiat that is embedded in the asymmetrical command and obedience roles relationships that are characteristic of hierarchy. In these unified governance structures, the employment contract is the relevant legal form of governance.

Table 1. Distinguishing characteristics of forms of transactions

		Forms	ms	
Distinguishing characteristics	Discrete market transactions	Hierarchical managerial transactions	Recurrent contracting transactions	Relational contracting transactions
Nature of exchange	One-time transfer of property rights	On-going production and rationing of wealth	Episodic production and transfer of property rights	Sustained production and transfer of property rights
Terms of exchange	Clear, complete and monetized, sharp in by agreement, sharp out by pay and performance	Authority structure superior hires subordinate obeys or quits the employment relationship	Certain, complete contingent on prior performance; plans for experimentation on safeguards	Uncertain, open and incomplete; plans for bilateral learning safeguards and conflict resolution
Transaction-specific investment	Nonspecific	Idiosyncratic	Mixed	Mixed and idiosyncratic
Temporal duration of the transaction	Simultaneous exchange	Indefinite	Short to moderate term	Moderate to long term
Status of the parties	Limited, nonunique relation between legally equal and free parties	Structural functional command-obedience role relationship between legally unequal parties	Unlimited, unique relation between legally free and equal parties	Extensive, unique social-embedded relation between legally equal, and free parties
Mechanisms for dispute resolution	External market norms and societal legal system	Internal conflict resolution by fiat and authority	Norms of equity and of reciprocity and societal legal systems	Endogenous designed by the parties and based on trust
Relevant contract law and governance structure	Classical contract market governance	Employment contract unified governance	Neoclassical contract market governance	Relational contracts bilateral governance

Quite different from the generally well understood forms of market and hierarchical governance, the interorganizational relationships we explore in this paper can be governed by two, less well explored, types of contracting: recurrent and relational. Recurrent contracts involve repeated exchanges of assets that have moderate degrees of transaction specificity.⁵ The terms of these exchanges tend to be certain, but some contingencies may be left to future resolution. Temporally, the duration of these contracts is relatively short-term. The parties see themselves as autonomous, legally equal, but contemplating a more embedded relationship. They use the recurrent contracting to explore outcomes driven by motives other than efficiency, to experiment with safeguards, and with alternative methods for resolving conflict. Neoclassical contract law (Macneil, 1974) provides the legal framework within which these predominantly market-based transactions are governed.

In contrast, relational contracts tend to involve long-term investments that stem from groundwork laid by recurrent bargaining on the production and transfer of property rights among these legally equal and autonomous parties. The property, products, or services jointly developed and exchanged in these transactions entail highly specific investments, in ventures that cannot be fully specified or controlled by the parties in advance of their execution. As a consequence, the parties to these rational contracts are exposed to a much broader variety of trading hazards than their counterparts employing either market or hierarchical transactions experience. Disputes are resolved through internal mechanisms designed to preserve the relationship and insure that both the efficiency and equity outcomes sought in the longterm relationship are realized. In contrast to the unified governance typically attributed to hierarchy (e.g. Williamson, 1985, 1991), bilateral governance is employed in relational contracts.

CRITERIA BEARING ON CHOICE OF GOVERNANCE FORMS

Our analysis of cooperative agreements that are governed by recurrent and/or relational

contracting requires that we make a set of assumptions about the transacting parties. First, we assume that risk and trust are separable concepts for transacting parties. Second, employing a behavioral assumption of trustworthiness (open, other-regarding behavior) rather than opportunism (self-interest seeking with guile) enables us to (a) define how firms might build trust through recurrent contracts and (b) explore the benefits of governing long-term uses of idiosyncratic assets through relational contracts in lieu of hierarchies. Third, we assume that parties to contracts negotiated and agreed to on the basis of trustworthiness are far less constrained ex ante about the ex post contract implications of their bounded rationality (i.e., they trust each other to deal fairly with gaps in the contract that result from their inability to perfectly forsee the future). These assumptions about conditions under which relational contracting occurs are associated with criteria that bear on the governance choices confronting transacting parties, a premise we now develop in more detail.

Risk

A recurring source of risk in all transactions is the need to make decisions in the face of the uncertainty of accomplishing tasks that require sustained cooperation with others, particularly when they represent difficult or novel ventures (Ring and Van de Ven, 1989). This uncertainty can lead to various types of risk. Chakravarthy (1985: 260) describes one form as commercial probabilities of (i.e., the 'price-performance niches' in the market) and another as technological risk (i.e., the probability of bringing technology to the market). Risk may also reflect difficulty in establishing probabilities scientific (i.e. 'a lack of fundamental knowledge') or engineering (i.e. will a technology work?) uncertainty (Marcus, 1988: 140). Finally, risk may be defined in terms of 'corporate risk' (see, generally, Bromiley, 1991; Miller and Bromiley, 1990). This kind of risk frequently presents itself as managers confronting the need for resources choose between a slower process of further enhancing their own organization's capabilities, or acquiring those capabilities rapidly, but at high investment costs, through a merger.

Deciding whether an organization should face

⁵ Williamson (1985) would characterize these as being mixed idiosyncratic assets.

circumstances in which these forms of risk all occur alone, or through cooperative arrangements, leads to 'corporate strategic risk' (Baird and Thomas, 1985). In their view, this kind of risk involves 'venturing into the unknown, [moves] that may result in corporate ruin—moves for which the outcomes and probabilities may be only partially known and where hard to define goals may not be met' (Baird and Thomas, 1985:231–232).

In this paper we proceed on an assumption that the degree of risk inherent in any transaction generally will rise in direct proportion to decreases in time, information, and control (MacCrimmon and Wehrung, 1986: 14–19). Time accentuates risk when demands for action are beyond the control of the parties to a deal. For example, fear of losing first-mover advantages can drive a firm to prematurely market new products, even in the face of high commercial and/or technological risk.

Unexpected natural events (earthquakes, blizzards) or environments that regulate the activities of organizations (such as unions, quality conscious buyers; e.g. Ring, 1989) can lead to increased risk by reducing management's control over the way in which it manages its operations. The absence of required resources also reduces an organization's control over its own actions (e.g. Pfeffer and Salancik, 1978). And, as MacCrimmon and Wehrung (1986) point out, a lack of control is usually accompanied by a lack of information. This lack of information also affects the degree of risk faced by the parties to a transaction.

