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Transaction Cost Economics and Organization Theory

1. Introduction

Economic and sociological approaches to economic organization have reached a state of healthy tension. That is to be contrasted with an earlier state of affairs in which the two approaches were largely disjunct, hence ignored one another, or described each other's research agendas and research accomplishments with disdain (Swedberg, 1990, p. 4). Healthy tension involves genuine give-and-take. Neither the obsolescence of organization theory, to which Charles Perrow has recently alluded (1992, p. 162), nor the capitulation of economics, to which James March (tongue-in-cheek) remarks,¹ is implied.

A more respectful relation, perhaps even a sense that economics and organization are engaged in a joint venture, is evident in W. Richard Scott's remark that "while important areas of disagreement remain, more consensus exists than is at first apparent" (1992, p. 3), in game theorist David Kreps's contention that "almost any theory of organization which is addressed by game theory will do more for game theory than game theory will do for it" (1992, p. 1), and in my argument that a science of organization is in progress in which law, economics, and organization are joined.²

Joint ventures sometimes evolve into mergers and sometimes unravel. I do not expect that either will happen here. That merger is not in prospect is because economics, organization theory, and law have separate as well as combined agendas. A full-blown merger, moreover, would impoverish the evolving science of organization—which has benefitted from the variety of insights that are revealed by the use of different lenses. I expect that the joint venture will hold until one of the parties has learned enough from the others

1. James March advised the Fourth International Conference of the Society for the Advancement of Socio-Economics that economics had been so fully reformed that the audience should 'declare victory and go home' (Coughlin, 1992, p. 23).

2. Richard Posner comes out differently. He argues that "organization-theory . . . [adds] nothing to economics that the literature on information economics had not added years earlier" (1993a, p. 84).

to go it alone. Progress attended by controversy is what I project for the remainder of the decade.

This chapter focuses on connections between transaction cost economics and organization theory and argues that a three-part relation is taking shape. The first and most important of these is that transaction cost economics has been (and will continue to be) massively influenced by concepts and empirical regularities that have their origins in organization theory. Secondly, I sketch the key concepts out of which transaction cost economics works to which organization theorists can (and many do) productively relate. But thirdly, healthy tension survives—as revealed by an examination of phenomena for which rival interpretations have been advanced, remain unsolved, and provoke controversy.

I begin this paper with some background on institutional economics, both old and new. A three-level schema for studying economic organization is proposed in Section 3. Some of the more important ways in which transaction cost economics has benefitted from organization theory are examined in Section 4. The key concepts in transaction cost economics are sketched in Section 5. Empirical regularities, as discerned through the lens of transaction cost economics, that are pertinent to organization theory are discussed in Section 6. Contested terrain is surveyed in Section 7. Concluding remarks follow.

2. Institutional Economics

2.1. Older Traditions

Leading figures in the older institutional economics movement in the United States were Wesley Mitchell, Thorstein Veblen, and John R. Commons. Although many sociologists appear to be sympathetic with the older tradition, there is growing agreement that the approach was “largely descriptive and historically specific” (DiMaggio and Powell, 1991, p. 2) and was not cumulative (Granovetter, 1988, p. 8). Criticisms of the old institutional economics by economists have been scathing (Stigler, 1983, p. 170; Coase, 1984, p. 230; Matthews, 1986, p. 903).

My general agreement with these assessments notwithstanding, I would make an exception for John R. Commons. Not only is the institutional economics tradition at Wisconsin still very much alive (Bromley, 1989), but also the enormous public policy influence of Commons and his students and colleagues deserves to be credited. Andrew Van de Ven’s summary of Commons’s intellectual contributions is pertinent to the first of these:

Especially worthy of emphasis [about Commons] are his (a) dynamic views of institutions as a response to scarcity and conflicts of interest, (b) original formulation of the transaction as the basic unit of analysis, (c) part-whole analysis of how collective action constrains, liberates, and expands individual action in countless numbers of routine and complementary transactions on the one hand, and how individual wills and power to gain control over limiting or contested factors provide the generative mechanisms for institutional change on the other, and (d) historical appreciation of how customs, legal

precedents, and laws of a society evolve to construct a collective standard of prudent reasonable behavior for resolving disputes between conflicting parties in pragmatic and ethical ways. (1993, p. 148).

Albeit in varying degree, transaction cost economics is responsive to Commons in *all four of these respects*.³

Commons and his colleagues and students were very influential in politics during and after the Great Depression—in shaping social security, labor legislation, public utility regulation, and, more generally, public policy toward business. Possibly because of its public policy successes, the Wisconsin School was remiss in developing its intellectual foundations. The successive operationalization—from informal into preformal, semiformal, and fully formal modes of analysis—that I associate with transaction cost economics (Williamson, 1993e) never materialized. Instead, the institutional economics of Commons progressed very little beyond the informal stage.

There is also an older institutional economics tradition in Europe. Of special importance was the German Historical School. (Interested readers are advised to consult Terrence Hutchison, 1984, and Richard Swedberg, 1991, for assessments.) And, of course, there were the great works of Karl Marx.

A later German School, the Ordoliberal or Freiburg School, also warrants remark. As discussed by Heinz Grossekkettler (1989), this School was inspired by the work of Walter Eucken, whose student Ludwig Erhard was the German Minister of Economics from 1949 to 1963, Chancellor from 1963 to 1966, and is widely credited with being the political father of the “economic miracle” in West Germany. Grossekkettler describes numerous parallels between the Ordoliberal program and those of Property Rights Theory, Transaction Cost Economics, and especially Constitutional Economics (1989, pp. 39, 64–67).

The Ordoliberal program proceeded at a very high level of generality (Grossekkettler, 1989, p. 47) and featured the application of lawful principles to the entire economy (Grossekkettler, 1989, pp. 46–57). Its great impact on postwar German economic policy notwithstanding, the influence of the School declined after the mid-1960s. Although Grossekkettler attributes the decline to the “wide scale of acceptance of the Keynesian theory . . . [among] young German intellectuals” (1989, pp. 69–70), an additional problem is that the principles of Ordoliberal economics were never given operational content. Specific models were never developed; key trade-offs were never identified; the mechanisms remained very abstract. The parallels with the Wisconsin School—great public policy impact, underdeveloped conceptual framework, loss of intellectual influence—are striking.

3. Briefly, the transaction cost economics responses are: (i) institutions respond to scarcity as economizing devices, (ii) the transaction is expressly adopted as the basic unit of analysis, (iii) conflicts are recognized and relieved by the creation of credible commitments/*ex post* governance apparatus, and (iv) the institutional environment is treated as a set of shift parameters that change the comparative costs of governance. Although these may be incomplete responses, the spirit of the transaction cost economics enterprise nevertheless makes serious contact with Commons’s prescription.

2.2. The New Institutional Economics

The new institutional economics comes in a variety of flavors and has been variously defined. The economics of property rights—as developed especially by Coase (1959, 1960), Armen Alchian (1961), and Harold Demsetz (1967)—was an early and influential dissent from orthodoxy. An evolutionary as opposed to a technological approach to economic organization was advanced, according to which new property rights were created and enforced as the economic needs arose, if and as these were cost effective.

The definition of ownership rights advanced by Eirik Furubotn and Svetozar Pejovich is broadly pertinent: “By general agreement, the right of ownership of an asset consists of three elements: (a) the right to use the asset . . . , (b) the right to appropriate the returns from the asset . . . , and (c) the right to change the asset’s form and/or substance” (1974, p. 4). Strong claims on behalf of the property rights approach to economic organization were set out by Coase as follows:

A private enterprise system cannot function unless property rights are created in resources, and when this is done, someone wishing to use a resource has to pay the owner to obtain it. Chaos disappears; and so does the government except that a legal system to define property rights and to arbitrate disputes is, of course, necessary. (1959, p. 14)

As it turns out, these claims overstate the case for the property rights approach. Not only is the definition of property rights sometimes costly—consider the difficult problems of defining intellectual property rights—but also court ordering can be a costly way to proceed. A comparative contractual approach rather than a pure property rights approach, therefore has a great deal to recommend it.

Although the earlier property rights approach and the more recent comparative contractual approach appear to be rival theories of organization, much of that tension is relieved by recognizing that the new institutional economics has actually developed in two complementary parts. One of these parts deal predominantly with background conditions (expanded beyond property rights to include contract laws, norms, customs, conventions, and the like) while the second branch deals with the mechanisms of governance.

What the economics of organization is predominantly concerned with is this: holding these background conditions constant, why organize economic activity one way (e.g., procure from the market) rather than another (e.g., produce to your own needs: hierarchy)?

3. A Three-Level Schema

Transaction cost economics is mainly concerned with the governance of contractual relations. Governance does not, however, operate in isolation. The

comparative efficacy of alternative modes of governance varies with the institutional environment on the one hand and the attributes of economic actors on the other. A three-level schema is therefore proposed, according to which the object of analysis, governance, is bracketed by more macro features (the institutional environment) and more micro features (the individual). Feedbacks aside (which are underdeveloped in the transaction cost economics set-up), the institutional environment is treated as the locus of shift parameters, changes in which shift the comparative costs of governance, and the individual is where the behavioral assumptions originate.

