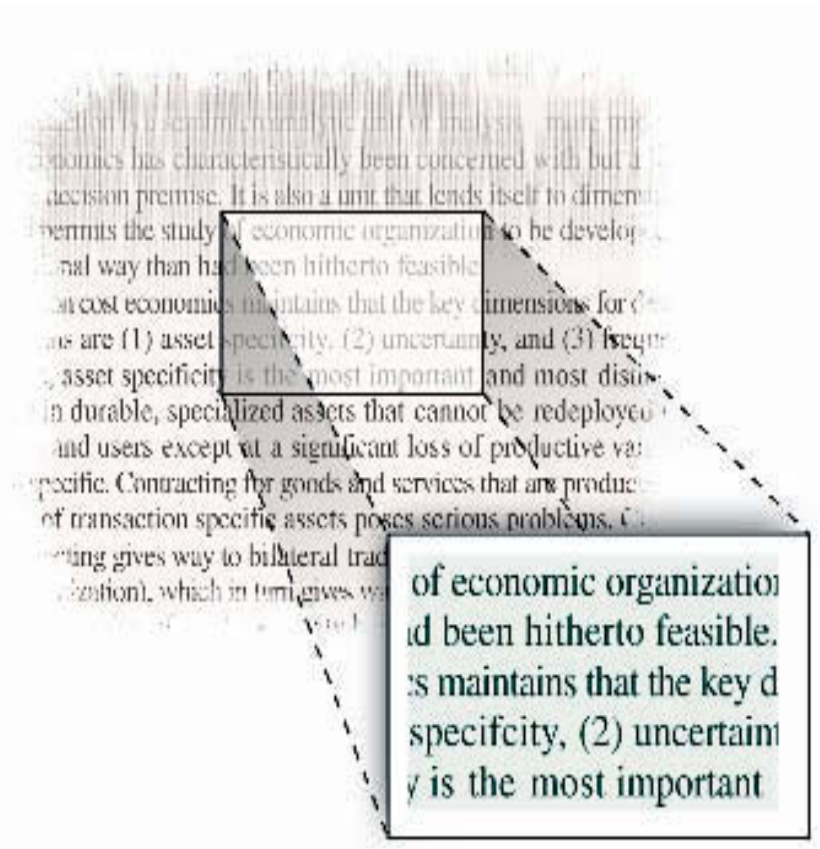
ROLAND F. SPEKLÉ

Beyond Generics:

A Closer Look at Hybrid and Hierarchical Governance



Beyond Generics

A Closer Look at Hybrid and Hierarchical Governance

BEYOND GENERICS:
A CLOSER LOOK AT HYBRID AND HIERARCHICAL GOVERNANCE

Het generieke voorbij: een nadere beschouwing van hybride en hiërarchische besturing

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Preface

Given its modest size, it may come as a surprise that this little book is the result of several years of quite intensive research efforts. Nonetheless, this is the case. I wrote my first serious thesis proposal early in 1997. That was the start of a long and winding road, the travelling of which took me about four years. These were, however, marvellous years. I truly enjoyed every single step on the way, and I owe a great deal to many colleagues and friends who supported me during the process.

I am indebted to many individuals for their encouraging and insightful comments on draft versions of parts of this thesis. These include Jan van Helden, Bernard Verstegen, Oliver Williamson, David Otley, Barry Spicer, John Groenewegen, Chris Knoops (whom I also thank for his valuable literature suggestions), and two anonymous AOS reviewers. My discussions with Jan-Pieter Oosterom helped me to organize my thoughts on exploratory control. I thank my colleagues at Erasmus University Rotterdam for relieving me of a substantial part of my teaching responsibilities, giving me the time to write this thesis.

Some people deserve more than a simple acknowledgement. The first of these is Rien van Hoepen, my thesis supervisor. He embraced my original thesis proposal quite enthusiastically, not knowing of course that my actual efforts would lead me in a wholly different direction than suggested in that proposal. Although I fear that there must have been times that he regretted accepting supervision, he never complained. In fact, he supported me throughout the whole project, tolerating my wandering off and awaiting patiently my return to a practicable track. In so doing, he allowed me to find my own way, and I am really grateful for that. Also, I thank him for his perceptive and constructive comments and suggestions during the process. Whereas most seem to base there comments on their personal convictions and favourite theories, Rien van Hoepen is a true master of 'internal' critique, always grounding his remarks firmly in my own writing and theorizing. Such internal comments are, in my experience, among the most powerful that are being offered, and I believe my work has benefited greatly from his judicious attention.

I am also deeply indebted to Marcel Bonnet. He has been with me during the entire process, reading almost everything I produced and cheerfully discussing every little idea I thought I had –even the lousy ones. And there has been quite a few of the latter over the years. Our discussions have had a major impact on my thinking on management control. Moreover, these discussions have been most stimulating, and his unwavering enthusiasm for my work and confidence in my ability –although undeserved- have meant more to me than I can express without laying myself open to the suspicion of being sentimental.

With our shared interest in institutional economics, Ed Vosselman has provided both an intellectual safe haven and an academic battleground. Although our approach to management control is not unprecedented, it is hardly mainstream either. Knowing that one is not alone in one's somewhat unconventional efforts is, then, a comforting and reassuring thought. However, despite the fact that at a fundamental level, our views are quite similar, we seem to disagree on almost everything else. That has been most productive, and our challenging debates have been the source of many fertile ideas.

Finally, I thank Karolinne, my dearest friend and wife, for many things, including allowing me –indeed, stimulating me- to pursue a life in academe. Knowing that I can rely on her almost unconditional support when it comes to the 'big choices' in life is invaluable to me.

Roland Speklé
July, 2001.

Synopsis

The theme of this study

This study is about disaggregating the generic modes of governance as they are defined in Transaction Cost Economics (TCE). More specifically, it intends to increase the level of resolution of TCE in the field of hybrid and hierarchical governance by specifying (some of) the subcategories of governance within these two generic modes and relating these subcategories explicitly to the transactions they control. It is argued that such a disaggregation is useful for two main reasons: (1) it may increase the accuracy of TCE's predictions and may improve the expressiveness of its style of explanation, and (2) it may enlarge the conceptual scope of TCE, opening up problem areas that previously did not fit neatly into the realm of this approach.

This general idea ties together the two substantive parts of this study. The first of these starts from the empirical observation that hybrid structures sometimes survive conditions of substantial uncertainty -an observation that does not go particularly well with received TCE-, and examines two cases of hybrid contracting in such conditions. It is argued that both cases are examples of a hitherto ignored subcategory of governance that, once identified, restores TCE's ability to explain this observation. The second part brings TCE's explanatory apparatus to bear on issues of management control. It is shown that TCE supports a detailed study of control issues, and that it has much to offer to the explanation of control structure variety within (and beyond) the hierarchy.

Hybrid contracting and uncertainty

There is a growing body of empirical evidence showing that sometimes, hybrid structures are chosen for transactions that combine substantial asset specificity with significant uncertainty. This evidence meets uneasily with TCE. Extant TCE suggests that for such transactions, hierarchical governance with its distinctive blend of cooperation-inducing features and sequential adaptation is uniquely suited. The hybrid form, on the other hand, is considered

infeasible in conditions of uncertainty, because it requires a fairly complete ex ante explication of the particulars of the transaction.

In this study, I argue that TCE's somewhat overstated position on the infeasibility of hybrid contracting in conditions of uncertainty is best be rectified by taking a closer look at the mechanisms of governance on which apparently uncertainty-resistant hybrids rely. It may very well be that extant TCE puts too much emphasis on compliance arrangements, and that there are in fact different (configurations of) control mechanisms available to the hybrid form to mitigate opportunism.

An analysis of two generalized cases of hybrid contracting in conditions of asset specificity and uncertainty (outsourcing in the Japanese automobile industry and venture capital financing) revealed the contours of a subcategory of the hybrid mode that, unlike its more familiar compliance-focused counterpart, allows substantial contractual incompleteness. This subcategory invokes both market-based incentives and intensive exchange of information. The market-based incentives foster behaviour congruence without requiring performance goals or standards to be specified in advance, whereas information exchange and the resulting transparency allow significant direct control over the actions of the contracting partner during the process of contract execution. The combination of the two facilitates harmonious interim adjustment and correction, and in both cases, this configuration of governance devices seemed an efficient solution to the relevant contractual problems.

Transaction Cost Economics and Management Control

One of the quintessential problems of management control (MC) as a field of scholarly inquiry is to explain control structure variety within and between organizations. However, previous theorizing in MC has not been able to address this issue fully satisfactorily. In this study, I suggest that substantial progress can be made by applying TCE to the issue at hand. MC shares its central problem –explaining control- with TCE, albeit that the former requires a higher level of resolution. The logic of TCE, however, is receptive to refinement, and supports a detailed study of control issues at the level of organizational subsystems. At that analytical level, I propose a transaction cost

theory of MC. This theory specifies the composition of various archetypal control structures, and links these to the kind of activities they are expected to control.

The argument runs as follows. The nature of the organizational activities and the contributions from organizational participants that are required to perform these activities can be defined discriminatingly through their scores on three dimensions: (1) the extent to which the contributions are susceptible to up front programming; (2) the degree of asset specificity; and (3) the intensity of ex post information impactedness. Given bounded rationality and opportunism, these features are predictably associated with distinctive control problems that need to be dealt with. The various control archetypes differ in their problem-solving ability, which makes them appropriate for the governance of some contributions, but not for others. Moreover, they differ in respect of cost, and ultimately, an empirically observable alignment of a contribution with a control archetype can be explained by delineating the relative efficiency properties of the match, either quantitatively or –more likely- in a qualitative way.

This theoretical approach has some qualities that make it worth considering. For one, it is empirically testable. Furthermore, its relatively simple theme seems to speak to a wide empirical domain, and can be used to make sense of a large set of remarkably different control structures in a consistent and coherent way. And finally, the proposed theory offers a practicable procedure to handle the issue of defining the organizational goals that MC is supposed to serve, and an operational way to address control structure effectiveness.

Chapter 1

Introduction: Purpose and Scope of this Study

1.1 Introduction

Some 25 years ago, Oliver Williamson published his *Markets and Hierarchies: Analysis and Antitrust Implications*. This book laid down the conceptual foundations of what became known as Transaction Cost Economics (TCE). TCE seeks to uncover the economic mechanisms that explain institutions of governance and their habitat. These institutions come in three distinct generic modes: (1) markets; (2) hybrids; and (3) hierarchies, and TCE's central aim is to explain the empirical fact that some transactions are likely to be executed within the confines of one of these forms of organization, whereas other transactions tend to be associated with one of the alternative modes. The main thrust of TCE's answer is that some specific institutional arrangement is chosen to govern a specific transaction because that particular arrangement provides a distinctive set of control devices -a set that cannot be replicated within alternative organizational arrangements- that is uniquely tailored to the control needs of that transaction. Thus, TCE submits that transactions differ in respect of their characteristics and that these characteristics are predictably associated with specific contractual problems. Organizational arrangements on the other hand differ in their problem-solving ability, so that alignments between transactions and specific forms of organization can be explained by demonstrating the comparative efficacy and efficiency of the match. This approach to economic organization has been most influential, stimulating an already quite massive and still rapidly growing stream of empirical applications as well as studies that probe more deeply into aspects of TCE's theoretical constructs and structure, amounting to what may be considered an unusually vibrant and successful research programme.

TCE is not a neatly rounded, fully saturated theory. Rather, it is a coherent set of (relations between) concepts that offer a distinctive way to look at the world of economic organization and that help to open up this world, making it

amenable to analysis. To be sure, TCE's general logic is quite compelling and the definition of its variables have gained significantly in respect of accuracy. But its predictions as to which organizational mode will obtain given the characteristics of a transaction are generic at best. The point is that whereas TCE's explanatory structure is highly micro-analytical in nature -its unit of analysis being the (individual) transaction and its focus being on the problems of governance that are associated with that particular transaction- TCE's problem-solving devices (the governance structures) have been formulated at a markedly high level of aggregation, i.e. at the level of the generic modes. These modes of governance, however, are heterogeneous categories, comprising a variety of different configurations of control devices. The hybrid form for instance encompasses profoundly dissimilar governance arrangements, including relatively straightforward, collateral-backed contracts, but also highly specialized and complex arrangements designed to cope with substantial transactional ambiguity. Although presumably, the full range of these diverse contracting practices can *a posteriori* be addressed from TCE's explanatory apparatus in a meaningful way, TCE currently lacks the degree of systematized detail required to *predict* the particulars of their actual manifestation other than in terms of general tendencies. In this respect, TCE is not unlike the metaphorical Darwinian theory of evolution, which is quite able to explain the existence of, say, the duck-billed platypus once one has seen one, but would not enable the prediction of its being had this animal not yet been discovered.

These remarks should not be taken as a critique of TCE; not a fundamental one anyway. They merely show TCE to be less than perfect. That, however, is a self-evident and inconsequential observation, and rather than implying dissent, the remarks suggest a potentially rewarding agenda for constructive research in theoretical TCE. This agenda involves refining more exhaustively the categories of governance and linking these to the attributes of the transactions and the associated problems of governance in an effort to enhance the predictive precision of the TCE approach. This is an important project, for although the purpose of theory is explanation -and not prediction for its own sake- it is still quite generally accepted that predictive success is vital to establish explanatory credibility.

Predictive accuracy, however, is not the only reason to recommend the suggested disaggregation of the generic modes. Further refinement may also improve the expressiveness of TCE's style of explanation. TCE reasoning relies heavily on a comparative analysis in which an observed governance structure is explained by delineating its superior efficiency traits as opposed to some alternative arrangement that could realistically have been installed instead of the one actually chosen. The persuasiveness (and informative value) of this comparative approach depends critically on the choice of the benchmark arrangement, and it seems reasonable to assume that in many instances the relevant comparison is with some adjacent subcategory of governance; not with an entirely different generic mode. A fuller a priori specification of the subcategories, then, is useful to facilitate a more structured selection of appropriate benchmarks. Additionally, such a specification is likely to advance coherence within the stream of empirical applications, which expectedly increases the possibility productively to combine and cumulate results of individual studies, accelerating the pace of development of this field of research.

The reasons discussed so far are primarily internal in nature, in the sense that they derive from potential structural improvements the beneficiary of which would be TCE itself. However, the refinement project may be of broader interest, for a higher level of resolution may open up problem areas that previously did not fit comfortably into the realm of TCE. This would enlarge the conceptual scope of TCE, adding new problems to the list of addressable items, but it may also provide the academic disciplines that traditionally study these areas with a new and possibly helpful conceptual lens through which to analyse their subject-matter.