The lack of information may be a result of scientific or engineering uncertainty, or a consequence of information asymmetries (e.g. Arrow, 1971). Whatever its source, a lack of information also will affect choices regarding the design of transaction governance structure. In dealing with risk, parties to a transaction will select a governance structure that provides appropriate safeguards against that risk. Those safeguards, generally, will lead to more complex governance structures as levels of risk increase. Thus, consistent with Williamson (1975, 1985) we propose:

P1: The greater the risk in a transaction, the more complex the governance structure, ceteris paribus.

Trust

Although higher degrees of risk mean that managers must focus more of their attention on the commercial and financial characteristics of a deal they are contemplating, the need to work cooperatively over sustained periods of time means that they must also concern themselves with the trustworthiness of other parties to a deal. Two different definitions of trust are frequently used in the literature: (1) confidence or predictability in one's expectations (Zucker, 1986) and confidence in the other's goodwill (Friedman, 1991). We employ the second definition in this paper. We operate from the perspective that personal embeddedness at a minimum, is a necessary condition for trust (e.g. Blau, 1964).

There is pervasive evidence supporting the inclusion of trust as a critical factor in a structural model of transactions. For example, Arrow (1973: 24) points out that '...ethical elements enter in some measure into every contract; without them, no market could function. There is an element of trust in every transaction' and it varies with transacting parties. Fried (1982: 8) argues:

when my confidence in your assistance derives from my conviction that you will do what is right (not just what is prudent), then I trust you, and trust becomes a powerful tool for our working our mutual wills in the world. So powerful a tool is trust that we pursue it for its own sake; we prefer doing things cooperatively when we might have relied on fear or interest or worked alone.

Thus, we conclude that some element of trust will be required for any transaction in which simultaneous exchange is unavailable to the parties. Needless to say, the condition applies to most modern business transactions. Williamson (1985: 62–63) acknowledges the utility of trust. He observes that '[o]ther things being equal, idiosyncratic exchange relations that feature personal trust will survive greater stress and will display greater adaptability.'

Generally, trust emerges in two ways. First it may be based on norms of equity which define the degree to which one party judges that another party will fulfill its commitments and that the relationship is equitable (Van de Ven and Walker,

1984). The concept of equity is developed in exchange theory, which argues that participants in a relationship desire: (1) reciprocity, by which one is morally obligated to give something in return for something received (Gouldner, 1959), (2) fair rates of exchange between utilitarian costs and benefits (Blau, 1964), and (3) distributive justice, through which all parties receive benefits that are proportional to their investments (Homans, 1961).

The desire to be viewed as trustworthy also has more direct, utilitarian roots. First, there are many non-legal sanctions which make it expedient for individuals and organizations to fulfill commitments (Macaulay, 1963). Repeated personal interactions across firms encourage some minimum level of courtesy and consideration, and the prospect of ostracism among peers minimizes individual opportunism. At the organizational level, the prospect of repeat business discourages attempts to seek a narrow, short-term advantage (Maitland, Bryson and Van de Ven, 1985).

Thus, trust is more likely to be extended to an organization when that organization earns a reputation in the market place for following norms of equity. We argue, however, that a reputation for trustworthiness, while necessary for acting in reliance on trust in a business relationship, is not sufficient.

Reliance on trust by organizations can be expected to emerge between business partners only when they have successfully completed transactions in the past and they perceive one another as complying with norms of equity. The more frequently the parties have successfully transacted, the more likely they will bring higher levels of trust to subsequent transactions. As the level of trust increases, greater reliance may be placed on the actions of the trusted party. Thus, we propose that:

P2: Trust is a necessary, but not sufficient, condition for market transactions, ceteris paribus.

P3: Reliance on trust will emerge only as a consequence of repeated market transactions

between the parties affirming the observance of norms of equity by both parties.

Risk and trust are related

Parties with a history of successful transactions are less likely to suffer the adverse affects of information asymmetry because they will share information that reduces technological or commercial risk more freely with each other. As they transact repeatedly, and observe norms of equity and reciprocity, they may place greater reliance on parties not to act opportunistically when given access to proprietary information. Moreover, these same parties are likely to view the information they received from each each as more reliable (see, e.g. Normann, 1971 on the effects of known intermediaries on information exchanges).

As organizations transact more frequently, and for very different reasons, with other parties, it increases the likelihood that they will be able to exercise greater autonomy without fearing a loss of control in subsequent transactions. As they observe norms of equity and reciprocity regarding the 'management' and their contractual relationships, they may loosen constraints on operating autonomy that are employed to guard against opportunistic behavior. These controls' manifest themselves as *ex post* costs of contracting such as bonding costs, or as 'agency' costs such as monitoring expenditures of the parties as principals (e.g. Jensen and Meckling, 1976).

The more frequently that an organization transacts with different types of organizations, the more its stock of information regarding the predictability or reliability of parties is likely to increase. Diversity in transactions is also likely to increase its store of information regarding the efficacy of contractual safeguards. Finally, even though a lack of time is frequently something over which all parties to a transaction have relatively little control, a history of successful past transactions may enable parties to prolong the time within which decisions have to be made. Past success can also diminish the time required to gather information. Thus, we propose that:

P4: The greater the ability to rely on trust, the less the risk inherent in a transaction, ceteris paribus.

⁶ Weigelt and Camerer (1988) provide a very useful review of reputation. Their analysis of reputation as a screening mechanism is pertinent to our approach, but a more detailed explication is not essential to the arguments made here.

RELATIONSHIPS BETWEEN GOVERNANCE STRUCTURE, TRUST AND RISK

The foregoing discussion implies that relationships may exist between degrees of risk, reliance on trust and the kind of governance structures employed by parties to a transaction. More explicitly, we offer the following propositions.

P5: Varying levels of risk and reliance on trust will explain the governance structures of transactions.

P5a: Low risk, low reliance on trust transactions will be governed by markets, ceteris paribus.