Roger Friedland and Robert Alford also propose a three-level schema in which environment, governance, and individual are distinguished, but their emphasis is very different. They focus on the individual and argue that the three levels of analysis are “nested, where organization and institution specify progressively higher levels of constraint and opportunity for individual action” (1991, p. 242).

The causal model proposed here is akin to and was suggested by, but is different from, the causal model recently proposed by W. Richard Scott (1992, p. 45), who is also predominantly concerned with governance. There are three main effects in my schema (see Figure 9.1). These are shown by the solid arrows. Secondary effects are drawn as dashed arrows. As indicated, the institutional environment defines the rules of the game. If changes in property rights, contract laws, norms, customs, and the like induce changes in the comparative costs of governance, then a reconfiguration of economic organization is usually implied.

The solid arrow from the individual to governance carries the behavioral assumptions within which transaction cost economics operates, and the circular arrow within the governance sector reflects the proposition that organization, like the law, has a life of its own. The latter is the subject of Section 3.

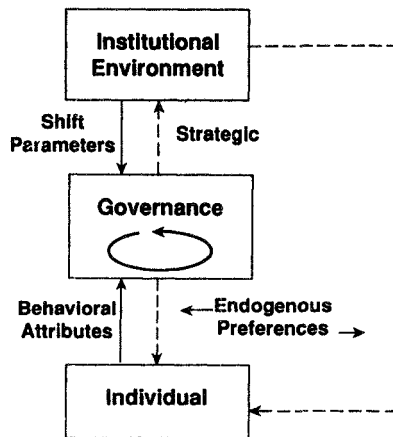


Figure 9.1. A layer schema.

Although behavioral assumptions are frequently scanted in economics, transaction cost economics subscribes to the proposition that economic actors should be described in workably realistic terms (Simon, 1978; Coase, 1984). Interestingly, “outsiders,” especially physicists, have long been insistent that a better understanding of the actions of human agents requires more self-conscious attention to the study of how men’s minds work (Bridgeman, 1955, p. 450; Waldrop, 1992, p. 142). Herbert Simon concurs:

Nothing is more fundamental in setting our research agenda and informing our research methods than our view of the nature of the human beings whose behavior we are studying. It makes a difference, a very large difference, to our research strategy whether we are studying the nearly omniscient *Homo economicus* of rational choice theory or the boundedly rational *Homo psychologicus* of cognitive psychology. It makes a difference to research, but it also makes a difference for the proper design of political institutions. James Madison was well aware of that, and in the pages of the *Federalist Papers* he opted for this view of the human condition (*Federalist*, No. 55):

As there is a degree of depravity in mankind which requires a certain degree of circumspection and distrust, so there are other qualities in human nature which justify a certain portion of esteem and confidence.

—a balanced and realistic view, we may concede, of bounded human rationality and its accompanying frailties of motive and reason. (1985, p. 303)

Transaction cost economics expressly adopts the proposition that human cognition is subject to bounded rationality—where this is defined as behavior that is “intendedly rational, but only limitedly so” (Simon, 1957a, p. xxiv)—but differs from Simon in its interpretation of the “degree of depravity” to which Madison refers.

Whereas Simon regards the depravity in question as “frailties of motive and reason,” transaction cost economics describes it instead as opportunism—to include self-interest seeking with guile. The former is a much more benign interpretation, and many social scientists understandably prefer it. Consider, however, Robert Michels’s concluding remarks about oligarchy: “nothing but a serene and frank examination of the oligarchical dangers of democracy will enable us to minimize these dangers” (1962, p. 370). If a serene and frank reference to opportunism alerts us to avoidable dangers which the more benign reference to frailties of motive and reason would not, then there are real hazards in adopting the more benevolent construction. As discussed in Section 5, below, the mitigation of opportunism plays a central role in transaction cost economics.

Opportunism can take blatant, subtle, and natural forms. The blatant form is associated with Niccolò Machiavelli. Because he perceived that the economic agents with whom the Prince was dealing were opportunistic, the Prince was advised to engage in reciprocal and even pre-emptive opportunism—to breach contracts with impugny whenever “the reasons which made him bind himself no longer exist” (1952, p. 92). The subtle form is strategic

and has been described elsewhere as “self-interest seeking with guile” (Williamson, 1975b, pp. 26–37; 1985b, pp. 46–52, 64–67). The natural form involves tilting the system at the margin. The so-called “dollar-a-year” men in the Office of Production Management, of which there were 250 at the beginning of World War II, were of concern to the Senate Special Committee to Investigate the National Defense Program because

Such corporate executives in high official roles were too inclined to make decisions for the benefit of their corporations. “They have their own business at heart,” [Senator] Truman remarked. The report called them lobbyists “in a very real sense,” because their presence inevitably meant favoritism, “human nature being what it is” (McCullough, 1992, p. 265)

Michel Crozier’s treatment of bureaucracy makes prominent provision for all forms of opportunism, which he describes as “the active tendency of the human agent to take advantage, in any circumstances, of all available means to further his own privileges” (1964, p. 194).

Feedback effects from governance to the institutional environment can be either instrumental or strategic. An example of the former would be an improvement in contract law, brought about at the request of parties who find that extant law is poorly suited to support the integrity of contract. Strategic changes could take the form of protectionist trade barriers against domestic and/or foreign competition. Feedback from governance to the level of the individual can be interpreted as “endogenous preference” formation (Bowles and Gintis, 1993), due to advertising or other forms of “education.” The individual is also influenced by the environment, in that endogenous preferences are the product of social conditioning. Although transaction cost economics can often relate to these secondary effects, other modes of analysis are often more pertinent.

More generally, the Friedland and Alford scheme, the Scott scheme, and the variant that I offer are not mutually exclusive. Which to use when depends on the questions being asked. To repeat, the main case approach to economic organization that I have proposed works out of the heavy line causal relations shown in Figure 9.1, to which the dashed lines represent refinements.

4. The Value Added of Organization Theory

Richard Swedberg (1987, 1990), Robert Frank (1992), and others have described numerous respects in which economics has been influenced by sociology and organization theory. The value added to which I refer here deals only with those aspects where transaction cost economics has been a direct and significant beneficiary.

The behavioral assumptions to which I refer in Section 3 above—bounded rationality and opportunism—are perhaps the most obvious examples of how transaction cost economics has been shaped by organization theory. But the

proposition that organization has a life of its own (the circular arrow in the governance box in Figure 9.1) is also important. And there are yet additional influences as well.

4.1. Intertemporal Process Transformations

Describing the firm as a production function invites an engineering approach to organization. The resulting “machine model” of organization emphasizes intended effects to the neglect of unintended effects (March and Simon, 1958, chap. 3). But if organizations have a life of their own, and if the usual economic approach is unable to relate to the intertemporal realities of organization, then—for some purposes at least—an extra-economic approach may be needed.

Note that I do not propose that the economic approach be abandoned. Rather, the “usual” or orthodox economic approach gives way to an augmented or extended economic approach. That is very different from adopting an altogether different approach—as, for example, that of neural networks.

As it turns out, the economic approach is both very elastic and very powerful. Because it is elastic and because increasing numbers of economists have become persuaded of the need to deal with economic organization” as it is,” warts and all, all significant regularities whatsoever—intended and unintended alike—come within the ambit. Because it is very powerful, economics brings added value. Specifically, the “farsighted propensity” or “rational spirit” that economics ascribes to economic actors permits the analysis of previously neglected regularities to be taken a step further. Once the unanticipated consequences are understood, those effects will thereafter be anticipated and the ramifications can be folded back into the organizational design. Unwanted costs will then be mitigated and unanticipated benefits will be enhanced. Better economic performance will ordinarily result.

Unintended effects are frequently delayed and are often subtle. Deep knowledge of the details and intertemporal process transformations that attend organization is therefore needed. Because organization theorists have wider and deeper knowledge of these conditions, economists have much to learn and ought to be deferential. Four specific illustrations are sketched here.

4.1.1. *Demands for control*

A natural response to perceived failures of performance is to introduce added controls. Such efforts can have both intended and unintended consequences (Merton, 1936; Gouldner, 1954).

One illustration is the employment relation, where an increased emphasis on the reliability of behavior gives rise to added rules (March and Simon, 1958, pp. 38–40). Rules, however, serve not merely as controls but also define minimally acceptable behavior (Cyert and March, 1963). Managers who apply rules to subordinates in a legalistic and mechanical way invite “working to rules,” which frustrates effective performance.

These unintended consequences are picked up by the wider peripheral vision of organization theorists. In the spirit of farsighted contracting, however, the argument can be taken yet a step further. Once apprised of the added consequences, the farsighted economist will make allowance for them by factoring these into the original organizational design. (Some organization theorists might respond that this last is fanciful and unrealistic. That can be decided by examining the data.)