1.2 The theme of this study

This study is about disaggregating the generic modes of governance as they are defined in TCE. More specifically, it intends to increase the level of resolution of TCE in the areas of hybrid and hierarchical governance by specifying (some of) the subcategories of governance within these two generic modes and relating these subcategories explicitly to the transactions they control. For reasons discussed in the previous section, this is a sensible project. How-

ever, it is also a task that is difficult to direct and to focus. How far should one proceed in splitting up the generic modes, i.e. what is the proper level of precision? How is one to draw the line between serviceable abstraction and excessive simplification? Where should one look for additional detail? Which supplementary classifications and distinctions are most helpful? Questions such as these elude general answers, for there is neither an intrinsically nor a universally appropriate level of resolution, and it is only in the context of specific research problems that answers can be formulated. Therefore, theory-enhancing efforts like the ones referred to here must almost by necessity be problem-driven. Now assuming that the researcher who is foolish enough to engage in such efforts is not entirely free of scholarly ambition –which assumption may be somewhat mind-boggling, for surely, there are far more practical and reliable ways to establish an academic reputation-, this presents him with the question as to how to identify potentially rewarding contexts within which to display his theoretical wit.

Some general selection criteria immediately come to mind. It may for instance be worthwhile focusing on an empirical context where governance structures are observed that are somewhat at odds with received theory, but that may be aligned more strongly with theory provided that appropriate refinements are made. If that context is sufficiently important in its own right, bringing it into the predictive reach of the theory would certainly constitute a step forward. Alternatively, one could try to find a discipline with a subject-matter that is closely related to the kind of questions TCE is accustomed to address, but that until now has not attracted much TCE-inflicted attention. This is an interesting strategy, because the audience for one's theoretical feat is potentially larger: it may appeal to those engaged in TCE, but also to those involved in the target discipline. In this study, I actually take both routes. Starting from the empirical observation that increasingly often, hybrid forms of governance are chosen to control relation-specific activities of an inherently uncertain nature -an observation that does not go particularly well with received, 'canonized' TCE- one principal part of this study sets out to identify how hybrids survive uncertainty after all, and relates the results of this examination to TCE's conceptual structure to restore coherence. The other key part of the study brings the conceptual apparatus of TCE to bear on

the field of management control (MC). TCE and MC share a common interest in understanding purposive, functional control, and both are committed to the explanation of control structure choice. However, TCE has been used primarily to study the trade-off between the generic modes of governance, whereas MC is more interested in trade-offs within just one of the generic modes -this one being the hierarchy. Applying TCE to issues of MC thus requires some work on this theory to increase its level of resolution. That, however, seems well worth the effort, at least from the point of view of MC. Despite MC's interest in understanding control structure choice, it does not have much cogent theory to go on, and TCE's compelling logic may actually fill a void there.

1.3 Outline of the study

Whilst the substantive parts of this study share a common theme, they do not form a closely knit and sequential train of thought. For reasons discussed in the preceding paragraph, the contributions this study intends to make are located explicitly in specific problem areas. However, due to their distinct problem orientation, the respective sections are destined to attract different audiences. More specifically, the part on hybrid contracting in conditions of uncertainty is cast in the context of an empirical phenomenon that is quite generally felt to be somewhat at odds with TCE, and may therefore appeal to those involved in the study of economic organization. The part focusing on management control, on the other hand, does not address any manifest, actually experienced weakness of TCE. Rather, it concentrates on acknowledged problems of MC-theorists. Although the analysis of these matters and the resulting taxonomy of control structures within the hierarchy is not without consequence for TCE as such -conceivably, the taxonomy relates to latent problems and may prove useful should these problems become acute-, this part of the study is probably more directly of interest to MC-scholars. To accommodate these different audiences, I chose to draft the relevant sections as individual essays that can be processed in relative isolation so as to enable selective reading. As a result of this, the sections partly overlap, and there is some duplication of argument. To those few readers who actually intend to read the whole study, I apologize for this, and I can but hope that the duplications are not too annoying.

Chapter 2 provides a general overview of the nature, scope, and method of TCE. This chapter also recapitulates some of the more important lines of criticism that have been levelled against TCE, and discusses their soundness and ramifications. This chapter figures primarily as a basic point of reference for the subsequent chapters, but it may also be of interest as an introduction to TCE for those unacquainted with this theory.

Chapter 3 is about hybrid contracting in conditions of uncertainty. This chapter presents an analysis of two generalized cases of hybrid contracting in such conditions; one referring to subcontracting practices in the Japanese automobile industry, the other being venture capital financing. Based on the stylized facts of these cases, this chapter argues that both cases are examples of a hitherto ignored subcategory of hybrid governance, the contours of which are identified and contrasted with the more familiar type of hybrid. It is furthermore suggested that explicit recognition of this subcategory enhances TCE's predictive precision.

Chapter 4 develops a transaction cost theory of management control. In this process, both the variables of TCE and the implications that can be derived from these are reworked to arrive at the level of resolution that is appropriate to address the subject-matter of MC. At that level, I propose a taxonomy of control archetypes, and an articulate explication of their respective habitats. This transaction cost theory of management control may be useful in explaining control structure variety within the hierarchical mode –which is one of MC's quintessential problems-, but it may also be of help in answering the challenge to MC-theory posed by the current tendency of firms to opt for non-hierarchical governance structures such as joint ventures, supply networks, and strategic alliances. This tendency calls for a broader scope than MC-theory is presently able to offer (Berry, 1994, Otley, 1994), and the transaction cost approach to MC may provide such a more inclusive perspective.

Finally, chapter 5 brings together the arguments of chapter 3 and 4 respectively, and discusses these in the light of the general theme of this study. Notwithstanding the fact that the approaches taken in chapter 3 and 4 are markedly different, and despite the fact that the subcategories of governance

specified in these chapters are arrived at in quite different contexts, it is conceivable that the conjunction of these chapters provide additional insights with ramifications for TCE or that may be useful to guide further research in TCE. This final chapter examines this possibility. Also, this chapter discusses some method related issues.

Chapter 2

Transaction Cost Economics: Introduction and Discussion

2.1 Introduction

Transaction Cost Economics (TCE) is one of the more influential branches of what has become known as the New Institutional Economics. The label New Institutional Economics refers to a strand of thought in economics that is characterized by a commitment to the study of phenomena of organization, and by the conviction that these phenomena are amenable to analysis (Williamson, 1996, 1998). With this interest in matters of organization, the New Institutional Economics has introduced a new set of questions into the science of economics; one that deals explicitly with the purposes served by economic institutions and that requires a much more detailed level of analysis than can be provided in conventional micro-economics. Whereas conventional analysis, exemplified by the (neoclassical) Theory of the Firm, focuses on explaining aggregated market behaviour and may rest content with a black box understanding of what goes on within individual firms and markets, the New Institutional Economics is explicitly interested in the operation of economic institutions from within. The New Institutional Economics, however, has no fundamental quarrel with orthodox economics. Unlike the older institutionalists, it sees itself as being complementary to conventional micro-economics, respecting the latter's essential usefulness but enlarging the scope of standard theory to take account of previously neglected issues (Coase, 1998; Furubotn and Richter, 1991; Williamson, 1986, 1990).

TCE owes most of its conceptual framework to the work of Oliver E. Williamson (1975, 1979, 1985, 1996). The first coherent account of TCE's substance, meaning and implications was his 1975 *Markets and Hierarchies*, which already contained most of the essential elements of the approach as it stands today. Important additions to the framework of later date include the treatment of aspects of contract law that were not specifically addressed until Williamson's 1979 paper, and the recognition of the hybrid mode as a sepa-

rate category of governance, which had to await *The Economic Institutions of Capitalism* (1985) for an explicit analysis.

This chapter presents a general inquiry into the nature of TCE. Section 2.2 gives a first and rather rough sketch of TCE's framework. This section introduces its dimensions and assumptions, so as to provide some background and perspective and to hint at the kind of explanation which it has to offer. These dimensions and assumptions are more fully worked out in section 2.3, which concentrates more specifically on their interrelatedness and the consequences of their conjunction. TCE adopts a comparative approach to the study of organization. It applies discrete structural analysis to the problems it addresses. Section 2.4 reviews this somewhat typical angle on method. Williamson's thoughts on economic organization have had their share of criticism. Some of the more influential points made by the critics, their soundness and ramifications are explored in section 2.5. Finally, section 2.6 concludes this chapter with a summary.

2.2 Transaction Cost Economics: its focus and main structure

TCE is a theory of economic organization. Its central purpose is to explain why some activities are more likely to be executed within one form of organization –say the firm-, whereas other activities tend to be associated with different organizational modes -as for instance markets. With this focus on understanding the distribution of economic activity among alternative organizational arrangements, TCE aims to address the celebrated but notoriously elusive issue coined by Coase (1937): why do firms emerge in exchange economies, and why do they not fully displace the market? This double-sided query is beyond neoclassical economics. In the neoclassical Theory of the Firm, firms are merely technologically determined production functions that owe their existence to phenomena like the indivisibility of assets or economies of scale. TCE, however, holds this explanation to be unsatisfactory, and submits that technological aspects are important, but not determinative. Instead, it contends that contractual or governance considerations are decisive in determining which mode of organization will obtain in what circumstances and why. To examine these considerations and their effect on organization, TCE adopts a micro-analytical point of view, defining the transaction

as the basic unit of analysis. At this level, TCE suggests that a specific organizational arrangement is chosen to govern a particular transaction because that arrangement offers some distinctive set of control devices that is uniquely tailored to the control needs of the transaction. Thus, TCE submits that transactions differ in respect of the contractual problems to which they give rise, whilst organizational forms differ in their problem-solving ability, and that alignments between the two can be explained by explicating the efficacy of the match.

A fundamental part of the contracting problem is rooted in the fact that transactions are effectuated through innately 'imperfect' human beings. Two "concessions to human nature as we know it" (Williamson, 1985: xiii) are especially important: bounded rationality and opportunism. The essence of bounded rationality is that although humans intend to behave rationally, their decisions are hardly ever optimal in a (neo-)classical economic sense because man simply lacks the cognitive and computational ability to arrive at such decisions (Simon, 1945). Opportunism is "self-interest seeking with guile" (Williamson, 1985: 47) and refers to the unbecoming but not unusual inclination to hide one's true intentions, to cheat and deceive, to abuse trust or to break an agreement whenever such is deemed beneficial to one's own position. Opportunism is a stronger form of the simple self-serving behaviour commonly attributed to homo economicus: economic man is a relatively nice chap for at least he plays by the rules, whereas such thoughtfulness cannot be expected from his opportunistic counterpart.

Given bounded rationality and opportunism, the nature and magnitude of contracting problems are associated with the characteristics of the transaction in question. Transactions can be discriminatingly scored on three dimensions: (1) the degree of asset specificity or idiosyncrasy of the transaction; (2) its uncertainty (including complexity, which is effectually similar to uncertainty); and (3) its frequency. Asset specificity is present when a transaction involves an investment, the value of which is larger within the contractual relationship than it would have been if the investment were to be put to alternative uses or users (cf. Williamson, 1996: 377). Thus, asset specificity corresponds to the opportunity losses that may arise when the transaction

requires commitment of specialized, custom-made products, processes, or knowledge. Uncertainty refers to the degree of specifiability of intended performance and predictability of (the influence of) the environment within which the contract is to be executed. Frequency can do without a definition; it has no peculiar connotations in TCE.

The essential challenge of contracting is to overcome impediments to adaptation. Uncertainty and bounded rationality jointly determine when and why the need to adapt is likely to arise, whereas asset specificity in conjunction with opportunism explain when and why achievement of successful adaptation cannot be taken for granted. Uncertainty is relevant for it inhibits the ex ante specification of required performance in a comprehensive, state-contingent way. Bounded rationality of course aggravates this problem. Therefore, contracts are bound to be incomplete, and increasingly so when uncertainty rises. Usually, however, information on the desirable properties of the transaction and on the actual state of nature gradually becomes available during contract execution. This new information allows contractual gaps to be filled and activates the need to realign contract execution with emerging insights. But gap-filling and realignment are not self-enforcing. Revision may require drastic renegotiations that are not necessarily cooperative because of opportunism. The room for such behaviour depends on the degree of asset specificity and on the existence of information asymmetry. Asset specificity refers to the size of the opportunity losses that will be incurred in case of premature termination. The value of these losses is -in absence of sufficiently powerful safeguards- exposed to the risk of opportunistic expropriation, and hence provide a measure of the potential gains from opportunism and of the intensity of the incentive to engage in such behaviour. The role of frequency is that it exacerbates the contracting problems associated with the other dimensions, adding to the pressure to find a solution.

Economic actors try to cope with these problems by means of organization, i.e. by adopting appropriate institutional arrangements to handle their transactions. At a generic level, TCE defines three distinct modes of organization: (1) market governance; (2) hybrid governance; and (3) hierarchical control or internalization. These alternative governance structures differ in the control

mechanisms they employ to safeguard contract execution and to achieve successful adaptation. Market governance derives control from the 'invisible hand' and relies on competition to bring about equitable terms of trade and disciplined contract execution. The hybrid form of governance is typically based on fairly explicit, long-term contracts in conjunction with additional safeguards to assure compliance. Hierarchical governance attains control primarily by means of authority, internal incentive structures, and monitoring. The differential access to control devices make the structures appropriate for the governance of some transactions, but not for others. Effectiveness of governance, then, depends on the match between problems to be solved and problem-solving ability.

But the structural options also differ in respect of costs, and TCE holds that ultimately, efficiency -not effectiveness- explains the match between transactions and governance structures: a transaction is aligned with a specific governance structure because of the distinct transaction cost economizing properties of that alignment. Transaction costs are broadly defined as the costs attached to the organization of a transaction; the cost of 'running the economic system'. A more precise definition is this: transaction costs are "the ex ante costs of drafting, negotiating, and safeguarding an agreement and, more especially, the ex post costs of maladaptation and adjustment that arise when contract execution is misaligned as a result of gaps, errors, omissions, and unanticipated disturbances" (Williamson, 1996: 379).

The essence of TCE can now be stated as follows: its main argument is that -given opportunism and bounded rationality- the specific nature of a transaction -to be expressed in terms of asset specificity, uncertainty and frequency-, gives rise to distinctive, predictable contractual problems with which contracting parties have to cope. Governance structures on the other hand differ in the control mechanisms they employ, or: they differ in their problem-solving ability. Moreover, they differ in cost. TCE maintains that alignments of transactions with governance structures are driven by the urge to economize. Efficiency presumes a close match between problems to be solved and problem-solving ability, and actual alignments can be explained by demonstrating the governance structure's discriminating ability to deal effi-

ciently with the contractual problems inherent in the transaction which it is supposed to control. Figure 2-1 summarizes the elementary structure of TCE.