P5b: High risk, low reliance on trust transactions will be governed by hierarchies, ceteris paribus.

P5c: Low risk, high reliance on trust transactions will be governed by recurrent contracts, ceteris paribus.

P5d: High risk, high reliance on trust transactions will be governed by relational contracts, ceteris paribus.

In Figure 1 we illustrate these propositions. In the discussion which follows we expand upon the logic that supports them.

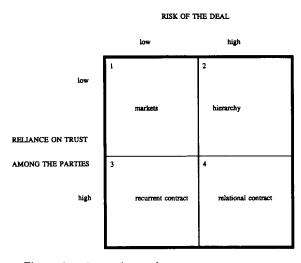


Figure 1. A typology of governance structures

Cell 1

In many business transactions, each party has easy access to information needed to evaluate commercial or technological risk. Time frames within which the transaction is to be carried out are short enough that the parties can exercise appropriate levels of control. These transactions reflect low risk. Thus, the parties need not depend on a single partner to accomplish a transaction or, for that matter, on any party's trustworthiness. Discrete contracts, classical contract law and markets provide an ideal combination for governing these kinds of transactions. Even when simultaneous exchange is not possible, if these transacting parties encounter conflict, mistrust, or malfeasance, they can seek recourse from the courts rather than depending on the party to 'make things right', and then 'can simply move on to the legion of other traders willing to do business on market terms; social relations and their details thus become frictional matters' (Granovetter, 1985: 484).

Consequently, while sufficient for transacting in such circumstances, reliance on trust is not necessary and, in fact, levels of trust may be very low or nonexistent in many such transactions. However, if parties wish to establish reputations for trustworthiness in the market, they can only do so by refraining from opportunistic behavior in the course of negotiating and executing discrete contracts.

Cell 2

In contexts in which high levels of risk may be encountered, and economic efficiency is the sole objective of the parties, hierarchical governance structures generally provide the parties with appropriate safeguards. Dependence is eliminated on complex and costly negotiations to anticipate properly the totality of investments and all possible outcome contingencies that may be entailed in undertaking a high-risk venture through a discrete contract-based market transaction. In addition, in high-risk situations in which time is of the essence, the parties may employ hierarchy as a governance mechanism through a merger. But, this gives rise to the conflicts outlined above.

Or, the parties can simply agree to create a new hierarchy through a joint venture. This has the effect of reducing some of the corporate risk in the transaction by limiting the degree of investment in the hierarchy (in contrast to merger, or acquisition, of the whole hierarchy of another organization). In this 'newco,' opportunism is mitigated and constrained by the role and authority relations that are prescribed, motivated, and monitored in a unified governance structure. By appeal to authority and fiat, internal organization is 'an enormously efficient way to settle instrumental differences' (Williamson, 1975: 30).

Reliance on high levels of trust may be sufficient for organizing such transactions within the unified governance structure that characterizes hierarchy, but it need not be necessary. Indeed, in hierarchical governance structures, dependence on maintaining good social relations can be virtually eliminated. Role relations between legally unequal superiors and subordinates are substituted, and as they become institutionalized their efficacy can grow.⁷ In this kind of context, Granovetter (1985) argues that an over-socialized account of human action emerges in which institutional role arrangements attenuate the dependency on personal trust characteristic of behavior in socially embedded relationships. Thus, like the under-socialized, atomistic view of social relations between parties in simple market transactions, this over-socialized view of role relationships between superiors and subordinates in hierarchical transactions tends to relegate social relations to frictional matters.

In sum, parties transacting by discrete contract in markets or within hierarchies rely on atomistic market norms or superior/subordinate role relationships. In contrast, we argue that trust is the principal mode of social control among parties using recurrent or relational contracting as a means of governance.

Cell 3

Nothing in the theory of transaction cost economics requires that assumptions be made about

relationships between the transactions of a single party. Thus, a transaction undertaken by a party at time (t_n) is made independent of the future needs of that party, including the need for transaction-specific assets at time (t_{n+1}) .⁸ The static nature of TCE, and its focus on single transactions, also means that transaction cost analysis does not require explicit assumptions regarding history between focal transacting parties.

Recurrent contracting enables the parties to build trust, by demonstrating norms of equity and reciprocity. This form of governance also enables them to experiment with elements of hierarchy that can be incorporated into contract: command structures and authority systems, incentive systems, administered pricing systems (costs, qualities, prices), a structure for the resolution of conflict and standard operating procedures (Stinchcombe, 1990).

If we assume that parties act strategically, then recurrent contracting provides an approach to governing transactions in time (t_n) that would not be efficient if no future transaction between the parties was contemplated. As we have suggested, the parties may experiment with exogenous or endogenous safeguards that would not be necessary if they were to rely solely on the market as a governance mechanism. The ability to rely on trust enables parties anticipating the need for transaction-specific assets at time (t_{n+1}) to consider each other in time (t_n) as sources of those assets.

Thus, given the opportunity, parties may engage in recurrent low-risk transactions within market governance structures for purposes of establishing higher levels of trust with their partners. Over time, recurrent contracting between parties also permits experimentation with safeguards calibrated to higher degrees of risk and greater reliance on trust. These safeguards, ultimately, may offset the need to rely upon the more costly (both in production

⁷ As most students of organizations will recognize, achieving these kinds of results in practice is quite difficult. Authority leads to its own abuses (e.g. Dow. 1987). Because decision-making powers are not always clearly delineated, uncertainty abounds within the hierarchy. Moreoever, information asymmetries, organizational politics, rapid changes in internal and external environments all create risk and give rise to the need to establish and rely upon trust. We explore these issues briefly in the conclusion.

⁸ The more likely implicit assumption in TCE is that if the party is aware of the need for transaction-specific assets in the future, they will understand that the most efficient way of meeting the need is by resort to a hierarchy.

⁹ Williamson (1985: 62–63) recognizes that recurrent transactions can reduce transaction costs that arise from the fundamental transformation of a large numbers bidding condition to a small numbers bidding condition. See, more generally, Williamson (1985: 343–345).

and transaction costs) unified governance that tends to accompany hierarchy. In the future they may be able to pursue more flexible production processes, by employing a governance structure that does not create redundancies to existing, hierarchically based solutions to engineering or administrative problems (Miles and Snow, 1978).