4.1.2. *Oligarchy*

The Iron Law of Oligarchy holds that “It is organization which gives birth to the dominion of the elected over the electors, of the mandatories over the mandators, of the delegates over the delegators. Who says organization, says oligarchy” (Michels, 1962, p. 365). Accordingly, good intentions notwithstanding, the initial leadership (or its successors) will inevitably develop attachments for the office.

One response would be to eschew organization in favor of anarchy, but that is extreme. The better and deeper lesson is to take all predictable regularities into account at the outset, whereupon it may be possible to mitigate foreseeable oligarchical excesses at the initial design stage.⁴

4.1.3. *Identity/capability*

The proposition that identity matters has been featured in transaction cost economics from the outset. As developed in Section 6, below, identity is usually explained by some form of “asset specificity.” The “capabilities” view of the firm (Penrose, 1959; Selznick, 1957; Wernerfelt, 1984; Teece et al., 1992) raises related but additional issues.

One way to unpack the “capabilities” view of the firm is to ask what—in addition to an inventory of its physical assets, an accounting for its financial assets, and a census of its workforce—is needed to describe the capabilities of a firm. Features of organization that are arguably important include the following: (i) the communication codes that the firm has developed (Arrow, 1974); (ii) the routines that it employs (Cyert and March, 1963; Nelson and

4. Oligarchy is usually applied to composite organization, but it applies to subdivisions as well. Whether a firm should make or buy is thus a matter for which oligarchy has a bearing. If the decision to take a transaction out of the market and organize it internally is attended by subsequent information distortions and subgoal pursuit, then that should be taken into account at the outset (Williamson, 1975, chap. 7; 1985b, chap. 6). Not only do operating costs rise but also a constituency develops that favors the renewal of internal facilities. An obvious response is to demand high hurdle rates for new projects, thereby to protect against the unremarked but predictable distortions (added costs; advocacy efforts) to which internal (as compared with market) procurement is differentially subject.

The argument applies to public sector projects as well. Because of the deferred and undisclosed but nevertheless predictable distortions to which “organization” is subject, new projects and regulatory proposals should be required to display large (apparent) net gains.

Winter, 1982); (iii) the corporate culture that has taken shape (Kreps, 1990b). What do we make of these?

One response is to regard these as spontaneous features of economic organization. As interpreted by institutional theory in sociology, “organizational structures, procedures, and decisions are *largely ritualistic and symbolic*, especially so when it is difficult or impossible to assess the efficacy of organizational decisions on the basis of their tangible outcomes” (Baron and Hannan, 1992, p. 57, emphasis added).

If, of course, efficiency consequences are impossible to ascertain, then intentionality has nothing to add. Increasingly, however, some of the subtle efficiency consequences of organization are coming to be better understood, whereupon they are (at least partly) subject to strategic determination. If the benefits of capabilities vary with the attributes of transactions, which arguably they do, then the cost effective thing to do is to *shape* culture, *develop* communication codes, and *manage* routines in a deliberative (transaction specific) way. Implementing the intentionality view will require that the microanalytic attributes that define culture, communication codes, and routines be uncovered, which is an ambitious exercise.

4.1.4. *Bureaucratization*

As compared with the study of market failure, the study of bureaucratic failure is underdeveloped. It is elementary that a well-considered theory of organization will make provision for failures of all kinds.

Albeit underdeveloped, the bureaucratic failure literature is vast, partly because purported failures are described in absolute rather than comparative terms. Unless, however, a superior and feasible form of organization to which to assign a transaction (or related set of transactions) can be identified, the failure in question is effectively irremediable. One of the tasks of transaction cost economics is to assess purported bureaucratic failures in comparative institutional terms.

The basic argument is this: it is easy to show that a particular hierarchical structure is beset with costs, but that is neither here nor there if all feasible forms of organization are beset with the same or equivalent costs. Efforts to ascertain bureaucratic costs that survive comparative institutional scrutiny are reported elsewhere (Williamson, 1975, chap. 7; 1985b, chap. 6), but these are very provisional and preliminary. Although intertemporal transformations and complexity are recurrent themes in the study of bureaucratic failure, much more concerted attention to these matters is needed.

4.2. *Adaptation*

As described in earlier chapters, the economist Friedrich Hayek maintained that the main problem of economic organization was that of adaptation and argued that this was realized spontaneously through the price system. The

organization theorist Chester Barnard also held that adaptation was the central problem of organization. But whereas Hayek emphasized autonomous adaptation of a spontaneous kind, Barnard was concerned with cooperative adaptation of an intentional kind.

Transaction cost economics (i) concurs that adaptation is the central problem of economic organization; (ii) regards adaptations of both autonomous and cooperative kinds as important; (iii) maintains that whether adaptations to disturbances ought to be predominantly autonomous, cooperative, or a mixture thereof varies with the attributes of the transactions (especially on the degree to which the investments associated with successive stages of activity are bilaterally or multilaterally dependent); and (iv) argues that each generic form of governance—market, hybrid, and hierarchy—differs systematically in its capacity to adapt in autonomous and cooperative ways. A series of predicted (transaction cost economizing) alignments between transactions and governance structures thereby obtain (Williamson, 1991a), which predictions invite and have been subjected to empirical testing (Joskow, 1988; Klein and Shelanski, 1995; Masten, 1992).

4.3. Politics

Terry Moe (1990b) makes a compelling case for the proposition that public bureaucracies are different. Partly that is because the transactions that are assigned to the public sector are different, but Moe argues additionally that public sector bureaucracies are shaped by politics. Democratic politics requires compromises that are different in kind from those posed in the private sector and poses novel expropriation hazards. Added “inefficiencies” arise in the design of public agencies on both accounts.⁵

The inefficiencies that result from compromise and from political prepositioning are as described in Chapter 8.

4.4. Embeddedness and Networks

Gary Hamilton and Nicole Biggart take exception with the transaction cost economics interpretation of economic organization because it implicitly assumes that the institutional environment is everywhere the same; namely, that of Western democracies, and most especially that of the United States. They observe that large firms in East Asia differ from United States corporations

5. Politics really is different. But it is not as though there is no private sector counterpart. The more general argument is this: weak property rights regimes—both public and private—invite farsighted parties to provide added protection. The issues are discussed further in conjunction with remedialness (see Section 5.5 below).

Note, as a comparative institutional matter, that secure totalitarian regimes can, according to this logic, be expected to design more efficient public agencies. That is neither here nor there if democratic values are held to be paramount—in which event the apparent inefficiencies of agencies under a democracy are simply a cost of this form of governance.

in significant respects and explain that “organizational practices . . . are fashioned out of preexisting interactional patterns, which in many cases date to preindustrial times. Hence, industrial enterprise is a complex modern adaptation of pre-existing patterns of domination to economic situations in which profit, efficiency, and control usually form the very conditions of existence” (1988, p. S54).

The evidence that East Asian corporations differ is compelling. The argument, however, that transaction cost economics does not have application to East Asian economies goes too far.

The correct argument is that the institutional environment matters and that transaction cost economics, in its preoccupation with governance, has been neglectful of that. Treating the institutional environment as a set of shift parameters—changes in which induce shifts in the comparative costs of governance—is, to a first approximation at least, the obvious response (Williamson, 1991a). That is the interpretation advanced above and shown in Figure 9.1.

The objection could nevertheless be made that this is fine as far as it goes, but that comparative statics—which is a once-for-all exercise—does not go far enough. As Mark Granovetter observes, “More sophisticated . . . analyses of cultural influences . . . make it clear that culture is not a once-for-all influence but an *ongoing process*, continuously constructed and reconstructed during interaction. It not only shapes its members but is also shaped by them, in part for their own strategic reasons” (1985, p. 486).

I do not disagree, but I would observe that “more sophisticated analyses” must be judged by their value added. What are the deeper insights? What are the added implications? Are the effects in question really beyond the reach of economizing reasoning?

Consider, with reference to this last; the embeddedness argument that “concrete relations and structures” generate trust and discourage malfeasance of non-economic or extra-economic kinds:

Better than a statement that someone is known to be reliable is information from a trusted informant that he has dealt with that individual and found him so. Even better is information from one’s own past dealings with that person. This is better information for four reasons: (1) it is cheap; (2) one trust one’s own information best—it is richer, more detailed, and known to be accurate; (3) individuals with whom one has a continuing relation have an economic motivation to be trustworthy, so as not to discourage future transactions; and (4) departing from pure economic motives, continuing economic relations often become overlaid with social content that carries strong expectations of trust and abstention from opportunism. (Granovetter, 1985, p. 490)

This last point aside, the entire argument is consistent with, and much of it has been anticipated by, transaction cost reasoning. Transaction cost economics and embeddedness reasoning are evidently complementary in many respects.