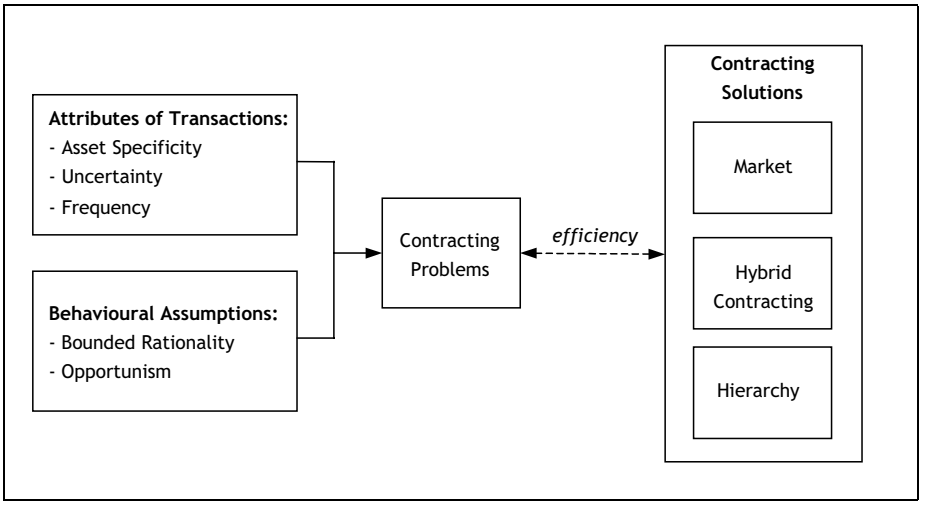

Figure 2-1: The basic structure of TCE

2.3 A further specification of the basic structure

2.3.1 The problematic nature of contracting

Contracting problems arise from the conjunction of the characteristics of human nature and the attributes of the transactions. Three combinations are especially consequential: (1) bounded rationality and uncertainty; (2) opportunism and asset specificity; and (3) opportunism and uncertainty.

Bounded rationality is only interesting to the extent that the limits of man's cognitive ability are actually being reached. This expectedly is the case when transactions are conducted under conditions of uncertainty. Given substantial uncertainty, man's limited cognitive ability does not allow a full specification of required performance. In these conditions, it is not feasible to spell out in advance all possible changes of circumstances and disturbances during the period of contract execution -let alone the appropriate adjustments thereto. It may even be impossible to decide a priori on the functional specifications of the object of the transaction. Therefore, contracts are bound to be incom-

plete –if not misconstrued. A similar outcome may result as a consequence of complexity; a condition that is included in the notion of uncertainty[1].

The condition of uncertainty often dissolves during the process of contract execution as information on the desirable properties of the transaction and on the actual state of nature gradually becomes available. This new information allows contractual gaps to be filled or mistakes to be corrected, thus activating the need to realign contract execution with emerging insights. In absence of opportunism, realignment would not pose any serious contracting difficulties. One could just await events to unfold and respond fairly to them, whilst resting assured that the other party to the contract will react equally fair. All unanticipated events could be dealt with by some general clause, restricting parties to exclusively cooperative actions with joint beneficial effects. But given opportunism, one is better advised not to rely too much on reciprocal fairness, and to realize that gap-filling and realignment are not self-enforcing but may require renegotiations that are not cooperative.

The problematic implications of opportunism are strongly associated with asset specificity. Asset specificity assumed away, opportunistic behaviour would not pay. Absence of idiosyncrasy implies the existence of a large number of suitable contracting parties, allowing a disappointed or dissatisfied contractor to turn to some other source of supply or demand. Since in these circumstances, potential contractors are fully homogeneous or 'faceless', there is no reason to maintain enduring relations. Then, to indulge in opportunistic inclinations would mean to lose contracts. But as soon as asset specificity comes in, contracting parties experience certain lock-in effects. Once transaction-specific investments are made, continuity of the relation becomes of value, because in that case the full proceeds of the investment can only be harvested if the transaction is to be completed. This usually goes for both

1. Technically, complexity could be distinguished from uncertainty –in the former case, the impossibility to specify the complete decision tree in advance derives from man's imperfect cognitive ability, whereas in the latter that impossibility has external, more objective origins. This distinction has, however, no consequences for the problems at hand and is, therefore, ignored in TCE's framework (cf. Williamson, 1975: 23).

sides to the transaction. The owner of the asset benefits from continuity, since premature termination of the relation would leave him by definition with an unrecoverable loss of productive value. However, the other party is likely to gain from continuity too, for it is doubtful that he can turn to alternative sources of supply or demand without incurring additional costs (Williamson, 1985: 62), as for instance the obvious costs associated with finding a new partner and the subsequent negotiations, but also the less clear-cut costs originating from for example loss of experience and specific know-how accumulated during the now terminated relationship. Thus, asset specificity tends to involve mutual dependency. And mutual dependency entails room for opportunism, because both parties become "strategically situated to bargain over the disposition of any incremental gain whenever a proposal to adapt is made by the other party" (Williamson, 1979: 242). Opportunism thus complicates matters of contracting.

In the presence of opportunism, or more generally, in situations in which opportunistic behaviour *might* occur, one may at first glance expect contracts to contain explicit provisions to protect the contracting parties from the hazards caused by this kind of behaviour. Such clauses are, however, difficult to design for reasons of uncertainty and bounded rationality. For one, integral contractual protection requires the contracting parties to be able to foresee the full set of contingencies that may possibly arise in the course of contract execution and to anticipate the opportunistic acts that might be evoked by them. It further requires the parties to be able to devise appropriate, enforceable hedges against these hazards and to reach agreement on the resulting clauses. And finally, unless the hedges are of a pre-emptive nature, it requires observability of opportunistic behaviour to activate the hedges. Therefore, full protection soon becomes illusory. Of special interest here is the condition of information asymmetry or, more generally, information impactedness. This is a derivative condition that arises mainly from the conjunction of uncertainty and opportunism and that exists when information relevant to the transaction is known to one or more parties but cannot costlessly be obtained by others (Williamson, 1975: 31-37). Information impactedness refers to a situation in which either (1) information is asymmetrically distributed between contracting parties and can be equalized only at great

cost, or (2) it is costly to apprise an arbiter of the true information condition should a dispute arise between parties who have identical knowledge of the underlying circumstances (cf. Williamson, 1996: 65). Its relevance here is that this condition can be exploited during contract execution in an attempt to increase one's share of the gains. Also, it may restrain the efficacy and deterrent quality of third party enforcement (court ordering or arbitration) when information impactedness deprives the enforcement agency of the information necessary for fair conflict settlement.

The role of frequency as one of the dimensions in TCE's framework is basically confined to that of a rather trivial -but important nevertheless- 'problem-multiplier' or 'intensifier'. If, say, opportunism is a major problem in the structuring of a transaction, it becomes even more problematic if that transaction is to be repeated over and over again. Frequency thus adds to the pressure to find a suitable solution to a contracting problem. It also affects the economic rationality of investing in specialized governance, because recurrent transactions provide a larger basis against which to charge the extra cost of specialized governance, ceteris paribus. Apart from that, it has no particularly interesting ramifications.

To summarize the argument, one could safely submit that contracting owes most of its problematic nature to troublesome adaptation processes. Without ever incurring the need to adapt, most transaction difficulties would vanish. In such a world, contracts would contain a full specification of required performance, and the adequacy of actual execution would easily be established. But in the real world, when uncertainty is present, bounded rationality impedes complete contracting. Then, unforeseen events activate the need for continuous and not previously agreed to realignment of contract execution with prevailing circumstances and emerging insights. The intensity of this need depends on the degree of uncertainty involved: the more uncertain the transaction, the more frequent or the larger the unanticipated disturbances, and the more pressing the need to adjust. Realignment, however, is not always self-enforcing, and the required renegotiations are not necessarily cooperative because of opportunism, the room for which depends on the degree of asset specificity. Thus, the nature and magnitude of the contractual

problems are determined by the characteristics of the transaction. Table 2-1 recapitulates the association between the scores on the individual dimensions and the contractual hazards they denote.

	Low	*High*
Asset Specificity	Adaptation 'mechanistic' Go-with-the-flow-type of adjustment	Adaptation imperative because of large opportunity losses associated with failure to adapt Adaptation difficult to achieve because of opportunism
Uncertainty	Required performance clear Adaptation not frequently called for or of insignificant magnitude	Specification performance unclear Large or frequent disturbances, implying adaptation to be essential
Frequency	Low intensity of problems Ad hoc solutions suffice	High intensity of problems Need for systematic solutions

Table 2-1: The relation between the scores on the dimensions and contractual hazard

2.3.2 Asset specificity and the fundamental transformation

It is important to stress that the problems associated with asset specificity are quite pervasive, for the condition of idiosyncrasy itself is by no means rare. For one, asset specificity comes in many flavours, among which are (Williamson, 1996: 59-60; 105-106): (1) site specificity, referring to the situation in which two successive stages of production are located close to each other so as to economize on transportation and inventory expenses; (2) physical asset specificity, which is present when customized components are involved; (3) human asset specificity, connoting specialized training or experience acquired through learning by doing; (4) dedicated investments, which are discrete investments that are made at the behest of a particular customer; (5) brand name capital, as represented by the 'intel inside' effect; and (6) temporal specificity, alluding to some particular strength in timely responsiveness. Many transactions involve at least one of the characteristics of this broad range of idiosyncrasy. But asset specificity owes much of its ubiquity to the so-called fundamental transformation in which contract execution itself generates idiosyncratic conditions.

Obviously, conditions of specificity can be found to exist right from the start. This is the familiar case of downright monopoly, in which there is only a single qualified supplier or buyer. When monopoly is unilateral, the contracting situation is straightforward indeed: the monopolist dictates the terms. And when there is preexisting bilateral monopoly, mutual dependency exists from the outset, as do the intriguing contracting problems that are associated with it. Of course, original bilateral monopoly is a rare event, perhaps even so rare as not to warrant much thought anyway. However, the condition of bilateral monopoly is not exclusively brought about by preexisting technological causes. TCE asserts that a full examination of idiosyncratic properties requires the inclusion of ex post effects too, because the initial presence of large-numbers bidding does not necessarily imply such conditions to persist after the closing of the original deal. Since winners of the original contract sometimes procure exclusive advantages over non-winners, competitive bidding at the time of contract renewal may be frustrated. What once was a matter of free market competition, now turns into a state of bilateral dependency (Williamson, 1985: 61-63). This may for instance happen when the winner of a contract is exposed to the unique chance to acquire specialized, hands-on knowledge regarding the management of the transaction. Such private knowledge is valuable and since by its very nature it can only accumulate once one is a partner to the transaction, the initial contractor secures advantages that cannot be obtained by his rivals and which give him a sustainable lead over his competitors. This makes him a likely winner of subsequent bids also. And vice versa, the value of the accumulated knowledge is largest when it is put to productive use within the dyad in which it originated. Thus, bilateral dependency can also have intertemporal, contractual origins (Williamson, 1996: 26). In fact, this type of dependency is far more common than the technology-based type.

2.3.3 Governance structures and their distinctive qualities

The three generic modes of governance -market, hybrid and hierarchy- have different contracting properties. The most important difference is in the nature and the ability of the methods they employ in achieving adaptation, i.e. in their distinctive access to control devices to be used in the governance of the transaction.

Market governance is based on free competition. In its extreme form, it features standardized, frequently even non-explicated contracts and instantaneous settlement. Inasmuch as longer-term relations between parties obtain, they are governed by a series of successive short-term contracts, each of these being subjected to competitive forces. It has no access to some previously agreed upon set of rules to apply in case of adaptation. Changes in circumstances do not affect existing contracts, but they will alter the provisions of the next short-term contract. Each individual contract is written de novo, and each party is free to adjust without prior consultation to changing circumstances. This freedom, however, is restricted by the market's opinion of what constitutes an appropriate adjustment, and adaptation is moulded by competition. Apart from recourse to court ordering, the market provides no means to settle conflicts.

In contrast to market mediation, hybrid governance relies on extensive contracts, which may contain explicit provisions on when and how to adapt. However, the problem with these contracts is that, despite their numerous clauses and their detailed treatment of all sorts of contingencies, they are hardly ever truly complete because of uncertainty and bounded rationality. In that case, successful adjustment requires some form of mutual consent and the contract itself provides no airtight guarantees that such an agreement will in fact be reached. That is why parties typically demand additional, transaction-specific safeguards. These safeguards often take the form of some kind of hostage, the exchange of which serves to infuse a self-enforcing quality into the transaction. Basically, hostages tend to correct asymmetric stakes in the contract, more closely equalizing the interests of the parties in successful contract completion. Room for dispute, however, inevitably remains and when the parties fail to agree, their conflict will ultimately be referred to an arbitrator or to the court for settlement. Court referral is appropriate in conditions where easily accessible information suffices for fair conflict settlement. When knowledge of a more intimate nature is needed to appreciate fully the intricacies of the transaction and its execution, reliance on private, extra-judicial arbitration is a more plausible alternative. These mechanisms of conflict resolution are, however, expensive options. Furthermore, the eventual outcome of the ruling of the court or arbitrator is in general quite diffi-

cult to predict in case of incomplete contracts. In short, referral to the court or arbitrage is cumbersome. And consequently, since both parties are quite aware of that, they can both take a gamble on each other's actual willingness to litigate. Therefore, litigation does not always pose a credible threat, and its disciplinary powers may be limited accordingly.