We also argue that recurrent contracting enables the parties to a transaction to more easily pursue equitable outcomes that lead to higher levels of trust. The low risk condition of recurrent contracting solutions to governance enables the parties to explore a wider variety of administered pricing schemes, or to leave other performance measures (e.g. quantities, quality, delivery time) open to future determination.

Neoclassical contract law (e.g. Macneil, 1978) provides parties engaged in recurrent contracting with greater flexibility. This flexibility is denied them by classical contract law that is most efficiency applied in cases of discrete contracting which, we argue, will be employed in the low-risk, low-trust conditions of Cell 1 of our model. As Williamson (1991: 271) observes:

Neoclassical contract law. . .relieves parties from strict enforcement [in] contracts in which parties to the transaction maintain autonomy but are bilaterally dependent to a nontrivial degree. Identity plainly matters if premature termination of persistent maladaption would place burdens on one or both parties.

The ability to engage in recurrent contracting also provides parties anticipating the need to rely on each other for idiosyncratic assets in the future to guard against one final contingency. In our discussion of risk and trust we made no judgement about the impact, if any, time would have on their variability. Now we make the following assumption: parties will have the opportunity to engage in riskier transactions sooner than they can develop offsetting capabilities to rely on trust between themselves. In such situations, neoclassical contract law provides the flexibility required to experiment with safeguards that offset the parties' inability to rely more heavily on trust in governing the transaction.

Cell 4

The kinds of reciprocal dependencies described in our opening paragraphs involve transactions

characterized by high asset specificity, uncertainty, and recurrence in a small numbers bargaining condition. In these high-risk transactions, the TCE argument is that hierarchy is the most efficient governance structure, *ceteris paribus*. Lincoln (1990: 281) concludes, however, that such an argument 'stresses the cold, rational, and formal side, [of transacting]'and ignores the crucial role that informal, socially embedded personal relationships have in producing stable relations of trust, obligation, and custom among formally independent firms.¹⁰

The flexibility inherent in relational contracting creates strong incentives to become involved with parties in whose trustworthiness heavy reliance can be placed. Among these flexibilities is the ability to avoid the kinds of conflicts, previously discussed, that arise in mergers, such as making trade-offs between timeliness and high investment costs.

Because risk is high in these transactions, high levels of trust are not only sufficient; they are also necessary. The degree to which the parties rely on trust in designing endogenous safeguards for their transaction will depend upon the degree of risk the parties will face in their transaction.

Relational contracts require a more elaborate internal governance structure than is associated with discrete transactions, or recurrent contracting, but one that is less elaborate than that which accompanies unified governance. Whereas discrete transactions rely heavily on public ordering of legal and market sanctions, and unified governance relies on elaborate authority relationships, relational contracting rests much more on private ordering emerging from what Kronman (1985) describes as a 'state of union': an evolving set of safeguards that are mutually agreed to by, and for, the immediate parties

¹⁰ Indeed, Dore (1983), Granovetter (1985), Lincoln (1990) and Powell (1990) argue that occasional reliance on socially embedded relations often produces sufficient levels of trust and obligation between parties to efficiently avert market failure and the need for full internalization of transactions within a hierarchy. As exemplified in Eccles' (1981) construction industry and investment banking (Eccles and Crane, 1987) studies, the overlay of long-term, personal relationships on economic transactions between firms generates standards of expected behavior, reliable information, and monitoring procedures that are at least equal or superior to those of internal hierarchical relations in discouraging malfeasance. In this sense, relational contracting combines the efficiency and flexibility of markets with the control and information-processing advantages or organization (Lincoln, 1990; 281).

because they see their interests as convergent. In cases in which the parties face reciprocal strategic dependencies of the types previously described, interests do converge.

The successful reliance on high levels of trust that can emerge from recurrent contracting enables the parties to employ relational contracts in repeat transacting for idiosyncratic assets, even in cases in which *ex ante* transaction risk is very high. The use of appropriate endogenous safeguards to achieve an internal harmonizing of conflict and the preservation of relationships built to solve strategic dependencies is of paramount importance in relational contracts (e.g. Macneil, 1978).

We argue that greater harmony (and an enhanced ability to preserve a relationship) flows from the increased production and transaction flexibility available to the parties through relational contracts. Authority and control systems related to performance outcomes can be loosely specified in the contract. Incentive systems can be left adaptable to the changing needs of the specific relationship, and made independent of other systems employed by the parties. Issues such as costs, quality, prices, volume, and other production-related matters can be left relatively open-ended.

This flexibility obviates the necessity of leaving gaps in the contract which, in all likelihood, would render the contract void under classical contract law. The ability to internally harmonize conflict also enables the parties to avoid overspecifying the contract, which could leave them with little or no production or transaction-related flexibility. Thus, we propose that:

P6: The elaborateness of safeguards in relational contracts is a function of the perceived level of risk in a transaction and the reliance on trust by the parties to the exchange.

Broadly, these safeguards elaborate the rights and duties of parties pertaining to the conditions of the transaction.¹¹ They will also govern claims

that may flow from the transaction due to conflict between the parties, as well as the decision processes, review provisions, and due process appeals that may be followed by parties as they seek (at a minimum) to insure that levels of harmony that existed *ex ante* are maintained throughout the duration of a relational contract, or beyond, if the parties are interested in employing relational contracts as a governance structure for future transactions.

Several corollaries to Proposition 6 become evident when we further consider the main and interaction effects of trust and risk on the structuring of safeguards for relational contracts. Under conditions of high contracting risk and high levels reliance on trust, ¹² parties will seek

the safeguards will be designed to take account of the following legal and managerial requirements.