A related argument is that transaction cost economics is preoccupied with dyadic relations, whereupon network relations are given short shrift. The for-

mer is correct,⁶ but the suggestion that network analysis is beyond the reach of transaction cost economics is too strong. For one thing, many of the network effects described by Ray Miles and Charles Snow (1992) correspond very closely to the transaction cost economics treatment of the hybrid form of economic organization (Williamson, 1983, 1991a). For another, as the discussion of Japanese economic organization (see Section 6.4, below) reveals, transaction cost economics can be and has been extended to deal with a richer set of network effects.

4.5. Discrete Structural Analysis

One possible objection to the use of maximization/marginal analysis is that “Parsimony recommends that we prefer the postulate that men are reasonable to the postulate that they are supremely rational when either of the two assumptions will do our work of inference as well as the other” (Simon, 1978, p. 8). But while one might agree with Simon that satisficing is more reasonable than maximizing, the analytical toolbox out of which satisficing works is, as compared with maximizing apparatus, incomplete and very cumbersome. Thus if one reaches the same outcome through the satisfying postulate as through maximizing, and if the latter is much easier to implement, then economists can be thought of as analytical satisficers: they use a short-cut form of analysis that is simple to implement. Albeit at the expense of realism in assumptions, maximization gets the job done.

A different criticism of marginal analysis is that this glosses over first-order effects of a discrete structural kind. Capitalism and socialism, for example, can be compared in both discrete structural (bureaucratization) and marginal analysis (efficient resource allocation) respects. Recall Oskar Lange’s conjectured that, as between the two, bureaucratization posed a much more severe danger to socialism than did inefficient resource allocation (1938, p. 109).

That he was sanguine with respect to the latter was because he had derived the rules for efficient resource allocation (mainly of a marginal cost pricing kind) and was confident that socialist planners and managers could implement them. Joseph Schumpeter (1942) and Abram Bergson (1948) concurred. The study of comparative economic systems over the next fifty years was predominantly an allocative efficiency exercise.

Bureaucracy, by contrast, was mainly ignored. Partly that is because the study of bureaucracy was believed to be beyond the purview of economics and belonged to sociology (Lange, 1938, p. 109). Also, Lange held that “monopolistic capitalism” was beset by even more serious bureaucracy problems (p. 110). If, however, the recent collapse of the former Soviet Union is attribut-

6. Interdependencies among dyadic contracting relations and the possible manipulation thereof have, however, been examined (Williamson, 1985b, pp. 318–19). Also see the discussion of appropriability in Section 5.

able more to conditions of waste (operating inside the frontier) than to inefficient resource allocation (operating at the wrong place on the frontier), then it was cumulative burdens of bureaucracy—goal distortions, slack, maladaptation, technological stagnation—that spelt its demise.

The lesson here is this: always study first-order (discrete structural) effects before examining second-order (marginalist) refinements. Arguably, moreover, that should be obvious: waste is easily a more serious source of welfare losses than are price induced distortions (cf. Harberger, 1954, with Williamson, 1968b).

Simon advises similarly. Thus he contends that the main questions are

Not “how much flood insurance will a man buy?” but “what are the structural conditions that make buying insurance rational or attractive?”

Not “at what levels will wages be fixed” but “when will work be performed under an employment contract rather than a sales contract?” (1978, p. 6)

Friedland and Alford’s recent treatment of institutions is also of a discrete structural kind. They contend that “Each of the most important institutional orders of contemporary Western societies has a central logic—a set of material practices and symbolic constructions—which constitutes its organizing principles and which is available to organizations and individuals to elaborate” (1991, p. 248). Transaction cost economics concurs. But whereas Friedland and Alford are concerned with discrete structural logics between institutional orders—capitalism, the state, democracy, the family, etc.—transaction cost economics maintains that distinctive logics within institutional orders also need to be distinguished. Within the institutional order of capitalism, for example, each generic mode of governance—market, hybrid, and hierarchy—possesses its own logic and distinctive cluster of attributes. Of special importance is the proposition that each generic mode of governance is supported by a distinctive form of contract law (see Chapter 4).

5. Transaction Cost Economics, the Strategy

The transaction cost economics program for studying economic organization has been described elsewhere (Williamson, 1975, 1981a, 1985b, 1988d, 1991a; Klein, Crawford, and Alchian, 1978; Alchian and Woodward, 1987; Davis and Powell, 1992). My purpose here is to sketch the general strategy that is employed by transaction cost economics, with the suggestion that organization theorists could adopt (some already have adopted) parts of it.

The five-part strategy that I describe entails (i) a main case orientation (transaction cost economizing), (ii) choice and explication of the unit of analysis, (iii) a systems view of contracting, (iv) rudimentary trade-off apparatus, and (v) a remediableness test for assessing “failures.”

5.1. The Main Case

Economic organization being very complex and our understanding being primitive, there is a need to sort the wheat from the chaff. I propose for this purpose that each rival theory of organization should declare the *main case* out of which it works and develop the *refutable implications* that accrue thereto.

Transaction cost economics holds that economizing on transaction costs is mainly responsible for the choice of one form of capitalist organization over another. It thereupon applies this hypothesis to a wide range of phenomena—vertical integration, vertical market restrictions, labor organization, corporate governance, finance, regulation (and deregulation), conglomerate organization, technology transfer, and, more generally, to any issue that can be posed directly or indirectly as a contracting problem. As it turns out, large numbers of problems which on first examination do not appear to be of a contracting kind turn out to have an underlying contracting structure—the oligopoly problem (Williamson, 1975, chap. 12) and the organization of the company town (Williamson, 1985b, pp. 35–38) being examples. Comparisons with other—rival or complementary—main case alternatives are invited.

Three of the older main case alternatives are that economic organization is mainly explained by (i) technology, (ii) monopolization, and (iii) efficient risk bearing. More recent main case candidates are (iv) contested exchange between labor and capital, (v) other types of power arguments (e.g., resource dependency), and (vi) path dependency. My brief responses to the first three are that (i) technological non-separabilities and indivisibilities explain only small groups and, at most, large plants, but explain neither multiplant organization nor the organization of technologically separable groups/activities (which should remain autonomous and which should be joined), (ii) monopoly explanations require that monopoly preconditions be satisfied, but most markets are competitively organized, and (iii) although differential risk aversion may apply to many employment relationships, it has much less applicability to trade between firms (where portfolio diversification is more easily accomplished and where smaller firms [for incentive intensity and economizing, but not risk bearing, reasons] are often observed to bear inordinate risk). Responses to the last three are developed more fully below. My brief responses are these: (iv) the failures to which contested exchange refers are often irremediable, (v) resource dependency is a truncated theory of contract, and (vi) although path dependency is an important phenomenon, remediable inefficiency is rarely established.

To be sure, transaction cost economizing does not always operate smoothly or quickly. Thus we should “expect [transaction cost economizing] to be most clearly exhibited in industries where entry is [easy] and where the struggle for survival is [keen]” (Koopmans, 1957, p. 141).⁷ Transaction cost economics

7. The statement is a weakened variant on Tjalling Koopmans. Where he refers to “profit maximization,” “easiest,” and “keenest.” I have substituted transaction cost economizing, easy, and keen.

nevertheless maintains that later, if not sooner, inefficiency in the commercial sector invites its own demise—all the more so as international competition has become more vigorous. Politically imposed impediments (tariffs, quotas, subsidies, rules) can and have, however, delayed the reckoning⁸ and disadvantaged parties (railroad workers, longshoremen, managers) may also be able to delay changes unless compensated by buyouts.

The economizing to which I refer operates through weak-form selection (Simon, 1983, p. 69)⁹ and works through a private net benefit calculus. That suits the needs of positive economics—What’s going on out there?—rather well, but public policy needs to be more circumspect. As discussed below, the relevant test of whether public policy intervention is warranted is that of remediableness.

These important qualifications notwithstanding, transaction cost economics maintains that economizing is mainly determinative of private sector economic organization and, as indicated, invites comparison with rival main case hypotheses.

5.2. Unit of Analysis

A variety of units of analysis have been proposed to study economic organization. Simon has proposed that the *decision premise* is the appropriate unit of analysis (1957a, pp. xxx–xxxii). “*Ownership*” is the unit of analysis for the economics of property rights. The *industry* is the unit of analysis in the structure–conduct–performance approach to industrial organization (Bain, 1956; Scherer, 1970). The *individual* has been nominated as the unit of analysis by positive agency theory (Jensen, 1983). Transaction cost economics follows John R. Commons (1924, 1934) and takes the *transaction* to be the basic unit of analysis.