The hierarchy plays by altogether different rules. Inside the firm, most contracts contain hardly any explicit clauses as to the desired outcomes. Rather, contracts are designed to secure command over factors of production. Normally, the allocation of these factors to productive uses is not specifically agreed upon in advance –although some prior restrictions may have been placed-, but is left to the discretion of management. Such contracts grant considerable flexibility in decision-making, as well in timing as in scope, thus permitting sequential, adaptive responses to disturbances and unforeseen events. These responses can be implemented fairly easily, because individual compensation is typically only indirectly connected to the outcome of internal transactions. Instead, the hierarchy largely uses fixed remuneration schemes in which rewards are independent of performance, at least in the short run. Since in such a regime, a change in job content will not affect individual compensation, this policy increases the willingness of employees to accept management's orders and removes the incentive to haggle over proposed adjustments and the distribution of the associated gains. In the longer run, though, there is a link between individual performance histories and rewards via the hierarchy's promotion policy. This link is usually left implicit, and performance standards are communicated in an somewhat vague and informal way, thus allowing incorporation of relevant but less explicable aspects of performance in performance appraisal. By these means, the hierarchy is able to fine-tune incentives to elicit adaptive, cooperative behaviour and to avoid myopic pursuit of predefined contractual provisions. And this incentive structure may be complemented with bonus schemes in areas for which the hierarchy is in fact able to define required performance unambiguously. This flexibility in incentive structure design allows the hierarchy to support goal alignment which, in combination with appropriate monitoring, alleviates opportunism and many of the associated problems. Issues that remain unresolved are referred to a higher hierarchical level for settlement 'by fiat'. These

superiors are usually more efficient judges than those that can be found in the courts, for the former already posses the intimate knowledge required to understand the dispute and to assess the relative merits of alternative solutions. This kind of inside knowledge can often only be gained through years of hands-on experience, which effectively blocks it from being communicated to the courts. The rulings of the internal 'judges' are more strongly directed towards persuasion and are therefore more likely to encourage mutual accommodation and enduring, harmonious relations. Thus, internal organization works from an entirely different doctrine than that which governs relations between independent parties. Whereas autonomous party contracting is in last resort regulated by a vast body of rather rigid legal rules and procedures with little talent for tailor-made solutions, the hierarchy applies the elastic and adaptive 'doctrine of forbearance' (Williamson, 1996: 97-100).

The hierarchy, however, comes at a cost. Obviously, there are considerable costs involved in monitoring and in the design and maintenance of appropriate internal incentive systems. Moreover, supplanting the higher-powered incentives of markets or hybrids by the flexible but relatively flat internal incentives may create excessive slack. Lack of market incentives may induce deliberate attempts to absorb as much of the slack as one can. Eventually, such behaviour is of course plain, hazardous opportunism in some new guise. Almost paradoxically, internal organization provokes opportunistic behaviour, whereas from the outset, the very purpose of internalization was evasion or restraint of such conduct. Yet, although there are no compelling reasons to expect the new opportunism to be less harmful and notwithstanding the fact that the consequences of both manifestations of opportunism are essentially alike -private goal pursuit will dominate the pursuit of common goals, even if that would result in opportunity losses- the available instruments to deal with them do differ with the chosen governance structure, as well in their nature as in their costs. Understanding the trade-off in some particular situation is what matters.

Table 2-2 recaptures the differences between the governance structures qua mechanisms of adaptation.

Governance Structure	*Mechanisms of Adaptation*
Market	No prior agreement on framework within which adjustments ought to fit Adjustment via market-driven modification of next contract Court ordering in case of unresolved conflict
Hybrid	Contract-governed adaptation, but usually incompletely specified Contractual gaps filled in by negotiation Hostages to balance stakes in successful contract execution Unresolved conflicts referred to arbitrator or court
Hierarchy	No ex ante specification of when and how to adapt Sequential adjustment: postpone decisions until need to adapt arises Goal congruence through internal incentive system and monitoring Conflict settlement by hierarchical fiat

Table 2-2: Governance structures and their mechanisms of adaptation

2.3.4 The main argument: alignment and economizing

It has already been noted that TCE maintains that the discriminating alignment of transactions -which differ in their attributes- with governance structures -which differ in their costs and competencies- can be understood by referring to the transaction cost economizing properties of that alignment (Williamson, 1996: 46-47). The meaning of this notion of efficiency, however, is rather qualified. First, TCE adopts a comparative approach in which transaction cost efficiency is a relative concept. This concept takes the form of a remediableness criterion, holding that an existing configuration of control devices is (provisionally and refutably) considered efficient unless a feasible alternative can be described and implemented with expected net gains (Williamson, 1996; 1999a; 1999b). Furthermore, transaction cost efficiency is not fully deterministic: "if economic organization is formidably complex, which it is, and if economic agents are subject to very real cognitive limits, which they are, then failures of alignment will occur routinely" (Williamson, 1996: 311). And finally, TCE posits economizing on governance costs to be the main case, and not the only case. It explicitly acknowledges the need for additional, complementary explanations (cf. Williamson and Ouchi, 1981): economizing behaviour is germane, but other causes -not (yet) incorporated in the theory-

might interfere. But then, to begin with some main case reasoning is no bad choice at all.

Consider market governance. The market provides little ex ante safeguards when it comes to adjustment. But many transactions do not need such prior protection anyway. After all, transactions that score low on asset specificity and uncertainty are exposed to comfortingly minor contractual hazards. These transactions can perfectly do without all kinds of contractual gadgets. Since absence of asset specificity means large-numbers bidding, the market's invisible hand elegantly, yet irresistibly assures the necessary adjustments as soon as the need to adapt arises. Contracting parties are left with hardly any room for strategic bargaining behaviour. They just have to accept the market's newly dictated equilibrium terms and learn to live with them. For this kind of transactions, market governance is clearly the most efficient structure. It simply does what it needs to do, and it does so at low costs. The market mechanism can only be replicated -if at all- by the other governance structures at excessive costs, for replication would require a complex contract or an intricate incentive system, to be fed with massive amounts of data about prices, efficiency standards and the like, complemented with a multitude of checks and balances. Why bother to construct such an artificial and expensive structure, when a functionally similar system is already there to be used at virtually no costs at all?

Things change only gradually with increasing uncertainty, provided that asset specificity is low. The market mechanism often remains unsurpassable in cost-effectiveness respects. Given low idiosyncrasy, high uncertainty can ordinarily be understood to mean incertitude or ignorance regarding future price movements. These can be coped with in many ways. For instance, if one is unable or unwilling to accept this uncertainty, one could simply choose to build up stocks. Alternatively, one could write long term, fixed price contracts. This obviously exposes one to contractual hazards, but usually not prohibitively so, for this type of contract can in fact be genuinely complete and potential recourse to court ruling does pose a credible threat to negligent parties. Furthermore, the market sometimes furnishes quite sophisticated means to redistribute the effects of uncertainty, as in the case in which one can resort

to an easily accessible and well developed secondary market on which one can obtain the desired hedges at relatively low costs. And again, it is unlikely that in these circumstances, market governance can be supplanted by some other mechanism of governance on equally efficient terms. But when asset specificity rises, the 'marvellous market' looses much of its appeal; to become practically obsolete when idiosyncrasy rises above moderate levels.

Transactions that involve moderate or high asset specificity are not likely to be governed by the market. The market's inherent lack of control over adaptation processes -apart from the invisible hand, which presumes highly competitive conditions; conditions which are not satisfied when asset specificity is significant- certainly is a serious impediment to its use in presence of mutual dependency. Assigning market governance to such relation-specific transactions will probably result in endless haggling over appropriation issues, maladaptation and, consequently, in associated opportunity losses. These may well become excessive, considering that there actually are alternatives. Hybrid and hierarchical governance surely come at a price, but it is perfectly conceivable that this price is more than offset by the cost of haggling and maladaptation that would otherwise result, in which case the choice for the alternative structures would of course be the economically wise one to make. In fact, TCE explicitly predicts these alternative modes of governance to prevail in circumstances of asset specificity: assuming low uncertainty, a moderate degree of asset specificity will favour hybrid-type governance, whereas a substantial degree of idiosyncrasy implies governance by hierarchy. However, mounting uncertainty frustrates hybrid governance.

The preference for hybrid contracting when asset specificity is moderate and uncertainty is not substantial, is -again- rooted in the economizing advantages it has to offer. Unlike the market, it adequately tempers the intrinsic contractual hazards, and it does so at lower costs than those that would be incurred in the case of internalization. The writing as such of a contract is clearly more efficient than the construction of a whole hierarchy can ever be. Low uncertainty permits contracts to be fairly complete. Moreover, these contracts will be enforceable too, for market conditions will not allow much latitude in opportunism. Threats to take one's business elsewhere are to be taken seri-

ously, since there are in fact alternative sources of supply and demand. Furthermore, a reputation of trustworthiness probably is a valuable marketing asset in such markets, not to be risked by blatant opportunism. And diffidence about court referral diminishes, because continuation of the relationship does not have to be secured; not at all costs anyway.

Yet, the efficacy of hybrid governance is singularly susceptible to increasing uncertainty. Increasing uncertainty lessens the comprehensiveness of the contract and leaves more to be decided on by renegotiations. Thus, the hybrid mode soon becomes nonviable when uncertainty reaches high levels and will usually be supplanted by market or hierarchical governance, depending on the degree of asset specificity (see, however, chapter 3 on that matter).

High asset specificity nearly invariably requests hierarchical governance. Even when uncertainty is low, unanticipated disturbances may still occur, but market and hybrid governance cannot assure a prompt and accurate reaction to changes because of opportunism. The hierarchy however, with its intricate mechanisms of adjustment, is uniquely suitable. And the costs associated with the maintenance of these mechanisms are likely to be offset by the costs of haggling and maladaptation now foregone.

Figure 2-2 depicts -in an indicative manner- the economical viability of the three generic forms of governance in relation to asset specificity and uncertainty. In this figure, which is adapted from Williamson (1996: 117), asset specificity ranges from zero (for commodity-type transactions) to complete (for purely relation-specific, highly specialized investments). The range of uncertainty is from low (for an almost perfectly static, transparent and highly predictable environment; i.e. the dominion of perfect foresight) to very high (for a situation that is characterized by frequent and large unanticipated disturbances). The exact scaling is unclear, however, as is the precise location of the dividing lines. Again, the figure is merely indicative. This ambiguity plainly hampers operationalization; see, however, section 2.4 on this matter.

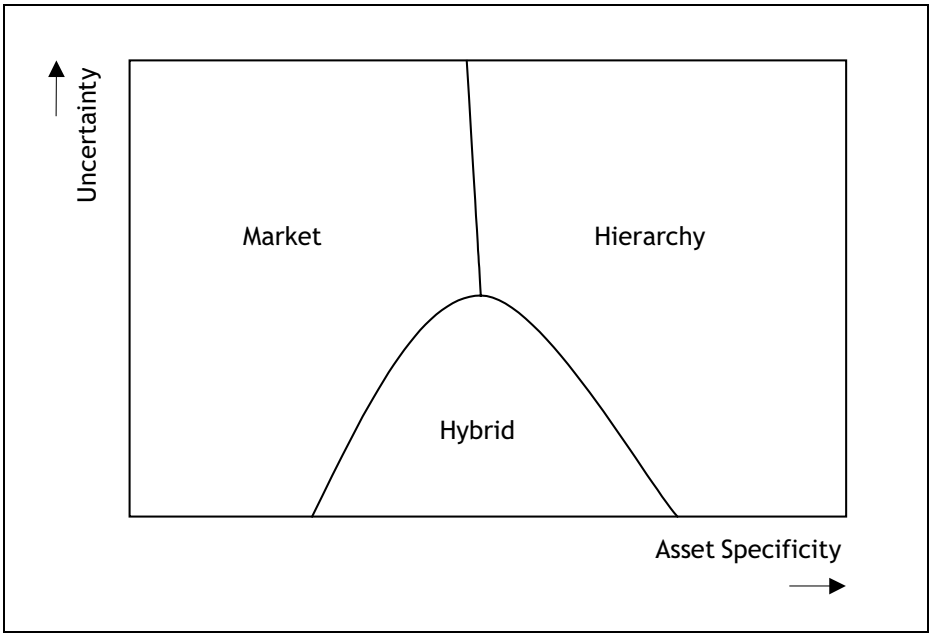

Figure 2-2: The viability of governance structures in relation to asset specificity and uncertainty

2.4 The method of TCE: discrete structural analysis

The foregoing section examined the main argument of TCE: particular governance structures are explicitly associated with distinctive transactions, because of the unique and discriminating transaction cost economizing properties of the match. That same section also touched on the method of TCE: TCE advocates an institutional approach in which transaction cost efficiency is assessed in a discrete and relative way by comparing an observed governance choice with actually feasible structural alternatives. This approach meets uneasily with traditional economics in which marginal analysis reigns. Whereas traditional economists -well versed as they are in neo-classical reasoning- are almost instinctively predisposed to grab their computers to perform some elegant marginal analysis of the world of organization in an attempt to firmly fix the trade-off between the respective modes of governance and to arrive at solid statements about the sole optimal way to organize, TCE does not allow marginal analysis. But, although this bar to marginal analysis does not exactly

magnify its glory -for undeniably, it is symptomatic of TCE's lack of rigour-, it is hardly devastating either. TCE's discrete structural analysis still provides a powerful lens through which to look at the world. This section discusses the rationale of this kind of analysis.

Williamson argues remarkably strongly in favour of discrete analysis. To him, discrete analysis is no second-best choice, but is entirely justified in the light of the specific problems that TCE addresses. Support for this position seems mainly to be found in two arguments: (1) different governance structures are not reducible to one another, but are fundamentally different, which impedes or dismisses marginal analysis; and (2) marginal analysis is typically concerned with second-order refinements, whereas what we really need is a firm understanding of first-order economizing (cf. Williamson, 1996: 94).

The first argument is based on the notion that a firm is not a mere extension of a market or a relational contract, but an altogether different coordinating device: it is just not possible to replicate markets by hierarchies or vice versa (Williamson, 1996: 25). What at first glance might appear as positions on a continuum of governance, really are discrete, individually distinct sets of control mechanisms; almost a trichotomy of governance[2]. Yet, although this assertion is probably true, it does not affect the applicability of marginal analysis. For no matter how far apart the generic modes of governance actually are, they clearly have one thing in common: they come at a cost. Specific alignments between transactions and structures are chosen because of the distinctive, non-reproducible qualities of the match, but these qualities are

2. It seems that this element of TCE has been overlooked by some of its critics. Dow (1987) and Perrow (1986) for instance argue that the distinction between markets and hierarchies is largely artificial. In their view, they cannot be seen as extreme positions on a continuum of governance, because they actually share most of the characteristics that Williamson allegedly needs to make the distinction: authority and opportunism. There are power relations in markets, and there is opportunism within hierarchies. These observations are true of course, but they are also beside the point. The distinction between markets and hierarchies in TCE is not based on presence or absence of power, opportunism, or any other feature of human behaviour, but on the mechanism available to cope with them. And these mechanisms *do* differ.

supposed to have repercussions on cost-effectiveness. If one is able to explicate these costs, one can readily perform all kinds of mathematical operations -including marginal analysis, if one so wishes. And if the apparatus is available, why not use it? Perhaps not for the reason implied by the second argument: marginal analysis is dangerous.