To be lawful, contracts must involve an agreement between competent persons. They must be based on consideration, which can be defined as a right, interest, profit or other form of benefit that accrues to one party or some detriment, disadvantage, responsibility or loss assumed by the other party (e.g. Becker v. Colonial Life Ins. Co., 138 NYS 491 [1912]). Thus, consideration reflects a promise (or a set of promises) to do or not to do something. In designing the contract, it is essential that both parties agree to the same thing in the same sense and that they enjoy a meeting of the minds on the essential terms and conditions of the contract (e.g. Patrick v. Bowman, 149 US 411, 37 Led 790, 13 SCt 811, [1893]). This mutual consent must be evident in the language that the parties employ, or from their words or actions. Finally, what parties promise must be valid subject matter; that is, it should not be contrary to public law, general policy or public justice, or violate provisions of federal or state constitutions, federal or state statutes, or the common law (e.g. Ard Bottling Co. v. Dr. Pepper Co., 202 F2d 372 [1953]). Where these four primary ingredients are present, a contract is formed and the promise (or multiple promises), if breached, will be remedied. Conversely, when a contract is formed, performance of its terms will be recognized, in some way, as a duty (see, generally, American Law Institute, Restatement, Second, Contracts, 1981).

To be managerially relevant, contracts must adequately specify the nature of the parties' relationship of five critical dimensions: (1) risk, the level and nature of the risks accepted or imposed on transacting parties by their inability to control the future; (2) returns, the parties' expected rewards and outcomes given the asset commitments made by each party; (3) control, the structures and procedures for allocating authority and responsibility between the parties; (4) duration, the length of time during which the parties are committed to a transaction (Klein, 1982); and (5) termination, the events and procedures which allow parties the right of exit from a transaction.

¹² When we describe varying risk-trust contexts as high or low we are, of course, speaking in relative terms. Because we are focused here on relational contracts as the governance mechanism, we are operating within a high risk-high trust context in general, but accept the fact that among parties to transactions degrees of risk and trust will remain variable.

These broadly defined types of safeguards will also be employed in governing the three other nodal types of governance outlined in Table 1. In our brief discussion of the kinds of contract law used in each type of governance mechanism, we have touched on some of the issues related to safeguards. Safeguard issues related to Cells 1 and 2 in Figure 1 should be well understood. Our discussion of recurrent contracting provides some insight into the opportunities to experiment with safeguards. In all of these cases,

to draft relational contracts that increase the timeliness and amount of information collectively available to them, yet safeguard control over proprietary know-how. The objective of these safeguards is to immunize the parties from the adverse consequences that could flow from unanticipated commercial or technological risks (Chakravarthy, 1985).

High levels of risk and trust typically will be present in cases where organizations use relational contracts to govern joint R&D, technology, or product development ventures. Among the employed safeguards, we would expect to find provisions that facilitate a just distribution of the tacit know-how assets (Winter, 1987) that are produced through such cooperative ventures. By its nature, tacit know-how is difficult to 'divide up', and it is virtually impossible to do so in advance of its creation. We would also expect to find provisions on how the parties would jointly deal with other opportunistic actors, e.g. collectively or individually funding efforts to create stronger regimes of appropriability (Teece, 1986).13

Consultation designed to reduce information asymmetries (Williamson, 1985: 307) is one safeguard offered by TCE theory that can be employed by parties to relational contracts. An attorney friend of one of the authors, specializing in relational contracts between U.S. and Japanese firms, argues that he frequently uses:

clauses which state how parties will work together on key matters. . .without getting involved in procedural mechanics and details. The annual and long range business plan provisions are an 'invention' of mine and I believe they work to eliminate disputes by putting the parties together in constructive planning environments on a regular basis. (personal communication, 1990).

An example of this kind of language follows:

The parties agree that [name omitted] and [name omitted] are authorized to consult and agree with respect to major policy decisions for the [name omitted] in accordance with procedures agree upon between them in order to enable the

making of such decisions conveniently and effectively for [name omitted].

Another safeguard in such cases involves developing machinery for gathering and disseminating information while recording reputational effects (Williamson, 1985: 121). Supplier associations are offered by Williamson as an exemplar of these kinds of safeguards.

High-risk relational transactions in which parties may still be learning to rely more heavily on trust are likely to make extensive use of hostages and collateral as a means of reducing risk otherwise surrounding a lack of exclusive control over idiosyncratic assets. In such cases the parties may seek to guard against risks related to a lack of information or information asymmetry by requiring reciprocity (Williamson, 1985: 190), especially in the exchange of tacit know-how (Winter, 1987). These forms of consultation may not be sufficient in cases in which heavy investments in idiosyncratic physical or sitespecific assets are involved in the transaction. In such cases, control risks may be safeguarded by requiring partial financing through equity collateral, or by the exercise of voting rights that accompany equity positions or membership on a board of directors (Williamson, 1985: 307).

Because the full potential of relying on high trust is yet to be realized, in these kinds of cases the parties may also provide for numerous procedural safeguards, review provisions, and either bilateral or trilateral (Williamson, 1985) mechanisms for dispute resolution. In determining which of these kinds of safeguards are more efficacious, the parties are likely to consider the extent to which the review procedure minimizes risk associated with a lack of control over time. Extensive provisions for allocating benefits and burdens as well as due process appeals will be required because parties want some assessment of the time that will be associated with the procedures for conflict resolution as a means to minimize unjust or inequitable outcomes to future contingencies with other parties whose trustworthiness is questioned (Bies, Shapiro and Cummings, 1988). An alternative approach in such cases is to increase trustworthiness, perhaps by requiring the 'social conditioning' or 'education' of one or both of the parties (Williamson, 1985: 247, 311).

These high-risk, lower reliance on trust,

¹³ Home or host country laws might prevent parties to a relational contract from different countries from engaging in 'political' activities. Consequently, one party might have to assume some or all of the costs of attempting to safeguard both from opportunism by a third.

relational contracting transactions are likely to occur in cases in which parties find it necessary to transact in new 'markets' in order to maintain their global competitiveness. They may take the form of joint marketing agreements, joint manufacturing agreements, etc. In some of these cases the safeguards may also include customer or territorial restrictions. For many of these kinds of relational contracts, the resemblance to unified governance will be considerable, but may remain in place only so long as it takes to establish an ability to rely more heavily on trust.