Whatever unit of analysis is selected, the critical dimensions with respect to which that unit of analysis differs need to be identified. Otherwise the unit

8. Joel Mokyr observes that resistance to innovation “occurred in many periods and places but seems to have been neglected by most historians” (1990, p. 178). He nevertheless gives a number of examples in which established interests, often with the use of the political process, set out to defeat new technologies. In the end, however, the effect was not to defeat but to delay machines that pressed pinheads, an improved slide rest lathe, the ribbon loom, the flying shuttle, the use of arabic numerals, and the use of the printing press (Mokyr, 1990, pp. 178–79). That, of course, is not dispositive. There may be many cases in which superior technologies were in fact defeated—of which the typewriter keyboard (see Section 7, below) is purportedly an example. Assuming, however, that the appropriate criterion for judging superiority is that of remediableness (see below), I register grave doubts that significance technological or organizational efficiencies can be delayed indefinitely.

9. The Schumpeterian process of “handing on”—which entails “a fall in the price of the product to the new level of costs” (Schumpeter, 1947, p. 155) and purportedly works whenever rivals are alert to new opportunities and are not prevented by purposive restrictions from adopting them—is pertinent. The efficacy of handing on varies with the circumstances. When are rivals *more* alert? What are the underlying information assumptions? Are there other capital market and/or organizational concerns?

will remain non-operational. Also, a paradigm problem to which the unit of analysis applies needs to be described. Table 9.1 sets out the relevant comparisons.

As shown, the representative problem with which transaction cost economics deals is that of vertical integration—when should a firm make rather than buy a good or service? The focal dimension on which much of the predictive content of transaction cost economics relies, moreover, is asset specificity, which (as discussed in Section 6, below) is a measure of bilateral dependency. More generally, transaction cost economics is concerned with the governance of contractual relations (which bears a resemblance to the “going concerns” to which Commons referred). As it turns out, economic organization—in intermediate products markets, labor markets, capital markets, regulation, and even the family—involves variations on a few key transaction cost economizing themes. The predictive action turns on the hypothesis of discriminating alignment.

The arguments are familiar and are developed above. Suffice it to observe here that empirical research in organization theory has long suffered from the lack of an appropriate unit of analysis and the operationalization, which is to say, dimensionalization, thereof.

5.3. Farsighted Contracting

The preoccupation of economists with direct and intended effects to the neglect of indirect and (often delayed) unintended effects is widely interpreted as a condition of myopia. In fact, however, most economists are actually farsighted. The problem is one of limited peripheral vision.

Tunnel vision is both a strength and a weakness. The strength is that a focused lens, provided that it focuses on core issues, can be very powerful. The limitation is that irregularities which are none the less important will be missed and/or, even worse, dismissed.

Transaction cost economics relates to these limitations by drawing on organization theory. Because organization has a life of its own, transaction cost economics (i) asks to be apprised of the more important indirect effects,

Table 9.1. Comparison of Units of Analysis

Unit of Analysis	Critical Dimensions	Focal Problem
Decision premise	Role; information; idiosyncratic ^a	Human problem solving ^b
Ownership	‘Eleven characteristics’ ^c	Externality
Industry	Concentration; barriers to entry	Price–cost margins
Individual	Undeclared	Incentive alignment
Transaction	Frequency; uncertainty; asset specificity	Vertical integration

^aSimon 1957a, pp. xxx–xxxii.

^bNewell and Simon, 1972.

^cBromley, 1989, pp. 187–190.

whereupon (ii) it asks what, given these prospective effects, are the ramifications for efficient governance. A joinder of unanticipated effects (from organization theory) with farsighted contracting (from economics) thereby obtains.

Lest claims of farsightedness be taken to hyper-rationality extremes, transaction cost economics concedes that all complex contracts are unavoidably incomplete. That has both practical and theoretical significance. The practical lesson is this: all of the relevant contracting action cannot be concentrated in the *ex ante* incentive alignment but some spills over into *ex post* governance. The theoretical lesson is that differences among organization forms lose economic significance under a comprehensive contracting set-up because any form of organization can then replicate any other (Hart, 1990).

Transaction cost economics combines incompleteness with the farsighted contracting by describing the contracting process as one of “incomplete contracting in its entirety.” But for incompleteness, the above-described significance of *ex post* governance would vanish. But for farsightedness, transaction cost economics would be denied access to one of the most important “tricks” in the economist’s bag, namely the assumption that economic actors have the ability to look ahead, discern problems and prospects, and factor these back into the organizational/contractual design. “Plausible farsightedness,” as against hyper-rationality, will often suffice.

Consider, for example, the issue of threats. Threats are easy to make, but which threats are to be believed? If *A* says that it will do *X* if *B* does *Y*, but if after *B* does *Y*, *A*’s best response is to do *Z*, then the threat will not be perceived to be credible to a farsighted *B*. Credible threats are thus those for which a farsighted *B* perceives that *A*’s *ex post* incentives comport with its claims, because, for example, *A* has made the requisite kind and amount of investment to support its threats (Dixit, 1980).

Or consider the matter of opportunism. As described above, Machiavelli worked out of a myopic logic, whereupon he advised his Prince to reply to opportunism in kind (get them before they get you). By contrast, the farsighted Prince is advised to look ahead and, if he discerns potential hazards, to take the hazards into account by redesigning the contractual relation—often by devising *ex ante* safeguards that will deter *ex post* opportunism. Accordingly, the wise Prince is advised to give and receive “credible commitments.”

To be sure, it is more complicated to think about contract as a triple—*p*, *k*, *s*—where *p* refers to the price at which the trade takes place, *k* refers to the hazards that are associated with the exchange, *s* denotes the safeguards within which the exchange is embedded, and price, hazards, and safeguards are determined simultaneously—than as a scalar, where price alone is determinative. The simple schema shown in Chapter 3 nevertheless captures much of the relevant action (also see the discussion of trust in Chapter 10).

5.4. Trade-Offs

The ideal organization adapts quickly and efficaciously to disturbances of all kinds, but actual organizations experience trade-offs. Thus whereas more

decentralized forms of organization (e.g., markets) support high-powered incentives and display outstanding adaptive properties to disturbances of an autonomous kind, they are poorly suited in cooperative adaptation respects. Hierarchy, by contrast, has weaker incentives and is comparatively worse at autonomous adaptation but is comparatively better in cooperative adaptation respects.

Simple transactions (for which $k = 0$)—in intermediate product markets, labor, finance, regulation, and the like—are easy to organize. The requisite adaptations here are preponderantly of an autonomous kind and the market-like option is efficacious (so firms buy rather than make, use spot contracts for labor, use debt rather than equity, eschew regulation, etc.). Problems with markets arise as bilateral dependencies, and the need for cooperative adaptations, build up. Markets give way to hybrids which in turn give way to hierarchies (which is the organization form of last resort) as the needs for cooperative adaptations ($k > 0$) build up.

More generally, the point is this: informed choice among alternative forms of organization entails trade-offs. Identifying and explicating trade-offs is the key to the study of comparative economic organization. Social scientists—economists and organization theorists alike—as well as legal specialists, need to come to terms with that proposition.

5.5. Remediableness

As developed in Chapter 8, the concept of remediableness has special relevances to politics. But it applies quite generally.

Note in this connection that “inefficiency” is unavoidably associated with contractual hazards. The basic market and hierarchy trade-off that is incurred upon taking transactions out of markets and organizing them internally substitutes one form of inefficiency (bureaucracy) for another (maladaptation). Other examples where one form of inefficiency is used to patch up another are (i) decisions by firms to integrate into adjacent stages of production (or distribution) in a weak intellectual property rights regime, thereby to mitigate the leakage of valued know-how (Teece, 1986), (ii) decisions by manufacturers’ agents to incur added expenses, over and above those needed to develop the market, if these added expenses strengthen customer bonds in a cost-effective way, thereby to deter manufacturers from entering and expropriating market development investments (Heide and John, 1988), and (iii) the use of costly bonding to deter franchisees from violating quality norms (Klein and Leffler, 1981). Organization also has a bearing on the distribution of rents as well as asset protection. Concern over rent dissipation influenced the decision by the United States automobile industry firms to integrate into parts (Helper and Levine, 1992) and also helps to explain the resistance by oligopolies to industrial unions.

To be sure, any sacrifice of organizational efficiency, for oligopolistic rent protection reasons or otherwise, poses troublesome public policy issues.¹⁰ A

10. This has public policy ramifications. As between two oligopolies, one of which engages in rent-protective measures while the other does not, and assuming that they are identical in other respects, the dissolution of the rent-protective oligopoly will yield larger welfare gains.

remediability test is none the less required to ascertain whether public policy should attempt to upset the oligopoly power in question. The issues are discussed further in relation to path dependency in Section 7.

6. Added Regularities

It is evident from the foregoing that the comparative contractual approach out of which transaction cost economics works can be and needs to be informed by organization theory. Transaction cost economics, however, is more than a mere user. It pushes the logic of self-interest seeking to deeper levels, of which the concept of credible commitment is one example. More generally, it responds to prospective dysfunctional consequences by proposing improved *ex ante* designs and/or alternative forms of governance. Also, and what concerns me here, transaction cost has helped to discover added regularities that are pertinent to the study of organization. These include (i) the Fundamental Transformation (see Chapter 3), (ii) the impossibility of selective intervention (see Chapter 6), (iii) the economics of atmosphere (see Chapter 10), and (iv) an interpretation of Japanese economic organization (see Chapter 12).