The second argument suggests that the application of marginal analysis exposes one to the risk of overlooking the real problems: a ferocious focus on second-order refinements is apt to come on pain of neglect of first-order conditions. This may very well be true. Or rather, I am quite prepared to believe that such excesses can in fact be found in the history of economics -and probably will be revealed in its future too. However, this ought not to lead to the dismissal of marginal analysis. Marginal analysis in no way precludes first-order analysis. On the contrary, marginal analysis actually presupposes a successful, conclusive first-order examination. That apparently incompetent researchers on occasion have been less scrupulous cannot be held against the technique, for surely, one cannot denounce a tool for its abusive application. Those who abuse it are the ones to blame.

I suspect that, after all, the real motivation for discrete analysis is not very exalting: marginal analysis is simply not possible due to the partial nature of the theory and because of insurmountable problems with the specification of the relevant cost functions. Marginalism pertains to maximization and could in casu only be employed if TCE assumed the urge to economize on transaction cost to be fully determinative. TCE, however, does not purport to offer causal explanations of a deterministic kind (see section 2.3.4). Then, marginal analysis is clearly premature. Furthermore, governance costs are exceedingly hard to quantify. TCE tries to evade this problem through the appraisal of transaction costs in a comparative, institutional manner, in which it is the difference between transaction costs that matters, rather than their absolute magnitude (Williamson, 1985: 22). Such comparative appraisal is a great relief because it alleviates the urgency fully to specify the cost curves. Additionally, TCE argues that the relevant comparisons are with feasible, actually available alternatives, and not with hypothetical ideals (Williamson, 1996: 240). Typically, feasible alternatives are few, which conveniently narrows the required

scope of the analysis. Moreover, in many cases, it is not even necessary to quantify transaction cost differentials. TCE's remediableness criterion can often be applied quite convincingly in a wholly qualitative way. It is not uncommon that one is able to demonstrate that an adopted governance structure involves some characteristic features that are essential in coping with the inherent contractual problems and that are unlikely to be replicable within another mode of governance. If the potential transaction costs associated with these problems are evidently large, the explanation of an observed governance choice may be based solely on considerations of effectiveness, i.e. without attempting to actually measure its efficiency. When transaction cost differentials are obvious, one can perfectly do without a quantification, for exact measurement of a self-evidently large difference can safely be regarded as redundant.

2.5 Discordant views: critics on Transaction Cost Economics

Although TCE has been embraced by many, it has also had its share of criticism. Some of the more influential critical remarks, their soundness and eventual ramifications, are explored in this section. The opposition mainly centres on the alleged lack of testability, the roots of which the critics locate primarily in: (1) definitional vagueness and the inherent danger of ad hoc and even manipulative reinterpretation of observations to protect the theory from refutation; and (2) the imputed inclination of TCE to rely on functionalist explanations with the subsequent danger of circularity. There is however a third potential source of testability problems, which is the partial nature of TCE. This source has to my knowledge not been dealt with explicitly in the literature, but it needs some attention anyway, since it is conceivable that my reply to the second line of criticism will in fact provoke objections based on this source, as will the earlier references to absence of deterministic causality. An altogether different stumbling block is the supposedly offending assumption of opportunism. Consider these seriatim.

2.5.1 On definitional vagueness and its consequences

TCE has a lingering tautological reputation. Williamson (1979: 233) quotes Fisher's complaint as typical: "[t]ransaction costs have a well-deserved bad

name as a theoretical device ... [partly] because there is a suspicion that almost anything can be rationalized by invoking suitably specified transaction cost" (Fisher, 1977: 322 note 5). In a similar vein, Perrow criticizes Williamson for his failure to define transaction costs stringently: "[a]ny competing analysis can be reinterpreted by saying that X or Y is really a transaction cost" (Perrow, 1981: 375). Pfeffer concurs: he claims that in organizational research, one is inclined to see what one believes, rather than to believe what one sees, especially when one uses "constructs difficult to define or utilize, such as transaction costs" (Pfeffer, 1981: 414).

These critics may have a point indeed. It is true that the notion of transaction costs lacks a clear and strictly demarcating definition, although there is some progress here: Williamson is much more specific about this concept in his recent work than he was in, say, *Markets and Hierarchies* (1975). This observation may be important, because the critics cited above base their remarks regarding the imprecision of the definition on Williamson's earlier work. It may very well be that their objections have been dealt with quite satisfactorily since. But admittedly, today's definition is no shining example of precision either. Transaction costs have been defined as the costs of drafting, negotiating, and safeguarding an agreement and, particularly, the ex post costs of maladaptation and adjustment that arise from misalignment. Especially the cost of maladaptation is a highly elastic concept; the more so, since transaction costs are to be assessed in a comparative way. Because TCE assumes a tendency towards efficient alignment, appropriate empirical benchmarks to measure the potential costs of misalignment may be quite hard to find in reality. Actual misalignments carry their own demise and, consequently, are bound to dissipate: "[t]ransaction costs are funny things: the most important of them exist not in reality, but in realities that have been avoided, in worlds that have not come to be" (Buckley and Chapman, 1997: 136). Therefore, one could argue the amount of the potential maladaptation costs to be limited only by imagination.

However, disapproval of definitional vagueness is not sufficient to reject TCE, because absence of an explicated, adequately restrictive definition does not necessarily lead to an unjustifiably lenient use of the concept. And in fact, to

my knowledge no such excessive over-interpretation can be reported. It is quite unfortunate indeed that no one seems to be able to express the meaning of transaction costs stringently, but its application shows a remarkable sense of unanimity about what to include and what to exclude. These applications are sufficiently clear about the nature of the costs that play a part in the analysis in question, thereby allowing academic scrutiny. Moreover, they stick without exception to the obvious elements on which there can hardly be disagreement. And there is no evidence of ad hoc redefinition. Therefore, although the critics are right in principle, they are not right in fact. Surely, TCE ought to come up with a better definition, but so long as those who use TCE do not loose their apparent self-control whilst applying their implicit concept and so long as they are clear about what they include, there is really no pressing reason for panic.

2.5.2 Functionalist explanations and circularity

The central theme of TCE is that of efficient alignment of transactions with governance structures. It posits a tendency towards cost-effective matches of structures with transactions. This conjecture has incited quite a bit of disapproval, which centres specifically on "the functionalist imputation of efficiency to observed governance structures" (Dow, 1987: 14). Or to quote Robins (1987: 72): "[transaction costs analysis] reduces too readily to the circularity of inferring transaction costs from the existence of formal organization and explaining organization on the basis of inferred transaction costs". (cf. also Granovetter, 1985, and see Vromen, 1994, for an assessment). The arguments of these critics are essentially alike. For ease of exposition, the evaluation will mostly follow Dow's line of reasoning.

Dow correctly points out that TCE tends to explain the existence of different governance structures for different transactions by referring to the efficiency features of the match. He further notes an inclination of adherents to the TCE approach to infer from the mere existence of a particular match, that it is in fact efficient. This, however, is one step too far: "[u]ntil an explicit mechanism capable of generating efficient governance structures and sustaining them over time is identified, the claim that observed structures are efficient will remain unpersuasive [...]" (Dow, 1987: 26). And in his view, TCE lacks

such a mechanism. Granovetter concurs when he almost sarcastically remarks that "[t]he operation of alleged selection pressures is [...] neither an object of study nor even a falsifiable proposition but rather an article of faith" (Granovetter, 1985: 503). Dow identifies within TCE's framework three conceivable candidates to provide the required generator of efficient structures: (1) intentionality; (2) adaptive learning; and (3) competitive market pressures, but he continues his argument in an attempt to show that these candidates are in fact incompatible with the framework. Intentional design of efficient governance structures through an explicit evaluation of the transaction costs associated with each possible structure clashes with the assumption of bounded rationality, for "[I]f agents cannot cope with contracts featuring complex contingencies, it is doubtful that they can select in advance an efficient decision making procedure to use in adapting to future circumstances" (Dow, 1987: 27). Organizational learning is likely to collide with the assumption of opportunism, because information about required changes that are not consistent with the private goals of those who have access to it, is likely to be suppressed. And when such information does in fact come to the surface, those who are in authority to restructure the organization may still suffer from opportunistic propensities and deny their fiat. Finally, selection through competitive market pressures warrants scepticism, if only because in conditions of high asset specificity, there hardly is a market to provide the necessary pressure (cf. also Robins, 1987: 72-74). The conclusion seems inevitable: TCE's explanations of phenomena of economic organization -a transaction is organized as it is, because that particular way of organizing is cost-effective- is not convincing at all, because one cannot safely assume that existent alignments are in fact efficient.

TCE does however not have to surrender to this criticism, for it is quite beside the point. TCE does not assume that existent matches are always efficient, notwithstanding the numerous isolated quotes that the critics bring to the fore to substantiate their claim. Instead, it explicitly acknowledges the fact that inefficient alignments can and will occur. It admits that intentional design of mechanisms of governance can have dysfunctional consequences for reasons of opportunism and bounded rationality –although the latter does not preclude far-sighted contracting (Williamson, 1987; 2000). And market pres-

sure is indeed no powerful selection mechanism in conditions of high idiosyncrasy -but the market does draw a line when asset specificity is moderate or low. TCE merely submits a general propensity towards efficiency: the urge to economize is present but fallible (cf. Williamson, 1987, 1991). However, its explanations of observed governance structures do not stop short by pointing out that they do in fact exist and hence must be efficient. Rather, if TCE presumes an observed structure to be efficient, then this conjecture is provisional at most and is to be followed immediately by an explication of the particular basis of this efficiency in terms of the variables of the theory: the dimensions of the transactions, the behavioural assumptions and the distinct problem-solving ability of governance devices. These variables define the distinctive suitability of the modes of governance to control a particular transaction. The appropriateness of the match results in a governance structure's efficiency, not its sole existence.

But this raises another problem: if TCE does not assume its variables fully to explain the governance structure -after all, inappropriate matches can be observed- does that not lead to irrefutability of the theory? For surely, a theory which prohibits nothing cannot be tested and ought to be expelled instantaneously from the stately dominion of science.

2.5.3 Partiality and irrefutability

The issue of theoretical partiality or incompleteness has already been hinted at. Now it is time to address its serious methodological consequences: how can a theory that fails to provide causal explanations of a deterministic kind ever be tested? Partial theories have this special proclivity to become practically immune to testing. Given partiality, inconsistent observations do not have to refute the theory, but can be blamed conveniently on causes which are outside the framework. This may result in sheer immunization of that theory and hence in pathetic 'metaphysicalness' or whatever pejorative qualification is deemed appropriate for theoretical statements that cannot be tested empirically.

TCE does indeed come close to this state of affairs. It holds that economizing on transaction cost is pertinent to the explanation of phenomena of economic

organization, but it explicitly recognizes the fact that there is more to these phenomena. Consequently, inefficient alignments will occur routinely and these are to be associated with unidentified interfering causes. Therefore, they are held not to raise insurmountable doubts as to the soundness of the main argument. This position is of course an atrocity in the eyes of radical methodologists of a somewhat overstretched Popperian disposition. And these methodological extremists have a point indeed, although they push it a bit too far –that is why they are extremists. For one, partiality does not necessarily and irrevocably deprive the theory of the capacity of being tested. Although recalcitrant observations do not lead to instant dismissal of the theory, they continue to be inconsistent nevertheless and they actually do undermine the status of the theory. Inconsistencies, then, are certainly not to be ignored, but should be used as clues to the direction in which to search for additional explanations. If possible, these additional explanations are to be integrated in the initial theory in an effort to enhance its expressiveness and to broaden its scope. Alternatively, they should merely be noted in the margins of the research programmes and be retained until the accumulated disobedient evidence is so overwhelming, that faith in the theory can no longer be preserved. Then, the theory will be rejected after all. One cannot specify in advance when this will happen. That supposedly depends on the balance between presumably tenable explanations and the number of failures -or their decisiveness, for simply 'counting instances' will probably not do-, on the perceived likeliness of finding an early cure for all too flagrant partiality, and on the availability and appeal of alternative theories. And, to please the postmodernists, even personal preferences of members of the scientific community, buttressed with their influence and rhetoric skill may be important in deciding on which theories to adhere to, and for how long. But ultimately, these are the only options for partial theories: grow or perish.

This view should not be regarded as an exotic, somewhat deviate methodological stance. The fact that scientists stubbornly cling to their theories has been known at least since Kuhn's account of the scientific process (Kuhn, 1962). That they often have good reason to do so has been made quite clear by Lakatos (1970). The point is that every single theory is unavoidably incomplete –except perhaps for the trivial ones, but these are not worthy of much

attention anyway. Theoretical partiality is always there, and it is most obvious in complex fields of science like the one that TCE intends to cover. Hence, the yardstick by which to measure the scientific stature of a theory is not completeness, for no theory would ever pass, but degree of partiality as compared to rival theories. The less partial theories, i.e. the ones that "yield better predictions for as wide a range of phenomena" (Friedman, 1953: 31) or the ones that offer equally good predictions, yet for a wider range of events, are the ones which are to be preferred. In this respect, TCE is no bad choice at all. It has been quite successfully applied to a wide variety of phenomena, ranging from vertical and lateral integration, via franchising and dealing arrangements to labour market contracting; even up to the sudden increase in the demand for diamond engagement rings in the USA during the mid-1930s (see Shelanski and Klein, 1995, for a recent and rather comprehensive review of empirical research in TCE; cf. also Masten, 1996, and Rindfleisch and Heide, 1997). Moreover, these applications show TCE's partiality to be fairly innocent: this variety of issues could be addressed quite well from TCE's main case apparatus without recourse to ad hoc reasoning. This is certainly no dim score, especially not when compared to other theoretical approaches.

If we are to accept the notion of inevitable partiality, then we simply have to learn to live with inconsistent evidence, as most have done already: "scientists have thick skins" indeed (Lakatos, 1978: 4). A contradicting observation merely tells us that our theory is not entirely true and that we have some more work to do. But then again, we knew that right from the start. Slow progress towards the supreme theory -and perhaps the occasional leap forward due to some brilliant new idea- is all we can hope for, although we know that we will never actually reach this end. Even worse, if we happen to stumble upon the absolute truth, we will not be aware of it, since truth cannot be assessed empirically. At best, we can "fail to disprove it" (Friedman, 1953: 9; cf. also Popper, 1959). Such is the bitter fate of the scientist.

2.5.4 Images of man and the assumption of opportunism

TCE has been criticized, although hardly ever in writing, for assuming opportunism. This criticism is grounded in a more optimistic view on the human condition than the one that TCE expresses. The critics argue vehemently that

TCE paints too gloomy a picture of man and that, in spite of the occasional villain, human nature generally is virtuous. Some even think of TCE's position as unethical or immoral. TCE on the other hand insists on the importance of opportunism and the often intricate ways in which it is dealt with to capture the richness of contracting (cf. Williamson, 1993). It asserts that in a very real sense, opportunism is the conditio sine qua non of contracting as we know it, for in absence of opportunism, contracting would be trivial indeed and simple promises would suffice.