Under conditions in which risk is low but reliance on trust is high, parties to a relational contract transaction can be expected to resort to even more efficient informal 'handshakes,' or as is the case in Japan, to te-uchi (the clapping of hands) in governing their relationships. These relational contracts are likely to contain few endogenous safeguards because of the parties' reliance on the trust that they have for each other as a result of prior recurrent or relational contracts, or for reasons that stem from the social embeddedness of the transaction. These types of transactions are exemplified in the socially embedded relationships often found between recurrent contractors and subcontractors in the building construction industry.

CONCLUSION

This paper has provided a conceptual framework for understanding a broader variety of governance mechanisms than those typically accompanying a focus on markets and hierarchies. We have explored varying combinations of risk and reliance on trust that will lead transacting parties to select among four nodal forms of governance: discrete, recurrent, or relational contracting, or hierarchy, in governing their transactions. We have argued that trust is central to understanding bargaining transactions, but has been assumed away as a frictional matter in prior treatments of simple market or hierarchical transactions. Many of the observations and propositions about the structure of relational bargaining transactions presented here were inferred from an interdisciplinary literature in law, economics, sociology, and management and from inductive observations of a small number of cooperative interorganizational relationships over time (Garud and Van de Ven,

1989; Ring and Rands, 1989; Ring and Van de Ven, 1989). We hope that they will stimulate further theoretical and empirical work.

The model developed thus far describes the antecedents and structural forms of relational contracts in relatively static terms. However, our analysis implies that the emergence of these relational contracts is a dynamic process. Levels of risk in deals and reliance on trust between parties can and will change over time, and with these changes parties will alter their choices in governance structures and accompanying safeguards. Our argument implies a number of paths by which parties use different governance structures, as risk and reliance on trust vary across individual transactions. In general, the foregoing discussion implied a progression from discrete to recurrent to relational contracting. Alternatively, we have observed that a firm might move from hierarchical governance to governance by recurrent contracting, to relational contracting as it contracts out functions it previously found to be more efficiently governed through hierarchy. An appreciation of the dynamics associated with shifting across governance mechanisms requires a processual understanding of how and why recurrent and relational contracts develop, evolve, and dissolve over time. However, an explication of these processes is beyond the scope of this analysis (Van de Ven and Ring, 1991).

For example, our propositions about the actions of transacting parties have been developed independently of the environment in which a firm is operating at the time a transaction is undertaken. Further elaboration of the framework should consider its operation in the specific contexts in which organizations find themselves as parties to a transaction. For example, the extent to which specific industry contexts lead to higher or lower levels of risk or trust was beyond the discussion of those concepts required here. These contexts might include the strategy which a firm was pursuing, its strategic predisposition, or the stage of industry or product life cycle which the firm confronts (e.g. Hudson and Ring, 1986; Van de Ven and Garud, 1989). Moreover, in this global economy, relational bargaining transactions are increasingly occurring between parties from different nation states, cultures, and languages. They represent a much more complex set of conditions than have been examined here. While these more complex environmental conditions can be incorporated in the conceptual framework developed here (e.g. Ring, 1991), their systematic development will require a much better understanding of how trust is developed, or manifested, in different cultures than currently provided in the literature. In addition to these macro level issues, we also ignore the potential effects of individual differences (e.g. how they are likely to alter perceptions of risk and trust).

The conceptual framework presented here also applies to the use of recurrent or relational contracts within complex multidivisional organizational hierarchies. If, as Stinchcombe (1990) argues, contracts can simulate critical elements of hierarchy in the market, then contracts within organizations can be similarly employed. As Ouchi (1984) has argued, recurrent transactions among divisions in these quasi-market M-form organizations are based more on trust and equity than on the limited monitoring and control capabilities of hierarchy. Perhaps in high-risk cases in which reliance on high levels of trust is possible, we will find hierarchies that look more like clans, or networks of contracts to employ Stinchcombe's (1990) concept, than current M-form organizations.14 Bromiley and Cummings (1990) are extending this scheme by pointing to the increased efficiencies that are produced when socially embedded hierarchical reporting relationships are designed to promote trust. Bowie (1990) speculates on similar phenomena while considering the firm as a moral community. And, as we have noted, the ability to rely on trust in high-risk situations can lead organizations to consider relational contracting as a means of restructuring the hierarchy. Only through such research will we begin to develop an empirical grounding of the transaction structures which organizations and their agents will find helpful to design, maintain, and conclude cooperative relationships between organizations.

ACKNOWLEDGEMENTS

We gratefully acknowledge extremely helpful comments on previous drafts of this paper from

reviewers for the Strategic Management Journal. This research program has been supported (in part) by a grant to the Strategic Management Research Center, University of Minnesota from the Program on Organization Effectiveness, Office of Naval Research, under Contract N. N00014-84-K-0016, by a Grant from the Graduate School of the University of Minnesota, and by a Summer Research Grant from Loyola Marymount University.

REFERENCES

- American Law Institute, Restatement, Second, Contracts, Philadelphia, PA, 1981.
- Ard Bottling Co. v. Dr. Pepper Co., 202 F2d 372, 1953.
- Arrow, K. Essays in the Theory of Risk Bearing, North-Holland, Chicago, IL, 1971.
- Arrow, K. Information and Economic Behavior, Federation of Swedish Industries, Stockholm, Sweden, 1973.
- Baird, I. and H. Thomas. 'Toward a contingency model of strategic risk taking', *Academy of Mangement Review*, **10**, 1985, pp. 230–243.
- Barney, J. B. 'The debate between traditional management theory and organizational economics: Substantive differences or intergroup conflict', *Academy of Management Review*, **15**, 1990, pp. 382–393.
- Barney, J. B. and W. G. Ouchi. *Organizational Economics*, Jossey-Bass, San Francisco, CA, 1986.
- Becker v. Colonial Life Ins. Co., 138NYS 491, 1912.
 Berg, S. V., J. Duncan and P. Friedman. *Joint Strategies and Corporate Innovation*. Oelgeschlager, Gunn and Hain, Publishers, Inc., Cambridge, MA, 1092
- Bies, R. J., D. L. Shapiro and L. L. Cummings. 'Casual accounts and managing organizational conflict: Is it enough to say it's not my fault', *Communication Research*, **15**, 1988, pp. 381–399.
- Blau, P. M. Exchange and Power in Social Life, Wiley, New York, 1964.
- Bowie, N. 'The firm as moral community'. Strategic Management Research Center, University of Minnesota, Minneapolis, MN, Working Paper, 1990.
- Bromiley, P. 'Testing a causal model of corporate risk taking and performance', *Academy of Management Journal*, **35**, 1991, pp. 37–59.
- Bromiley, P. and L. L. Cummings. 'Transaction costs in organizations with trust'. Strategic Management Research Center, University of Minnesota, Minneapolis, MN, Working Paper, 1990.
- Bryson, J. and P. S. Ring, 'A transaction cost approach to policy intervention', *Policy Studies*, **23**, 1990, pp. 205–230.
- Cameron, K., S. Freeman and A. Mishra. 'Best practices in white collar downsizing: Managing contradictions', *Academy of Management Executive*, 5, 1991. pp. 57–73.