These will not be repeated here (see, however, Williamson, 1993a, pp. 133–37, for a summary). All are important to an understanding of economic organization.

7. Unresolved Tensions

The healthy tension to which I referred at the outset has contributed to better and deeper understandings of a variety of phenomena. The matters that concern me here—power, path dependence, the labor managed enterprise, trust, and tosh—are ones for which differences between transaction cost economics and organization theory are great.

7.1. Power/Resource Dependence

That efficiency plays such a large role in the economic analysis of organization is because parties are assumed to consent to a contract and do this in a relatively farsighted way. Such voluntarism is widely disputed by sociologists, who “tend to regard systems of exchange as embedded within systems of power and domination (usually regarded as grounded in a class structure in the Marxian tradition) or systems of norms and values” (Baron and Hannan, 1992, p. 14).

The concept of power is very diffuse. Unable to define power, some specialists report that they know it when they see it. That has led others to conclude that power is a “disappointing concept. It tends to become a tautological label for the unexplained variance” (March, 1988, p. 6).

Among the ways in which the term power is used are the following: the power of capital over labor (Bowles and Gintis, 1993); strategic power exer-

cised by established firms in relation to extant and prospective rivals (Shapiro, 1989); special interest power over the political process (Moe, 1990a); and resource dependency. Although all are relevant to economic organization, the last is distinctive to organization theory.¹¹ I examine it.

Two versions of resource dependency can be distinguished. The weak version is that parties who are subject to dependency will try to mitigate it. That is unexceptionable and is akin to the safeguard argument advanced in Section 5, above. There are two significant differences, however: (i) resource dependency nowhere recognizes that price, hazards, and safeguards are determined simultaneously; (ii) resource dependency nowhere remarks that asset specificity (which is the source of contractual hazard) is intentionally chosen because it is the source of productive benefits.

The strong version of resource dependency assumes myopia. The argument here is that myopic parties to contracts are victims of unanticipated and unwanted dependency. Because myopic parties do not perceive the hazards, safeguards will not be provided and the hazards will not be priced out.

Evidence pertinent to the myopic versus farsighted view of contract includes the following. (i) Are suppliers indifferent between two technologies that involve identical investments and have identical (steady state) operating costs, but one of which technologies is much less redeployable than the other? (ii) Is the degree of non-redeployability evident *ex ante* or is it revealed only after an adverse state realization (which includes defection from the spirit of the agreement) has materialized? (iii) Do added *ex ante* safeguards appear as added specificity builds up? (iv) Does contract law doctrine and enforcement reflect one or the other of these concepts of contract? Transaction cost economics answers these queries as follows: (i) the more generic (redeployable) technology will always be used whenever the cetera are paria; (ii) non-redeployability can be discerned *ex ante* and is recognized as such (Masten, 1984; Palay, 1984, 1985; Shelanski, 1993); (iii) added *ex ante* safeguards do appear as asset specificity builds up (Joskow, 1985, 1988); (iv) because truly unusual events are unforeseeable and can have punitive consequences if contracts are enforced literally, various forms of “excuse” are recognized by the law, but excuse is granted sparingly.¹²

11. Friedland and Alford identify resource dependency as one of the two dominant theories of organization (the other being population ecology) (1991, p. 235).

12. Because contracts are incomplete and contain gaps, errors, omissions, and the like, and because the immediate parties may not be able to reconcile their differences when an unanticipated disturbance arises, parties to a contract will sometimes ask courts to be excused from performance. Because, moreover, literal enforcement can pose unacceptably severe contractual hazards—the effects of which are to discourage contracting (in favor of vertical integration) and/or to discourage potentially cost-effective investments in specialized assets—some relief from strict enforcement recommends itself. How much relief is then the question. Were excuse to be granted routinely whenever adversity occurred, then incentives to think through contracts, choose technologies judiciously, share risks efficiently, and avert adversity would be impaired. Accordingly, transaction cost economics recommends that (i) provision be made for excuse but (ii) excuse should be awarded sparingly—which it evidently is (Farnsworth, 1968, p. 885; Buxbaum, 1985).

7.2. Path Dependency

Transaction cost economics not only subscribes to the proposition that history matters but relies on that proposition to explain the differential strengths and weaknesses of alternative forms of governance. The Fundamental Transformation, for example, is a specific manifestation of the proposition that history matters. (Transactions that are not subject to the Fundamental Transformation are much easier to manage contractually.) The bureaucracy problems that afflict internal organization (entrenchment; coalitions) are also the product of experience and illustrate the proposition that history matters. Were it not that systems drifted away from their initial conditions, efforts to replicate markets within hierarchies (or the reverse) and selectively intervene would be much easier—in which event differences between organization forms would diminish.

The benefits that accrue to experience are also testimony to the proposition that history matters. Tacit knowledge and its consequences (Polanyi, 1962; Marschak, 1968; Arrow, 1974) attest to that. More generally, firm-specific human assets of both spontaneous (e.g. coding economies) and intentional (e.g. learning) kinds are the product of idiosyncratic experience. The entire institutional environment (laws, rules, conventions, norms, etc.) within which the institutions of governance are embedded is the product of history. And although the social conditioning that operates within governance structures (e.g. corporate culture; Kreps, 1990a) is reflexive and often intentional, this too has accidental and temporal features.

That history matters does not, however, imply that only history matters. Intentionality and economizing explain a lot of what is going on out there. Also, most of the path dependency literature emphasizes technology (e.g. the QWERTY typewriter keyboard) rather than the organizational consequences referred to above, Paul David's recent paper (1992) being an exception. I am not persuaded that technological, as against organizational, path dependency is as important as much of that literature suggests. Many of the "inefficiencies" to which the technological path dependency literature refers are of an irremediable kind.

7.2.1. *Remediable inefficiencies*

As described in Chapter 8, transaction cost economics emphasizes remediable inefficiencies; that is, those conditions for which a feasible alternative can be described which, if introduced, would yield net gains. That is to be distinguished from hypothetical net gains, where the inefficiency in question is judged by comparing an actual alternative with a hypothetical ideal.

To be sure, big disparities between actual and hypothetical sometimes signal opportunities for net gains. The need, however, is to realize real gains. Both public and private ordering are pertinent.

Whether public ordering can do better depends on whether (i) the public sector is better informed about externalities, (ii) the requisite collective action is easier to orchestrate through the public sector (possibly by fiat), and/or (iii) the social net benefit calculus differs from the private in sufficient degree to warrant a different result. Absent *plausible* assumptions that would support a prospective net gain (in either private or social respects), the purported inefficiency is effectively irremediable.

That is regrettable, in that society would have done better if it had better knowledge or if a reorganization could have been accomplished more easily. Hypothetical regrets are neither here nor there. Real costs in relation to real choices is what comparative institutional economics is all about.

7.2.2. *Quantitative significance*

Path dependency, remediable or not, poses a greater challenge if the effects in question are large and lasting rather than small and temporary. It is not easy to document the quantitative significance of path dependency. Arthur provides a series of examples and emphasizes especially the video cassette recorder (where VHS prevailed over the Beta technology [1990, p. 92]) and nuclear power (where light water reactors prevailed over high-temperature, gas-cooled reactors [1990, p. 99]). But while both are interesting examples of path dependency, it is not obvious that the “winning” technology is significantly inferior to the loser, or even, for that matter, whether the winner is inferior at all.

Much the most widely cited case study is that of the typewriter keyboard. The QWERTY keyboard story has been set out by Paul David (1985, 1986). It illustrates “why the study of economic history is a necessity in the making of good economists” (David, 1986, p. 30).

QWERTY refers to the first six letters on the top row of the standard typewriter keyboard. Today’s keyboard layout is the same as that which was devised when the typewriter was first invented in 1870. The early mechanical technology was beset by typebar clashes, which clashes were mitigated by the QWERTY keyboard design.

Subsequent developments in typewriter technology relieved problems with typebar clashes, but the QWERTY keyboard persisted in the face of large (reported) discrepancies in typing speed between it and later keyboard designs. Thus the Dvorak Simplified Keyboard (DSK), which was patented in 1932, was so much faster than the standard keyboard that, according to United States Navy experiments, the “increased efficiency obtained with DSK would amortize the cost of retraining a group of typists within the first ten days of their subsequent full-time employment” (David, 1986, p. 33). More recently, the Apple IIC computer comes with a built-in switch which instantly converts its keyboard from QWERTY to DSK: “If as Apple advertising copy says, DSK ‘lets you type 20–40% faster,’ why did this superior design meet essentially the same resistance . . . ?” (David, 1986, p. 34).