It is hard to escape the impression that these critics base their dissent on an overstatement of TCE's position on opportunism. TCE does not assume "that every individual is continuously or even largely given to opportunism. To the contrary, [it] merely assume[s] that some individuals are opportunistic some of the time and that differential trustworthiness is rarely transparent ex ante" (Williamson, 1985: 64). The truth of this statement is hard to deny. For really, opportunism is among those "significant facts about the world that are so obvious that only an economist would feel compelled to recognize them explicitly" (Goldberg, 1980 [1986]: 87). Ultimately, the only question is whether one perceives indulgence in opportunism to be common enough to warrant the deliberate design of protective measures. TCE would certainly answer affirmatively. According to TCE, many otherwise mind-boggling features of contracting behaviour can productively –though not necessarily accurately- be described as presuming the presence of opportunism, if only as a matter of precaution to avoid unpleasant surprises ex post. Almost all deviations from simple promises to perform well –meticulously drafted contracts, hostage exchange, specialized arbitrage, intensive monitoring, et cetera- could serve to illustrate this point. Unless the opponents come up with a rival explanation for these phenomena -which they have not done so far-, the assumption of opportunism cannot be dismissed. And as for the supposed immorality of the assumption: one may of course not like people to behave opportunistically, but that does not change the apparent fact that they often do so behave. If one purports to build positive theories, one cannot bluntly ignore reality, no matter how unpleasant its manifestation. Moreover, the mere act of assuming opportunism does not imply some kind of value judgement. Rather, TCE is amoral: right or wrong, opportunism simply is.

2.6 Summary

This chapter presented a general overview of the nature and scope of TCE. It sketched its 'first principles': the dimensions relevant to a meaningful description of transactions (asset specificity, uncertainty and frequency) and the core assumptions about human behaviour (bounded rationality and opportunism). The interaction of the dimensions and the behavioural assumptions results in distinctive contracting problems, which are to be mitigated by matching the transactions with a suitable governance structure. The three generic modes of governance -market, hybrid and hierarchy- differ in their respective problem-solving ability and, consequently, are appropriate to cope with some of the contracting problems, but not with others. Hence, the suitability of a governance structure depends on the specific contracting problems inherent in the transaction which it is supposed to control. Eventual mismatches lead to over-control or lack of control, both of which are to be avoided because of efficiency considerations. This is the central theme of TCE: in reality, specific transactions are aligned with specific governance structures -and not with others- because of the distinctive transaction cost economizing properties of the match.

TCE is not free of weak spots. Most importantly, its explanations are not to be understood in a rigorous, deterministic way. Although economizing behaviour is asserted to be pertinent to the explanation of phenomena of economic organization, there undoubtedly is more to it. The assumed general propensity to economize on transaction costs might meet with (still unidentified) countervailing causes. The tenet of TCE is thus explicitly held to be the main case, and not the only case, which means that the framework is partial and ought to be enriched and fortified in due time. Incompleteness, however, is inevitable. And since TCE is in no way singularly susceptible to it -on the contrary, rather- partiality can be no sufficient reason to discard of it. This is not to deny that TCE could do with some additional buttressing, stretching and refinement. For surely, its definitions are no marvel of precision. Neither is the rudimentary apparatus to quantify the relevant transaction costs reason for much complacency. But even in its present, immature state, it can easily stand comparison.

Chapter 3

Transaction Cost Economics, Hybrid Contracting, and Uncertainty

3.1 Introduction

Among the tenets of Transaction Cost Economics (TCE) is the general notion that the hybrid form of governance is especially vulnerable to uncertainty. Rising uncertainty implies an increasing number of unforeseen disturbances that call for adaptation. These disturbances can be handled quite effectively within both the market mode (via autonomous, unilateral adaptation) and the hierarchy (through managerial fiat). Within the hybrid mode, however, adaptation is less easily achieved. In hybrid forms of governance, adaptations to contingencies that were not foreseen at the time of contract specification require renegotiations and mutual consent. That, of course, takes time, and if parties to a hybrid agreement are negotiating a response to one disturbance only to be hit by another, failures to adapt predictably arise (Williamson, 1996: 116). Moreover, such renegotiations provide an arena for strategic behaviour, undermining the structure's effectiveness. For these reasons, hybrid governance is generally held to be infeasible in conditions of substantial uncertainty.

This infeasibility tenet, however, meets uneasily with a growing body of empirical evidence showing hybrid structures to arise in spite of uncertainty. Outsourcing for instance is no longer restricted to the more programmable activities, but encompasses several clearly less predictable projects as well, such as customized final assembly in a postponed manufacturing environment (Van Hoek, 1998), and integrated maintenance of specialized equipment (Van der Meer-Kooistra and Vosselman, 2000). Another example would be the increasing reliance on strategic alliances and other cooperative inter-firm arrangements to govern inherently uncertain innovative activities (Oxley, 1997; Pisano, 1990, 1991; Teece, 1992). These examples are somewhat disturbing, the more so since they relate to activities that must be positioned at

the higher end of the spectrum of asset specificity; a condition that seriously aggravates the risks associated with opportunism, adding to the pressure to find reliable ways to secure adaptation.

These observations may invite several different responses. One of these may be to conclude that TCE puts undue emphasis on opportunism and the associated problems of adaptation as a driver of governance structure choice. Supposing that it is true that the hybrid mode has limited access to mechanisms to actually compel coordinated and cooperative responses to unforeseen events, such mechanisms may not be needed if parties to a hybrid exchange are sufficiently confident that the other party will so respond anyway, i.e. when the parties expect their partners not to engage in opportunistic behaviour should an opportunity for such conduct arise. This is in fact an important theme in recent studies. Although not based –not explicitly at least- on the empirical issue referred to here, there is a growing literature that suggests that introducing trust into TCE's explanatory framework would increase its quality (see for instance Chiles and McMackin, 1996; Noorderhaven, 1994; Nooteboom, 1996; Nooteboom et al., 1997; Sako, 1992). By emphasizing the role of trust in enabling stable, long-lasting relations between contracting parties, these studies tone down the need for enforceable safeguards against opportunism, and argue that parties sometimes willingly accept less than full protection, because they trust their partners to behave cooperatively when adjustments are negotiated. This argument is of direct relevance here, for it may explain the rise of hybrid governance despite uncertainty: although the hybrid mode cannot offer full protection, it is chosen nonetheless because full protection is redundant.

There is, however, another strategy that may be called upon to bring back the inconsistent observations into the realm of the theory. This strategy, which is at the heart of the present chapter, focuses on the mechanisms of governance, rather than on the variables of TCE's framework. The general idea behind this strategy is that, while it is hard to deny that TCE's position on the infeasibility of hybrid governance in conditions of uncertainty is an overstatement, there is no compelling reason to believe that this mere fact signals some fundamental flaw in its theoretical structure that must be cured by

introducing new variables or theoretical constructs. The overstatement may also be attributable to a remediable underdevelopment of the scope and consequences of the incumbent variables, and a to lack of detailed knowledge of the governance solutions they support. Previous treatments of hybrid control have focused almost exclusively on the mechanisms available within the hybrid mode to prevent contract defection or to increase the probability that contract execution remains within the pre-set boundaries of what has been indicated in advance as reasonable results[1]. Thus, these treatments suggest that hybrid control is essentially concerned with 'compliance control' (see section 2 of this chapter for a more extensive examination of this issue). Such control is indeed frail when confronted with significant uncertainty, for it requires parties to be able to explicate in advance the particulars of their transaction in considerable detail. However, this emphasis in the literature notwithstanding, TCE's general logic does not preclude the existence of a different, hitherto omitted subcategory of the hybrid mode that has access to some configuration of control devices that is in fact able to explain the hybrid's resistance to uncertainty from within the confines of TCE's extant theoretical framework. Modification of that framework by introducing new variables, then, may be unnecessary and, if so, undesirable for reasons of parsimony. The identification and specification of such a subcategory is the aim of this chapter.

The structure of the chapter is as follows. Section 3.2 offers an overview of current TCE-thinking on hybrid contracting and examines the dominant position of arrangements to increase the probability that the ultimate outcomes of the transaction conform to some reasonably unambiguous prior specification of desired results. Sections 3.3 and 3.4 present an analysis of two generalized cases in which ex ante specifications are too vague to guide contract execution but in which hybrid governance is chosen nonetheless. These are the case of outsourcing relations in the Japanese automobile industry (section 3.3), and the case of venture capital financing (section 3.4). Based on the

1. An exception would be the literature on joint venture governance (e.g. Hennart, 1988, 1991; Kogut, 1988). Oxley (1997) and Teece (1992) also study hybrid control in ambiguous conditions, but their concern is mostly with appropriability hazards, whereas I propose to focus on adaptation, which is a more general orientation.

stylized facts of these cases as they appear from the relevant empirical literature, these sections argue that the scope of control sometimes may be extended to include the processes and actions that lead to ultimate performance, endowing the hybrid mode of governance with the quality to tolerate ambiguous goals and the ability to survive high levels of uncertainty. The analysis will, moreover, demonstrate that this practice can be understood from within TCE, i.e. without introducing new variables or ad hoc reasoning. Section 3.5 brings together the elements of the discussion and sketches the outlines of the pattern of governance that appears to emerge from the analysis. Finally, section 3.6 summarizes the argument and addresses a few loose ends.

3.2 Hybrid governance: perspectives from received TCE

Hybrid governance structures are defined as "long term contractual relations that preserve autonomy but provide added transaction-specific safeguards, compared with the market" (Williamson, 1996: 378). These structures are associated with transactions that involve a moderate degree of asset specificity and limited uncertainty (see chapter 2, figure 2-2). In absence of asset specificity, market governance would prevail, and additional safeguards would be redundant. Rising asset specificity, however, drives the need to devise protection against opportunistic reinterpretation or breach of contract, because defection would leave at least one of the parties with an unrecoverable loss from relation-specific, non-redeployable assets, whence the reliance on added transaction-specific safeguards to support adaptation. The additional safeguards normally take one or more of three forms (cf. Williamson, 1996: 62): (1) specialized, private dispute resolution; (2) embedding the transaction in an extended set of transactions; and (3) realignment of incentives. These safeguards, however, are imperfect and incomplete, and above some threshold in terms of asset specificity or uncertainty, the hierarchy is expected to supplant the hybrid mode. But first, consider the three forms of safeguards somewhat more closely.

Specialized mechanisms to resolve disputes are often chosen in support of hybrid transacting arrangements. These arise in response to the limitations of court ordering in respect of information handling capacity: the efficacy of

court ordering is restricted to conditions where easily accessible and verifiable information suffices for fair conflict settlement. When knowledge of a more intimate nature is needed to appreciate fully the provisions of the contract, the intricacies of the transaction, and its execution, reliance on private, extrajudicial arbitration with its superior information gathering and processing talent is a more plausible alternative. Such an institution is usually granted binding authority in matters of contract exegesis, performance evaluation, liability assessment, and claim settlement.

The second form of safeguard materializes when the transaction is set in a more complex trading network in an effort to balance parties' interests in continuity and adaptability. An example of this strategy is the reciprocity arrangement (Williamson, 1985: 190-205). Such arrangement transforms a unilateral supply relation –in which A sells X to B- into a bilateral one –in which A agrees to buy Y from B as a condition for making the sale of X. After the transformation, both parties commit idiosyncratic assets to support their two-way trading, thereby enlarging the value of the relation to both parties and balancing the benefits to be derived from continuity. However, by its very nature, reciprocity can only be attained in quite exceptional circumstances, and usually, other solutions must be found.

The last and probably most generally applicable way to safeguard hybrid transactions is to realign incentives to infuse a self-enforcing quality into the transaction. Such mechanisms come in many flavours, but their general function can meaningfully be described and analysed in terms of the hostage model (cf. Williamson, 1985: 163-205; 1996: 120-144). This model highlights the common reliance on the exchange of hostages to increase the probability of proper contract execution. Hostages are investments or transfers of wealth, the full value of which can only be recovered in case of successful contract execution, thus curtailing the potential gains from opportunistic defection, and adding credibility to one's declared commitment to the contract. Essentially, hostages tend to correct asymmetric stakes in the contract, more nearly equalizing the interests of both parties in successful contract completion.

In its most elementary form, the hostage arrangement involves a payment to the compliant party to compensate for the non-salvageable losses incurred because of contract defection by the other party. However, effective application of this simple structure is limited to rather special situations in which a number of conditions are simultaneously fulfilled. Evidently, settlement of the claim must be easily enforceable should defection occur. If either the quality of performance, the assessment of the damages, or the actual transfer of the compensatory payments were open to dispute, the hostage would loose most of its protective potency. Conversely, restitution of any hostages exchanged prior to contract execution should be self-enforcing when performance conforms to plan. Moreover, the hostage-taking party should be unable deliberately to provoke inferior performance on the other party's side. Such behaviour may have self-serving properties, for instance when one encounters an attractive, not previously identified trading opportunity that can only be seized at the expense of an order already accepted. Forthright breach might be considered, but if contrived breach is a feasible option, the latter has the additional attraction of enabling annexation of the hostage. This of course tips the scale in favour of the new offer even more strongly. Unless those expropriation hazards are properly dealt with, compensatory hostage exchange merely reverses the vulnerability to opportunism rather than solving the issue.

In situations where the risks of expropriation are perceived to be large, parties may agree to forego compensation and instead demand hostages that are of little value to the party pursuing protection, but which would in case of defection impose a considerable loss upon the defecting party. Presumably, such "ugly princesses"[2] (Williamson, 1985: 176) will not be abducted, and if

2. This term refers to an anecdote in which a king is asked to post one of his two daughters as a hostage to lend credibility to some promise he has made. This king, who is known to cherish his two daughters equally, is well advised to offer the less pretty of the two, for that increases the chance that the daughter will actually be allowed to return to her father. The beautiful one on the other hand might well be kept by the hostage-taker for his own less-than-honourable purposes, even if the king stands up to his promise. This story is of course totally politically incorrect. But it is clarifying. It is also quite amusing.

the king loves them sufficiently dearly, they might effectively eliminate the risks of intentional underperformance. This kind of hostage typically arises when one of the parties commits resources of which the realizable value depends on the outcome of the transaction in question. Specific, non-redeployable investments in final assembly technology or specialized distribution qualify, and so may for instance reputation effects in settings in which one's contractual history affects the ability to strike interesting deals.