¹⁴ More complete exploration of the roles of recurrent and relational contracting in governing relationships within organizations is beyond the scope of this paper. We believe, however, that our framework can usefully be employed in such cases.

- Chakravarthy, B. S. 'Business-government partnerships in emerging industries; Lessons from the American synfuels experience', *Advances in Strategic Management*, 3, 1985, pp. 257-275.
- Coase, R. 'The nature of the firm', Economica, 4, 1937, pp. 386-405.
- Commons, J. R. *Institutional Economics*, University of Wisconsin Press, Madison, WI, 1934.
- Commons, J. R. *The Economics of Collective Action*, University of Wisconsin, Madison, WI, 1950.
- Contractor, F. J. 'International business: An alternative view', *International Marketing Review*, 7, 1986, pp. 75-85.
- Donaldson, L. 'The ethereal hand: Organizational economics and management theory', *Academy of Management Review*, **15**, 1990, pp. 369–381.
- Dore, R. 'Goodwill and the spirit of capitalism', *British Journal of Sociology*, **34**, 1983, pp. 459–482.
- Dow, G. K. 'The function of authority in transaction cost economics', *Journal of Law, Economics, and Organizational Behavior*, 5, 1987, pp. 13–38.
 Doz, I. and C. K. Prahalad. 'Managing DMNCs: A
- Doz, I. and C. K. Prahalad. 'Managing DMNCs: A search for a new paradigm', Strategic Management Journal, 12, Special Issue, 1991, pp. 145–164.
- Eccles, R. G. 'Bureaucratic versus craft administration: The relationship of market structure to the construction firm', *Administrative Science Quarterly*, **26**, 1981, pp. 449–469.
- Eccles, R. G. and D. Crane. Managing through networks in investment banking', *California Management Review*, **30**, 1987, pp. 176–195.
- Fried, C. Contract as Promise, Harvard University Press, Cambridge, MA, 1982.
- Friedman, R. A. Trust, understanding, and control: Factors affecting support for mutual gains bargaining in labor negotiations'. A paper presented at the Annual Meeting of the Academy of Management, Miami, FL, August, 1991.
- Friedlander, M. Jr. and G. Gurney. *Handbook of Successful Franchising*, Van Nostrand Reinhold, New York, 1981.
- Garud, R. and A. H. Van de Ven. 'Technological innovation and industry emergence: The case of cochlear implants'. In A. Van de Ven, H. Angle, and M. S. Poole (eds.), Research on the Management of Innovation: The Minnesota Studies, Ballinger/Harper & Row, New York, 1989, pp. 489–532.
- Goldberg, V. 'Relational exchange: Economics and complex contracts', *American Behavioral Scientist*, **23**, 1980, pp. 337–352.
- Gouldner, A. 'Reciprocity and autonomy in functional theory'. In L. Gross (ed.), *Symposium on Sociological Theory*, pp. 241–280, Harper and Row, New York, 1959.
- Granovetter, M. 'Economic action and social structure: The problem of embeddedness', *American Journal of Sociology*, **78**, 1985, pp. 481–510.
- Gray, B. Building interorganizational alliances: Planned change in a global environment, Research in Organizational Change and Development, 4, 1990, pp. 101–140.
- Harrigan, K. R. Strategies for Joint Ventures, Lexington Books, Lexington, MA, 1985.

- Harrigan, K. R. Managing for Joint Venture Success, Lexington Books, MA, 1986.
- Hill, C. W. L. 'Cooperation, opportunism, and the invisible hand: Implications for transaction cost theory', Academy of Management Review, 15, 1990, pp. 500-513.
- Hill, C. W. L. and W. C. Kim. 'Searching for a dynamic theory of the multinational enterprise: A transaction cost model', *Strategic Management Journal*, **9**, 1988, pp. 93–104.
- Homans, G. Social Behavior: Its Elementary Forms, Harcourt, New York, 1961.
- Hudson, R. L. and P. S. Ring. 'Designing low cost governance structures'. Discussion Paper No. 60, Strategic Management Research Center, University of Minnesota, Minneapolis, MN, 1986.
- James, B. G. 'Alliance, the new strategic focus', *Long Range Planning*, **18**, 1985, pp. 76–81.
- Jarillo, J. C. 'On strategic networks', Strategic Management Journal, 9, 1988, pp. 31-41.
- Jensen, M. and W. Meckling. 'Theory of the firm: Managerial behavior, agency costs, and capital structure', *Journal of Financial Economics*, 3, 1976, pp. 305–360.
- Jones, G. R. and C. W. L. Hill. 'Transaction cost analysis of strategy-structure choice', *Strategic Management Journal*, 9, 1988, pp. 159–172.
- Killing, J. P. Strategies for Joint Venture Success, Praeger, New York, 1983.
- Klein, W. 'The modern business organization: Bargaining under constraints', *The Yale Law Journal*, **91**, 1982, pp. 1521–1564.
- Kronman, A. 'Contract law and the state of nature', *Journal of Law, Economics, and Organization*, 1, 1985, pp. 5-31.
- Lincoln, J. R. 'Japanese organization and organization theory'. In L. L. Cummings and B. Staw (eds.), Research in Organizational Behavior, 12, 1990, pp. 255–294.
- Macaulay, S. 'Non-contractual relations in business', American Sociological Review, 28, 1963, pp. 55–70.
- MacCrimmon, K. R. and D. A. Wehrung. Taking Risks: The Management of Uncertainty, Free Press, New York, 1986.
- Macneil, I. R. 'The many futures of contract', *Southern California Law Review*, **47**, 1974, pp. 691–816.
- Macneil, I. R. *The New Social Contract*, Yale University Press, New Haven, CT, 1980.
- Macneil, I. R. 'Contracts: Adjustments of long-term economic relationship under classical, neoclassical, and relational contract law'. *Northwestern University Law Review*, **72**, 1978, pp. 854–906.
- Law Review, **72**, 1978, pp. 854–906.