There are several possibilities. These include non-rational behavior, conspiracy among typewriter firms, and path dependency (David, 1986, pp. 34–46). David makes a strong case for the last, but there is a fourth possibility, subsequently raised and examined by Liebowitz and Margolis (1990): neither the Navy study nor Apple advertising copy can support the astonishing claims made on their behalf. Upon going back to the archives and examining the data, Liebowitz and Margolis conclude that “the standard history of QWERTY versus Dvorak is flawed and incomplete. . . . [The] claims of superiority of the Dvorak keyboard are suspect. The most dramatic claims are traceable to Dvorak himself, and the best documented experiments, as well as recent ergonomic studies, suggest little or no advantage for the Dvorak keyboard” (1990, p. 21). If that assessment stands up, then path dependence has had only modest efficiency effects in the QWERTY keyboard case. Such effects could easily fall below the threshold of remediable inefficiency.

Recent studies of the evolution of particular industries by sociologists also display path dependency. Population ecologists have used the ecological model of density-dependent legitimation and competition to examine the evolutionary process—both in particular industries (e.g. the telephone industry [Barnett and Carroll, 1993]) and in computer simulations. Glenn Carroll and Richard Harrison conclude from the latter that “chance can play a major role in organizational evolution” (1992, p. 26).

Although their simulations do suggest that path dependency has large and lasting effects, Carroll and Harrison do not address the matter of remedialness. Until a feasible reorganization of the decision process for choosing technologies can be described, the effect of which is to yield expected net private or social gains, it seems premature to describe their experiments as a test of the “relative roles of chance and rationality” (Carroll and Harrison, 1992, p. 12). Large but irremediable inefficiencies nevertheless do raise serious issues for modelling economic organization.¹³

7.2.3. *Perspectives*

David contends and I am persuaded that “there are many more QWERTY worlds lying out there” (1986, p. 47). An unchanged keyboard layout does not, however, strike me as the most important economic attribute of typewriter development from 1870 to the present. What about improvements in the mechanical technology? What about the electric typewriter? What about personal computers and laser printers? Why did these prevail in the face of path dependency? Were other “structurally superior” technologies (as defined by Carroll and Harrison) bypassed? If, with lags and hitches, the more efficient

13. I have argued that dominant firm industries in which chance plays a role do warrant public policy intervention (Williamson, 1975, chap. 11), but whether net gains would really be realized by implementing that proposal (especially as international competition becomes more intensive) is problematic.

technologies have regularly supplanted less efficient technologies, should not that be featured? Possibly the response is that “everyone knows” that economizing is the main case: “It goes without saying that economizing is the main case to which path dependency, monopolizing, efficient risk bearing, etc. are qualifications.”

The persistent neglect of economizing reasoning suggests otherwise. Thus the “inhospitality tradition” in antitrust proceeded with sublime confidence that non-standard and unfamiliar business practices had little or no efficiency rationale but mainly had monopoly purpose and effect. Similarly, the vast inefficiencies that brought down the economies of the Soviet Union and Eastern Europe may now be obvious, but that could never have been gleaned from the postwar literature on comparative economic systems or from CIA intelligence estimates. The preoccupation in the area of business strategy with clever “plans, ploys, and positioning” to the neglect of economizing is likewise testimony to the widespread tendency to disregard efficiency (Williamson, 1991b). And the view that the “effective organization is (1) *garrulous*, (2) *clumsy*, (3) *superstitious*, (4) *hypocritical*, (5) *monstrous*, (6) *octopoid*, (7) *wandering*, and (8) *grouchy*” (Weick, 1977, pp. 193–94, emphasis in original) is reconciled with economizing only with effort. More recent “social construction of industry” arguments reduce economizing to insignificance.¹⁴

If economizing really does get at the fundamentals, then that condition ought to be continuously featured. Some progress has been made (Zald, 1987), but there is little reason to be complacent.

14. The “new sociology of organization” holds that “even in identical economic and technical conditions, outcomes may differ dramatically if social structures are different” (Granovetter, 1992, p. 9). The “social construction of industry” argument is developed in a major book by Patrick McGuire, Mark Granovetter, and Michael Schwartz on the origins of the American electric power industry. That book has been described as follows:

Building on detailed historical research, . . . this book treats the origins of the electrical utility industry from a sociological perspective. The idea that industries, like other economic institutions, are ‘socially constructed,’ derives from Granovetter’s work on ‘embeddedness’ (1985) and presents an alternative to the new institutional economics, which contends that economic institutions should be understood as the efficient solutions to economic problems. . . .

We believe that the way the utility industry developed from its inception in the 1880s was not the only technologically practical one, nor the most efficient. It arose because a set of powerful actors accessed certain techniques and applied them in a highly visible and profitable way. Those techniques resulted from the shared personal understandings, social connections, organizational conditions, and historical opportunities available to these actors. This success, in turn, triggered pressures for uniformity across regions, even when this excluded viable and possibly more efficient alternative technologies and organizational forms.

Our argument resembles that made by economists Paul David and Brian Arthur on the ‘lock-in’ of inefficient technologies (such as the QWERTY keyboard . . .), but draws on the sociology of knowledge and of social structure. (McGuire, Granovetter, and Schwartz, 1992, pp. 1–2)

7.3. Worker-Managed Enterprises

John Bonin and Louis Putterman define a worker-managed firm as

a productive enterprise the ultimate decision-making rights over which are held by member-workers, on the basis of equality of those rights regardless of job, skill grade, or capital contribution. A full definition would state that no non-workers have a direct say in enterprising decisions, and that no workers are denied an equal say in those decisions. This definition does not imply that any particular set of decisions must be made by the full working group, nor does it imply a particular choice rule, such as majority voting. It says nothing about financing structures other than that financiers are not accorded direct decision-making powers in the enterprise by virtue of their non-labor contributions, and it does not say anything about how income is distributed among workers. On all of these matters, all that is implied is that ultimate decision-making rights are vested in the workers, and only in the workers. Thus, the basic definition centers on an allocation of governance rights, and is simultaneously economic and political. (1987, p. 2)

This definition does not preclude hierarchical structure, specialized decision-making, a leadership élite, or marginal product payment schemes. It merely stipulates that finance can have no decision rights in the labor-managed enterprise. The question is whether these financial restrictions come at a cost. Putterman evidently believes that they do not, since he elsewhere endorses Roger McCain's proposal that the labor-managed enterprise be financed in part by "risk participation bonds," where these purportedly differ from "ordinary equity" only in that "its owner can have no voting control over enterprise decisions, or over the election of enterprise management" (Putterman, 1984, p. 1989). Since "the labor-managed firm whose objective is to maximize profit-per-worker, having both ordinary and 'risk participation' bonds at its disposal, would 'attain the same allocation of resources as would a capitalist corporation, under comparable circumstances and informationally efficient markets'" (1984, p. 189), Putterman concludes that the labor-managed firm is on a parity.

The argument illustrates the hazards of addressing issues of economic organization within a framework that ignores, hence effectively suppresses, the role of governance. Operating, as he does, out of a firm-as-production-function framework, McCain (1977) is only concerned with examining the marginal conditions that obtain under two different set-ups, under both of which the firm is described as a production function.

Governance issues never arise and hence are not amenable to analysis within this orthodox framework. If, however, a critical—indeed, I would say, the critical—attribute of equity is the ability to exercise contingent control by concentrating votes and taking over the board of directors, then McCain's demonstration that allocative efficiency is identical under standard equity and risk participation bonds is simply inapposite.

Indeed, if risk participation finance is available on more adverse terms than standard equity because holders are provided with less security against

mismanagement and expropriation, then the constraints that Bonin and Puterman have built into the worker-managed firm come at a cost. To be sure, the worker-managed firm may be able to offset financial disabilities by offering compensating advantages. If those advantages are not uniform but vary among firms and industries, then the net gains of the worker-managed firm will vary accordingly.

I submit that firms that can be mainly financed with debt are the obvious candidates for worker-management. Thus, if there is little equity-like capital at stake, then there is little reason for equity to ask or expect that preemptive control over the board of directors will be awarded to equity as a contractual safeguard. The question then is what types of firms best qualify for a preponderance of debt financing?

As discussed elsewhere, peer group forms of organization can and do operate well in small enterprises where the membership has been carefully screened and is committed to democratic ideals (Williamson, 1975, chap. 3). Also, the partnership form of organization works well in professional organizations, such as law and accounting firms, where the need for firm-specific physical capital is small (Hansmann, 1988). There being little need for equity capital to support investment in such firms, the control of these firms naturally accrues to those who supply specialized human assets (Williamson, 1989b, pp. 24–26). These exceptions aside, “third forms” experience serious incentive disabilities.¹⁵

7.4. Trust

There is a growing tendency, among economists and sociologists alike, to describe trust in calculative terms: both rational choice sociologists (Coleman, 1990) and game theorists (Dasgupta, 1988) treat trust as a subclass of risk. I concur with Granovetter that to craft credible commitments (through the use of bonds, hostages, information disclosure rules, specialized dispute settlement mechanisms, and the like) is to create functional substitutes for trust (Granovetter, 1985, p. 487). Albeit vitally important to economic organization, such substitutes should not be confused with (real) trust.¹⁶

15. The limits of third forms for organizing *large* enterprises with *variegated* membership are severe in both theory and fact. To be sure, some students of economic organization remain sanguine (Horvat, 1991). The evidence from Eastern Europe has not, however, been supportive. Maciej Iwanek (1991, p. 12) remarks of the Polish experience that “except [among] advocates of workers’ management, nobody believes that the . . . governance scheme of state-owned enterprises [by workers’ management] creates strong incentives”; Manuel Hinds (1990, p. 28) concludes that “absenteeism, shirking, and lack of initiative are pervasive in the self-managed firm”; Janos Kornai (1990, p. 144) counsels that “it would be intellectually dishonest to hide the evidence concerning the weakness of third forms.”