Apart from reciprocity arrangements –a form of safeguard with quite limited applicability-, the additional safeguards on which hybrid contracting relies (hostage exchange and arbitration) essentially serve to advance adherence to the provisions of the contract. Therefore, their application requires at least some previously agreed to, contractually anchored notion as to what constitutes adequate performance. If parties are unable to specify in advance the essentials of their transaction with sufficient clarity, these safeguards do not necessarily secure smooth contract execution. Neither does placid contract effectuation assuredly result when the performance standards that are defined at the outset demand major reassessment during contract execution because of unanticipated events or shifting insights as to how to proceed best. However, in conditions of substantial uncertainty or complexity, the minimum level of contractual robustness cannot always be provided. Then, governance structures are needed that encourage adaptive, cooperative attitudes and actions when it comes to filling the contractual gaps.

Within theoretical TCE, potential solutions of the hybrid type to this problem have received scant attention. The default response is that, given high asset specificity, internalization is a likely candidate to solve the problems of governance. And indeed, the hierarchy comes with extraordinary qualities when sequential adaptation is called for, at least in principle. Basically, the hierarchical solution is to evade conflicts of interest. Except perhaps for top level employees, individual compensation within the hierarchy is typically not based on the direct, isolated financial outcomes of internal transactions. Instead, the hierarchy uses fixed compensation plans and links promotion to contributions made to the accomplishment of usually unspecified organizational goals. This practice removes the incentive to haggle over proposed

adjustments and the distribution of associated gains, and establishes quite a large zone of indifference in which choices and changes can be implemented at management's word of command. The hierarchy's recourse to managerial discretion offers significant decision making flexibility, permitting decisions to be postponed until more information has accrued, allowing second thoughts, and facilitating redirection of resources. It furthermore allows incorporation of soft, less explicable but highly relevant aspects of performance in performance appraisal, thus avoiding myopic pursuit of predefined but incomplete and possibly outdated surrogate standards. But apparently, it is not all roses there, and hierarchies have disadvantages of their own. After all, a growing body of empirical evidence suggests that hybrids do sometimes supplant hierarchies even in the strenuous conditions of both high idiosyncrasy and uncertainty. How do they do that, and why? Consider the following cases.

3.3 Subcontracting in the Japanese automobile industry

The Japanese automobile industry is a highly dynamic one. Firms in this industry face fiercely competitive markets in which profit margins are small. Their products and processes are complex and both price and technological sophistication are essential to maintain market position. Because of rapidly changing customer preferences, product life cycles are short. Existing models and production processes are continuously under review to identify opportunities for improvement, and there is unremitting pressure to reduce costs and to shorten product development cycles. Therefore, change is rapid and ubiquitous, and for firms in the industry, keeping pace with developments in the relevant consumer and component markets is seriously problematic. The Japanese response to these conditions is to specialize, notably in concept design, assembly, and –almost by implication- in supply chain coordination. The latter function arises from the typical reliance on extensive networks of subcontractors for a significant part of component development, design and production activities. A salient fact of the Japanese case is that the outsourcing strategy is not limited to general-purpose components, but includes customized products as well –even when uncertainty is substantial.

3.3.1 The benefits of cooperation

Customized components require significant specialized investments on the part of the supplier, and according to TCE's central logic, suppliers will not be prepared to invest unless the expected proceeds are adequately assured. The particularly volatile conditions, however, preclude the default solution of a long-term contract in conjunction with an appropriate hostage arrangement. In fact, the automobile manufacturers quite regularly face the need to arrange supply at a point in time at which they are unable to explicate the functional specifications of the components they intend to buy, other than in a highly general way. Moreover, functional specifications are susceptible to frequent but unpredictable modification due to rapid technological change and recurrent adjustment of production processes. And if the specifications cannot be fixed in advance, neither can performance standards and trading conditions be decided upon. In this setting, initial contracts are necessarily vague. At best, they are general thrust agreements, the subsequent explication of which requires input of specialized knowledge to which the buying firm, by itself, has no access. To bridge this knowledge gap, Japanese firms establish close, interactive relations with competent, committed suppliers. In these relations, parties work through the details of the component together in an effort to find a rational match between the needs of the buyer, the available technology, and the functional characteristics of the component, joining along the way private knowledge and expertise (cf. Aoki, 1988; Cooper and Yoshikawa, 1994; Dyer, 1996, 1997).

Suppliers to the automobile industry operate in market conditions that are similar to those faced by the buyers in that industry. They too experience relentless competition and strong pressure on innovation and cost reduction, and establishing intimate relations with a small number of customers is a sensible choice, for it allows focused product development and concentrated marketing and selling efforts. Therefore, cooperation offers potential advantages for both parties to the exchange. However, suppliers need some kind of assurance that their cooperative efforts and investments in customer-specific assets and skills will in fact result in a sustainable long-term relation. The buyer on the other hand can offer no hard guarantees to that effect up front

due to the uncertainty involved in assessing the prospective suppliers' competence in delivering still unspecifiable performance.

3.3.2 Conditional contracting and internalized competition

The Japanese answer to the implied deadlock is to establish a *conditional* long-term relationship between buyer and supplier. Instead of relying on long-term contracts, parties enter into a series of contracts in which each individual contract has a relatively short duration (Hagen and Choe, 1998). Taken separately, the contracts do not offer sufficient compensation to the supplier to balance the idiosyncratic investments made to support the transaction. However, each contract features an implicit renewal option, the exercise of which depends upon performance within the present and previous contracts. Basically, the buying firm makes a commitment to favour its current set of suppliers when new bids are invited, provided that their performance is satisfactory. This is a credible commitment, for it is to a large extent self-enforcing. In decisions on contract renewal or when evaluating solicited bids for new components, assessment of the supplier's competence is vital. General market reputations provide insufficient information, because they are based on generic competence rather than on customer-specific skills. Hence, buyers must rely on internally generated track records, and business is to be awarded on the basis of the supplier's demonstrated ability to generate solutions to the specific problems of the individual buyer (Asanuma, 1989; Gietzmann, 1996; Sako, 1996). Since only incumbent suppliers get to build up such records, they obtain an advantage over their outside competitors. Moreover, inside suppliers, being in close contact with the buyer, acquire private hands-on experience and unique knowledge and skills that enable them better to anticipate the needs of the customer and to improve responsiveness to these needs. Consequently, inside suppliers tend to increase their customer-specific competence, giving them a sustainable competitive edge and relieving future competitive strain. Insiders can confidently expect to win subsequent bids also, and a justified expectation of a long-term relation arises. The buyer's commitment, therefore, provides sufficient assurance to activate suppliers' willingness to invest in relation-specific assets.

However, by allowing suppliers to establish exclusive competitive advantages based on previous transactions, the incentive to continue to deliver high quality performance might erode. Having acquired a position on the buyer's short list, the supplier might restrict its efforts to mere perfunctory levels, achieving performance that is only marginally better than an outsider could deliver. The problem here is that the buyer's inclination to rely on inside suppliers could eventually lead to a monopolistic situation in which the buyer's threat to take its business elsewhere in case of disappointing performance is no longer be credible. To prevent the implied fundamental transformation (see chapter 2, section 2.3.2), the buying firm will usually not consider single sourcing. Whenever practicable, it will prefer a minimum of two suppliers for each component of non-trivial importance and complexity (Aoki, 1988; Cooper and Yoshikawa, 1994; Hagen and Choe, 1998; Liker et al., 1996). This dual-vendor policy, or more generally, multi-sourcing might decrease the degree of specialization, but it keeps open the firm's access to alternative sources of supply, thus avoiding excessive dependency and providing a safeguard against incentive degeneration. Since each supplier's performance can be assessed against the performance of at least one other supplier, suppliers will be constantly pressed to offer value beyond that of their competitors. Japanese automobile manufacturers have institutionalized this mechanism in the form of an explicit internal rating system in which suppliers are ranked according to their relative merit and in which the relative rankings are critically important in the allocation of contracts to suppliers (Asanuma, 1989; Gietzmann, 1996; Gietzmann and Larsen, 1998; Hagen and Choe, 1998; Konishi et al., 1996). Moreover, the possibility of comparative performance evaluation alleviates the need to decide upon performance standards in advance. These standards can at least in part be left to emerge in the process of inside competition and can be based on an assessment of actual achievements of the rival suppliers, which assures their situational relevance and validity. In addition, these emergent standards have a tendency to rise, absorbing along the way much of the slack -and part of the propensity towards opportunism- that might have existed initially.

3.3.3 Participatory monitoring

Arguably, rivalry between a limited set of inside suppliers is less pervasive than competition in a genuine market setting -especially so when contracting histories lengthen and the wedge between insiders' experience-fed competence and outsiders' more generic skills widens. Then, it is doubtful whether inside competition remains sufficiently powerful to elicit and maintain the kind of engagement the buyer aims at. Furthermore, the internally generated, emergent performance standards are mainly retrospective in nature. Although they are particularly useful in evaluating ex post the relative performance of individual suppliers, and although they serve to maintain the suppliers' general awareness that high quality performance is expected, they cannot by themselves prevent substandard outcomes, simply because they come too late. This is why the buying firm adopts an active, involved role in the process of contract execution, based on information that accrues through intensive monitoring of suppliers' behaviour and performance. In general outsourcing relationships, monitoring is usually confined to mere compliance control, i.e. the verification whether the outcome of the transaction conforms to predefined standards. In the Japanese outsourcing relationship, however, the scope of monitoring is much wider. Through the close interaction and extensive information sharing between buyer and supplier during the repetitive joint search for mutually beneficial ways to operationalize the successive contracts, and because of the accumulation of reference material resulting from multi-sourcing, information asymmetry diminishes. During this process, the buyer acquires a degree of understanding of the supplier's business that permits informed, perceptive appraisal of the behaviour of the supplier. Monitoring is no longer limited to the tangible outcomes of the transaction, but includes the entire process from which the output flows, allowing the buyer to distinguish between sincerely resourceful cooperation and mere perfunctory behaviour, and enabling a timely and appropriate, preventive response. Moreover, buyers learn to identify at an early stage the courses of action that are most likely to produce the desired results, and they may use this information to suggest improvements to the other suppliers. Monitoring, then, can be relied upon to preserve and to reinforce the supplier's engagement and to secure goal-consistent behaviour. This further alleviates the need to explicate performance standards in advance. The buyer -being an in-

formed, knowledgeable, and actively participating monitor and coach of the exploratory process of contract execution- acquires a quite profound influence on the ultimate outcome, with ample opportunity to adjust or correct the course of things during contract execution, and the frequent interaction between the parties provides sufficient occasion to realign perceptions on how to proceed. A sequential, emergent approach to contract execution might then be taken.

3.3.4 Atmosphere

An additional governance ramification of the strongly reduced information asymmetry is that it helps to stabilize the contractual relation, infusing it with a sense of reason and fairness. Because both parties posses the knowledge needed to appreciate the other party's position, they can be expected to adjust their behaviour to the specific circumstances that obtain. Unreasonable positions or excessive demands will be recognized as such and will be interpreted as acts of bad faith. Then, parties are more likely to search constructively for mutually acceptable solutions than to push for formalistic or power-based settlement when problems occur (cf. Gietzmann, 1996). Because in this setting, problems can be interpreted directly within the relevant context and can be corrected at an early stage, incidental flaws in performance need not be instantaneously devastating, but can be expected to elicit a more differentiated, forgiving response. This implication is especially important for suppliers, because it intensifies their expectations regarding the long-term nature of the relation. Furthermore, the open, constructive attitude can be expected to contribute to the innovative, problem-solving atmosphere required to encourage the creativity needed to achieve the goal of continuous improvement. A strong emphasis on results and a rigorous, formal style of evaluation on the other hand would be more likely to invite but defensive, risk avoiding behaviour from suppliers.

A similar sense of reason is likely to permeate negotiations on the division of the gains of successive adaptations. Parties enter negotiations with a pretty clear, preconceived notion of the other party's range of acceptable outcomes. The awareness of this range, and the possibility to assess independently its reasonableness facilitate identification of common ground. Consequently,

negotiations acquire a clearer sense of direction, yielding reduction of haggling costs. Harmony between the partners is further enhanced by the prospect of a long-term relationship, which allows parties to take a longer-term perspective when it comes to the equitableness of the transaction. An incidental inequity arising from an individual contract can relatively easily be accepted because subsequent contracts offer the opportunity to correct the imbalance (Dyer, 1997).

3.3.5 Information spill-over and appropriability issues

Since parties to the exchange obtain intimate knowledge about the other party's products, processes, and technological expertise, one might expect the prevalent information exchange between contracting partners to entail the risk of information spill-over (Oxley, 1997; Pisano, 1990; Teece, 1992). This knowledge could be used in a self-serving way. Although the mutual interest in continuity of the relation offers some protection against appropriation, one cannot safely assume this safeguard sufficient. This risk, however, seems no serious impediment. In fact, the Japanese evidence is quite sobering in this regard. In their case study, Cooper and Yoshikawa (1994) found that the automobile firm (in a non-keiretsu[3] setting) explicitly required its suppliers to share product and process innovations with their competitors to prevent the individual suppliers from acquiring a sustainable degree of technological leadership. There is some evidence indicating that this is not a peculiarity of this individual case, but a manifestation of a general practice in the Japanese context (cf. Gietzmann, 1996; Sako, 1992). The reason to require dissemination of the relevant information is that innovations -if kept private- could interfere with competition between suppliers all too strongly, dulling at least temporarily the incentive to further improve performance. Allowing exclusivity would also impede the coaching role of the buyer. Suppliers seem to accept this state of affairs, probably because technological leadership cannot be maintained for long anyway due to the high level of competence of their rivals. Furthermore, they do in fact receive an adequate compensation

3. The term keiretsu refers to the Japanese phenomenon of groups of interdependent enterprises that are typically bound together by financial ties and reciprocal board membership.

for their innovative successes in the form of a larger percentage of current business, as well as in the form of a more favourable position on the buyer's short list when new bids are invited. In the market conditions they face, such a position has genuine survival value. Consequently, although suppliers are not allowed to build a competitive position based on private access to existing technological expertise, they can found a differential advantage on proven ability continuously to improve extant technologies. This ability does not have to be shared. Hence, it could be argued that information sharing requirements are confined to almost transient details, whereas access to genuine core competencies-related knowledge is effectively blocked. Then, information spill-over can be considered relatively harmless, and the previously agreed to dissemination of private information need not be presumed to upset the suppliers' incentive to innovate.