 Maitland, I., J. Bryson and A. H. Van de Ven. 'Sociologists, economists, and opportunism', Academy of Management Review, **10**, 1985, pp. 59–65.
- Marcus, A. A. 'Risk, uncertainty and scientific judgement', *Minerva*, **26**, 1988, pp. 138–143.
- Miles, R. and C. C. Snow. Organizational Strategy, Structure, and Process, McGraw-Hill, New York, 1978.
- Miller, K. and P. Bromiley. 'Strategic risk and corporate performance: An analysis of alternative risk measures', Academy of Management Journal,

- 33, 1990, pp. 756-779.
- Normann, R. 'Organizational innovativeness: Product variation and reorientation', *Administrative Science Quarterly*, **16**, 1971, pp. 203–215.
- Oliver, C. 'The determinants of interorganizational relationships: Integration and future directions', *Academy of Management Review*, **16**, 1990, pp. 241–265.
- Ouchi, W. G. *The M-Form Society*, Addison-Wesley, Reading, MA, 1984.
- Ouchi, W. G. and M. Kremen-Bolton, 'The logic of joint research and development', *California Management Review*, **30**, 1988, pp. 9–33.
- Patrick v. Bowman, 149 US 411, 37 Led 790, 13 Sct 811, 1893.
- Perlmutter, H. V. and D. Heenan. 'Thinking ahead', Harvard Business Review, 86(2), 1986, pp. 136–152.
- Pfeffer, J. and G. R. Salancik. *The External Control of Organizations*, Harper & Row, New York, 1978.
- Porter, M. E. and M. B. Fuller. 'Coalitions and global strategies'. In M. E. Porter (ed.), *Competition in Global Industries*, Harvard University Press, Cambridge, MA, 1986, pp. 315–343.
- Powell, W. W. 'Hybrid organizational arrangements', California Management Review, 30, 1987, pp. 67–87.
- Powell, W. W. 'Neither market nor hierarchy: Network forms of organization'. In L. L. Cummings and B. Staw (eds.), *Research in Organizational Behavior*, 12, 1990, pp. 295–336.
- Richardson, P. R. Cost Containment: The Ultimate Advantage, Free Press, New York, 1988.
- Ring, P. S. 'Strategic alliances: A conceptual framework'. Strategic Management Research Center, University of Minnesota, Minneapolis, MN, Working Paper, 1991.
- Ring, P. S. 'The environment and strategic management'. In Jack Rabin, Gerald Miller, W. Bartley Hildreth (eds.), Handbook on Strategic Management, Marcel Dekker, New York, 1989, pp. 55-89.
- Ring, P. S. and A. H. Van de Ven. 'Legal and managerial dimensions of transactions'. In A. H. Van de Ven, H. Angle and M. S. Poole (eds.), Research on the Management of Innovation: The Minnesota Studies, Ballinger/Harper Row, New York, 1989, pp. 171–192.
- Ring, P. S. and G. Rands. 'Sensemaking, understanding, and committing: Emergent interpersonal transaction processes in the evolution of 3M's microgravity research program'. In A. H. Van de Ven, H. Angle and M. S. Poole (eds.), Research on the Management of Innovation: The Minnesota Studies,

- Ballinger/Harper Row, New York, 1989, pp. 337–366.
- Stinchcombe, A. *Information and Organizations*, University of California Press, Berkeley, CA, 1990.
- Sutton, R. I. and T. D'Aunno. 'Decreasing organizational size: Untangling the effects of money and people', *Academy of Management Review*, **14**, 1989, pp. 194–212.
- Teece, D. 'Profiting from technological innovation: Implications for integration, collaboration, licensing and public policy', *Research Policy*, **15**, 1986, pp. 285–305.
- Van de Ven, A. H. and R. Garud. 'A framework for understanding the emergence of industries'. In R. Rosenbloom and R. Burgelman (eds.), Research in Technological Innovation, Management and Policy, 4, 1989, pp. 195–225.
- Van de Ven, A. H. and G. Walker. 'The dynamics of interorganizational coordination', *Administrative Science Quarterly*, **29**, 1984, pp. 598–621.
- Van de Ven, A. H. and P. S. Ring. 'The development of relational contracts between organizations', Strategic Management Research Center, University of Minnesota, Minneapolis, MN, Working Paper, 1991
- Walsh, J. P. and J. W. Ellwood. 'Mergers, acquisitions, and pruning of managerial deadwood', *Strategic Management Journal*, **12**, 1991, pp. 201–218.
- Weigelt, K. and C. Camerer. 'Reputation and corporate strategy', *Strategic Management Journal*, 9, 1988, pp. 443–454.
- White, H. Where do markets come from?', American Journal of Sociology, 87, 1981, pp. 517–541.
- Williamson, O. *Markets and Hierarchies*, Free press, New York, 1975.
- Williamson, O. 'The economics of organization: The transaction cost approach', *American Journal of Sociology*, **87**, 1981, pp. 548–577.
- Williamson, O. The Economic Institutions of Capitalism, Free Press, New York, 1985.
- Williamson, O. 'Comparative economic organization', Administrative Science Quarterly, **36**, 1991, pp. 269–296.
- Winter, S. 'Knowledge and competence as strategic assets'. In D. E. Teece (ed.), *The Competitive Challenge*, Ballinger, Cambridge, MA, 1987, pp. 159–184.
- Zucker, L. G. 'Production of trust: Institutional sources of economic structure'. In B. M. Staw and L. L. Cummings (eds.), *Research in Organizational Behavior*, **8**, 1986, pp. 53–112.