16. Note that the trust that Granovetter ascribes to ongoing relations can go either way—frequent suggestions to the contrary notwithstanding. That is because experience can be either good (more confidence) or bad (less confidence), which, if contracts of both kinds are renewed, will show up in differential contracting (Crocker and Reynolds, 1993).

That calculativeness plays a larger role in economics than in the other social sciences is evident from my discussion of farsighted contracting. But calculativeness can also be taken to excesses. The issues as they bear on both the economics of atmosphere and personal trust relations are developed in Chapter 10.

7.5. Tosh

The legal philosopher, Lon Fuller, distinguished between “essentials” and “tosh,” where the former involves an examination of the “rational core” (1978, pp. 359–62) and tosh is preoccupied with “superfluous rituals, rules of procedure without clear purpose, [and] needless precautions preserved through habit” (1978, p. 356). According to Fuller, to focus on the latter would “abandon any hope of fruitful analysis” (1978, p. 360).

I think that this last goes too far: a place should be made for tosh, but tosh should be kept in its place.¹⁷ Consider in this connection the Friedland and Alford interpretation of Clifford Geertz’s description of Balinese cockfights:

Enormous sums of money can change hands at each match, sums that are *irrational* from an individualistic, utilitarian perspective. The higher the sums, the more *evenly matched* the cocks are arranged to be, and the more likely the odds on which the bet is made are even. The greater the sum of money at stake, the more the decision to bet is not individualistic and utilitarian, but collective—one bets with one’s kin or village—and status-oriented. (1991, pp. 247–48, emphasis added)

That there are social pressures to support one’s kin or village is a sociological argument. Absent these pressures, the concentration of bets on evenly matched cocks would be difficult to explain. It does not, however, follow that it is “irrational” to bet enormous sums on evenly matched cocks. Given the social context, it has become non-viable, as a betting matter, to fight unevenly matched cocks.

Thus suppose that the objective odds for a proposed match are 4:1. Considerations of local pride may reduce the effective odds to 3:2. Such a match will not attract much betting because those from the village with the lesser cock who view it from an individualistic, acquisitive perspective will make only perfunctory bets. Accordingly, the only interesting matches are those *where social pressures are relieved by the even odds*.¹⁸ The “symbolic construction of

17. The evolution of cooperation between opposed armies or gangs that are purportedly engaged in ‘deadly combat’ is illustrated by Robert Axelrod’s examination of “The Live-and-Let-Live System in Trench Warfare in World War I” (1984, pp. 73–87). Interestingly and important as the live-and-let-live rituals were, these non-violent practices should not be mistaken for the main case. Rather, these rituals were the exception to the main case, which was that British and German troops were at war.

18. Richard M. Coughlin contends that the “essence” of the socio-economic approach proposed by Amitai Etzioni is that

reality” to which Friedland and Alford refer thus has real consequences. It delimits the feasible set within which rationality operates; but rationality is fully operative thereafter.

One interpretation of this is that tosh has discrete structural effects and that rationality, operating through the marginal calculus, applies thereafter. Indeed, that seems to fit the Balinese cockfight rather well. Whether the social construction of reality has such important consequences more generally is then the question. My sense is that it varies with the circumstances.

Tosh is arguably more important in non-commercial circumstances—state, family, religion—than in the commercial sector, although the Hamilton and Biggart (1988) examination of differences in corporate forms in Far East Asia might be offered as a contradiction. Hamilton and Biggart, however, go well beyond tosh (as described by Fuller) to implicate the institutional environment—to include property rights, contract law, politics, and the like.

Thus although both tosh (superfluous rituals) and the institutional environment refer to background conditions, the one should not be confused with the other. Tosh is a source of interesting variety and adds spice to life. Core features of the institutional environment, as defined by North (1986, 1991) and others (Sundaram and Black, 1992), are arguably more important, however, to the study of comparative economic organization.¹⁹

8. Conclusions

The science of organization to which Barnard made reference (1938, p. 290) over fifty years ago has made major strides in the past ten and twenty years. All of the social sciences have a stake in this, but none more than economics and organization theory.

If the schematic set out in Figure 9.1 is an accurate way to characterize much of what is going on, then the economics of governance needs to be informed both from the level of the institutional environment (where sociology has a lot to contribute) and from the level of the individual (where psychology is implicated). The intertemporal process transformations that take place

human behavior must be understood in terms of the fusion of individually-based and communally-based forces, which Etzioni labels the *I and We*. The *I* represents the individual acting in pursuit of his or her own pleasure; the *We* stands for the obligations and restraints imposed by the collectivity. (1992, p. 3)

That is close to the interpretation that I advance here to interpret the Balinese cock fights.

19. This is pertinent, among other things, to the study of the multinational enterprise. As Anant Sundaram and J. Stewart Black observe, MNEs “pursue different entry/involvement strategies in different markets and for different products at any given time” (1992, p. 740). Their argument, that transaction cost economics “is inadequate for explaining simultaneously different entry modes because . . . asset specificity . . . [is] largely the same the world over” (1992, p. 740) assumes that the governance level operates independently of the institutional environment under a transaction cost set-up. This is mistaken.

within the institutions of governance (with respect to which organization theory has a lot to say) are also pertinent. The overall schema works out of the rational spirit approach that is associated with economics.²⁰

This multilevel approach relieves some, perhaps much, of the strain to which Baron and Hannan refer: “we think it important to understand the different assumptions and forms of reasoning used in contemporary sociology versus economics. . . . These disciplinary differences . . . represent major barriers to intellectual trade between economics and sociology” (1992, p. 13). If, however, deep knowledge at several levels is needed and is beyond the competence of any one discipline, and if a systems conception can be devised in which intellectual trade among levels can be accomplished, then some of the worst misunderstandings of the past can be put behind us.

I summarize here what I see to be some of the principal respects in which the healthy tension to which I referred at the outset has supported intellectual trade, of which more is in prospect.

Organization Theory Supports for Transaction Cost Economics

Behavioral assumptions. Organization theory’s insistence on workably realistic, as opposed to analytically convenient, behavioral assumptions is a healthy antidote. Transaction cost economics responds by describing economic actors in terms of bounded rationality and opportunism.

Adaptation. The cooperative adaptation emphasized by Barnard is joined with the autonomous adaptation of Hayek, with the result that transaction cost economics makes an appropriate place for both market and hierarchy.

Unanticipated consequences. The subtle and unintended consequences of control and organization need to be uncovered, whereupon provision can be made for these in the *ex ante* organizational design.

Politics. Because property rights in the public arena are shaped by democratic politics, provision needs to be made for these in the *ex ante* organizational design of public sector bureaus.

Embeddedness. The first-order response to the proposition that embeddedness matters is to regard the institutional environment as a locus of shift parameters, changes in which change the comparative costs of governance.

Discrete structural analysis. Each generic form of organization is described as a syndrome of attributes and possesses its own logic. These discreteness features need to be discovered and explicated both within and between sectors.

20. I borrow the term “rational spirit” from Kenneth Arrow (1974, p. 16). The rational spirit approach holds that there is a *logic* to organization and that this logic is mainly discerned by the relentless application of economic reasoning (subject, however, to cognitive constraints). The rational spirit approach is akin to but somewhat weaker (in that it eschews stronger forms of utility maximization) than the ‘rational choice’ approach associated with James Coleman (1990).

Transaction Cost Economics Supports for Organization Theory

Unit of analysis. Any theory of organization that fails to name the unit of analysis out of which it works and thereafter identify the critical dimensions with respect to which that unit of analysis varies is non-operational at best and could be bankrupt.

The main case. All rival theories of organization are asked to nominate the main case, develop the refutable implications that accrue thereto, and examine the data. Economizing on transaction costs is the transaction cost economics candidate.

Farsighted contracting. Looking ahead, recognizing hazards, and folding these back into the design of governance is often feasible and explains a very considerable amount of organizational variety.

Trade-offs. Because each mode of governance is a syndrome of attributes, the move from one mode to another involves trade-offs. The key trade-offs need to be stated and explicated.

Remediableness. Relevant choices among feasible forms of organization are what the analysis of comparative economic organization is all about.