3.4 The case of venture capital investing

3.4.1 Venture capital, problems of information, and lock-in effects

Venture capital financing can be described as the temporary provision of risk-bearing capital to immature companies to fund their intended trend-bending growth, in return for potential capital gains to be realized upon exit. Parties to a venture capital contract enter into a relationship with an expected duration that equals the period of time needed for the entrepreneurial firm to outgrow the venture stage. Premature exit of an economically viable venture tends to be prohibitively costly because venture capital investments lack marketability. The reason for this is both plain and profound: inevitable problems of information impede the smooth functioning of markets. Market liquidity presumes the public availability of sufficient information on performance and prospects of potential investments to assist decision-making. When funding mature companies with established reputations, disclosing comprehensive but rather aggregated data on past and current financial performance to the public at large can satisfy these information demands. But in venture capital, such data are unavailable. The essence of the venture capital challenge is to pick the ultimately successful companies at a point in time at which they have hardly -if at all- proven their mettle. Informative financial track records do not yet exist, and the merits of a proposed venture capital

investment can only be inferred from a direct assessment of technological feasibility, market potential, management skills and the like (cf. Fried and Hisrich, 1994; Ruhnka and Young, 1991; Tyebjee and Bruno, 1984; Wright and Robbie, 1996). However, access to the sensitive kind of information necessary to perform such a detailed analysis cannot be granted to anonymous market parties, but must be restricted to a particularly small audience because of its private and competition-affecting nature. This implies severe illiquidity of the investment; a condition that does not change until the venture has outgrown the venture stage. Until then, the contracting parties are effectively locked-in into the relationship (cf. Cable and Shane, 1997; Chan et al., 1990; Sahlman, 1990).

These lock-in effects are quite pervasive, notwithstanding the partial relief offered by stage-wise funding. Stage-wise funding refers to the common practice to divide the prospective flow of funds required to reach maturity into small portions, each of these being just large enough to reach the next milestone in the development process of the venture (Gompers, 1995; Sahlman, 1990). This practice is a natural response to the high level of uncertainty involved in venture capital financing, for it allows commitment of funds to be postponed until more information on the economic viability of the venture becomes available. This may appear as a textbook specimen of contingent contracting. However, after initial investments have been made, the venture capital firm cannot refuse additional funds unless the viability of the venture is doubtful. Refusal would imply premature termination of the project, since new financiers can most probably not be found. After all, in absence of public information, the venture capital firm will have an especially hard time trying to convince outsiders of the rosy prospects of the venture when the firm's own behaviour expresses scepticism as to the project. Hence, when provision of supplementary funds is economically sound, a large part of these funds has to be furnished by the original investors. To be sure, this does not deny the possibility to attract new co-investors along the way. But new financiers can only be persuaded to invest when the original investors are willing to increase significantly their stake in the venture as well. The implication is that venture capital qualifies as "relational finance", in which the

financier agrees in advance to provide additional financing in a class of unspecifiable –and therefore uncontractible- future states (Aoki and Dinç, 1997).

The venture's management team experiences similarly strong lock-in effects. From the point of view of the venture's management, there is usually no real alternative but to continue a once established relation with venture capital investors. Premature termination would most probably mean financial suicide, since it is highly unlikely that new sources of funds can ever be found. Venture capital firms tend to be heavily interconnected. They usually operate in syndicates and engage in intense networking activity to maintain access to the deal flow and to information (Bygrave, 1987; Fried and Hisrich, 1994; Murray, 1995; Norton and Tenenbaum, 1993; Sahlman, 1990; Tyebjee and Bruno, 1984). As a consequence, news travels fast in the venture capital industry, and some bad experience of an individual firm is likely to reflect negatively on the other firms' willingness to invest. The upshot is that an irreconcilable conflict with one particular venture capitalist all too quickly amounts to a clash with the entire industry and, consequently, to irreversible exclusion from the sources of cash.

3.4.2 Market incentives and active involvement

In the case of venture capital, complete contracting is clearly not feasible because of the inherent uncertainty, and it is hardly surprising that the typical venture capital contract contains no details on required performance or on state-contingent actions. Instead, it centres on the general division of rights to information, influence and control, and it does so in a particularly global fashion with but a few qualifications as to the way in which these rights are to be satisfied and the conditions under which they can or cannot be exercised (cf. Sahlman, 1990). Apparently, contracts settle for a rather vague definition of some overall framework for the governance of the relationship, leaving many issues to be decided upon as time goes by. However, such a contract does not protect against opportunism. To cope with the associated problems, venture capital firms rely on a mixture of mechanisms that pair market-like incentives with hierarchy-like influence on actions and decisions of the entrepreneurial team.

Market incentives are present in the compensation scheme. Since the venture's managers are required to invest heavily in their company, and since their eventual premature leave from the company has usually been made quite difficult by means of unattractive buy-back provisions, non-compete clauses and the like (Cable and Shane, 1997; Sahlman, 1990), their financial future is indissolubly connected to the performance of that company. Considering that the returns to the venture capital firm are also closely linked to the company's performance, this compensation scheme assures a substantial degree of alignment of the interest of the venture capitalist and the management of the venture. The congruence of goals mitigates opportunism and enhances adaptability. Because both parties are awarded the residual claimant status, the proceeds of any adjustment that affects the value of the venture will benefit both. Moreover, since the issue of the division of the gain is decided upon in advance in a relatively interpretation-free manner –essentially, division follows the respective shares in the venture- no problems of haggling are expected to arise on that account. Such adaptive decisions thus acquire a self-enforcing quality, and need not be explicated in advance.

Yet, the commensurability of goals will not be perfect, and considerable room for dispute between venture capitalist and venture is bound to remain (cf. Cable and Shane, 1997; Sapienza and Gupta, 1994). Parties are quite apt to disagree on the way in which their common goals are reached best. Furthermore, their risk preferences might differ or might drift apart as the venture develops. And some shirking and overconsumption of perquisites by the management team is to be anticipated considering that a part of the associated costs can be passed on to the venture capital firm. Therefore, additional checks and balances are required. Venture capitalists handle this situation by demanding extensive transparency to enable timely detection of impending problems, and by claiming the power to instigate appropriate action when management's response is believed to be inadequate.

To this effect, venture capital firms are actively involved in the management of their ventures (Fried et al., 1998; Sapienza et al., 1994; Sapienza and Gupta, 1994), assuring considerable influence on and providing the means to correct the decisions and actions of the entrepreneurial team. But instead of

assuming direct control, they preferably present themselves as supportive and competent advisors and sparring partners, using persuasion rather than harsh authoritarian force (Bygrave and Timmons 1992; MacMillan et al., 1989; Rosenstein et al., 1993; Sahlman, 1990; Sapienza and Timmons, 1989). At first glance, this advisory role might appear not to be a particularly strong basis to secure influence on decision-making. After all, advice can be ignored. However, the customary membership of the board of directors (Barney et al., 1989; Fried et al., 1998; Lerner, 1995; Rosenstein et al., 1993; Sahlman, 1990) grants the venture capitalist's opinion considerable momentum and impact. But equally important is that entrepreneurs seem to acknowledge the value of the venture capital firm's experience and complementary knowledge in areas where their own skills fall short, and they usually appreciate the input of the venture capitalist as an opportunity to improve decision-making (Cable and Shane, 1997; Rosenstein et al., 1993; Sapienza and Timmons, 1989). In addition, persuasion is a powerful instrument when buttressed with the option to use less friendly means to make sure that one's views on the matter are taken seriously. Venture capitalists do have such an option in the form of the right to fire and replace management (Gorman and Sahlman, 1989; Ruhnka et al., 1992). This privilege is quite costly to apply, and it clearly is an instrument of last resort. Less expensive devices are undesirable, though, because the magnitude of these costs serves to protect the venture's managers against excessive demands placed on them by the venture capitalist. And despite the costs, the replacement right remains a credible threat to discipline unreasonably stubborn entrepreneurs.

3.4.3 Participatory monitoring

To effectuate their involvement, venture capital firms vigilantly monitor the performance of the venture and the behaviour of its management team. Part of the information required to perform this task is explicitly contracted upon. The venture capital agreement usually requires the provision of detailed accounting and operating statements on a frequent basis (Mitchell et al., 1995; Reid, 1996; Sahlman, 1990). Furthermore, the typical contract allows the venture capital firm to request additional figures to satisfy any remaining information needs. However, an essential part of the information flow is not specifically dealt with in the contract. The accumulated reference material

associated with the usual stage-wise or sector specialization (cf. Amit et al., 1998; Bygrave, 1987; Norton and Tenenbaum, 1993) is relevant here, but more interesting are the flows of information that are activated during the interactive, participatory process of contract execution. As advisor, sparring partner, and board member the venture capitalist gains direct and frequent access to the venture, enabling unmediated observation of the venture in action. This arrangement allows monitoring to move beyond the usual ex post evaluation of quantifiable results in predefined area's of performance to include the actions that lead to the results on the one hand, and the more involved, less explicable aspects of performance on the other. The richness of the resulting information base expands the scope and increases the potential effectiveness of the venture capitalist's influence. Moreover, the more or less autonomous nature of the process that generates this information -the information transpires without active mediation by the management team- might serve to enhance the reliability of the formal reports and the communicativeness of the entrepreneurs, for it increases the likelihood that selective or distorted disclosure will be detected, mitigating the potential inclination to engage in such manipulative behaviour.

The frequent interaction between venture capitalist and management team, their common destiny, and the strongly reduced information asymmetry allow parties to forego ex ante contractual specification of the constituents of performance and their contingent adequacy. Direct influence on important decisions and actions and implicit, but highly relevant standards that emerge almost naturally during the process supplant predefined performance standards. These emergent standards support adaptability since they take into account the specific circumstances as they develop and transpire. The interactive process in which they arise guarantees their reasonableness and secures mutual consent (cf. also Cable and Shane, 1997).

3.4.4 Information spill-over

A final issue that needs to be addressed is that of information spill-over. The venture capitalist might be tempted to use the available information on technology, market potential, and the like in a self-serving way. However, the conceivable risk of information leakage is not a serious obstacle, because

leaking is likely negatively to affect the competitive position of the venture, thereby diminishing its value. Thus, such behaviour tends to run counter to the venture capitalist's interests. Moreover, reputation effects will be involved here. Because reputation is an essential asset to the venture capitalist in safeguarding the deal flow (Cable and Shane, 1997; Sahlman, 1990), due respect for confidentiality can reasonably be expected.

3.5 The outlines of a pattern: hybrids featuring exploratory control

Although there are differences between the cases, the foregoing analysis revealed some substantial similarities too, suggesting that the governance solutions adopted in the cases belong to the same subcategory of governance. This section emphasizes the functional similarities to sketch the contours of this subcategory as opposed to the more familiar compliance-focused type of hybrid governance.

In conditions of high uncertainty, contracts are either short-term, or incomplete. Atomistic short-term contracting is only feasible when the transaction does not require investment in transaction-specific assets, the value of which cannot be recouped in a single transaction. A non-negligible degree of asset specificity, therefore, tends to preclude the short-term solution, and parties considering a transaction with idiosyncratic properties will have to face the problems of contractual incompleteness. When uncertainty is present -but not pervasively so-, it is often possible to define in advance the required performance with sufficient clarity. Then, the major governance issue is to assure compliance, and hostage arrangements can be relied upon to fill the contractual gaps. Rising uncertainty, however, drives attention away from compliance control to process control. Due to the inherent ex ante indeterminacy of desired results, predefined performance standards become increasingly elusive and irrelevant, and contracts become general thrust agreements, the subsequent explication of which requires mechanisms that elicit adaptive, cooperative and coordinated behaviour from the parties in the exploratory process of contract execution.

In order to achieve the cooperative solution, there must at least be a justified expectation that the relationship has a long-term nature. This is a necessary

condition to induce the required level of relation-specific investments and to increase the potential future benefits from cooperation so that they are likely to exceed any short-term gains from opportunistic behaviour. Explicitly long-term contracts are not required, though. A self-enforcing mutual interest in continuance due to switching costs and lock-in effects suffices, provided that the governance structure offers the means to preserve a balance between the interests of the parties in the successive evolution of the relationship. This latter provision is important to handle the implied dependency and the associated problems of opportunism.

Partial relief is found by importing disciplinary elements of market-based control in the compensation structure, either directly by tying ultimate recompense to the market's appraisal of created value (as in the case of venture capital financing), or indirectly by linking subsequent business to the quality of current performance relative to endogenized competition (as in the case of Japanese subcontracting). This incentive structure serves to enhance goal congruence without requiring the goals to be specified in advance. Furthermore, it stimulates responsiveness to technological and market conditions, and it helps to ensure a reasonably objective, verifiable assessment of performance and associated rewards. This latter aspect is important to protect the agent from exploitation by the principal. In the presence of real, manipulation-resistant benchmarks, compensatory fairness is less ambiguous and more easily enforced. However, the strength of these mechanisms is insufficient, mainly because their signals come too late. That is why in the meantime, other mechanisms are relied upon to complement the market-based incentives.

These mechanisms originate from the active, participatory involvement of the principal in the sequential process of contract operationalization and execution. That exploratory process becomes a more or less joint responsibility. Close, repetitive interaction between principal and agent, buttressed with intensive exchange of information, supports continuous adjustment to the circumstances as they develop and provides the occasion timely to realign behaviour and perceptions on progress. To effectuate this involvement and to give the interaction a sense of direction, the principal adopts a monitoring

and coaching role, allowing prompt detection of impending problems and direct intervention if that seems warranted. The information necessary to perform this role may (partly) be explicitly contracted upon, but that need not be the case, since the interactive process itself generates much of the information. Then, secretive or selective attitudes are hard to sustain, and might well be counterproductive. The result is a situation of strongly diminished information asymmetry.

Similarly, the agent's assent to the monitoring role of the principal and his interventions may (partly) be formalized, but it can also be based on the agent's self-interest. Allowing the principal access to information and granting him influence on decision-making and operations is not primarily a negative, restrictive device. Rather, it is an instrument that helps to maintain high levels of performance that are mutually advantageous.

Table 3-1 summarizes the more important features of this structure –for which I propose the label *Exploratory Control Hybrid* because of its reliance on emerging insights that accrue during the exploratory process of contract execution- in contrast with the characteristics of the compliance-focused hybrid.

Uncertainty	
Low to moderate	*High*
Compliance Control Hybrid:	**Exploratory Control Hybrid:**
Contract: reasonably full specification of results or actions	Contract: general thrust agreement
Long-term contracts to induce relation-specific investments	Expectation of long-term relation to induce relation-specific investments
Focused monitoring: compliance control based on predefined, contractually anchored standards	Emergent standards against which to assess performance. Broad monitoring of processes and actions. Preventive intervention.
Hostage exchange as safeguard against opportunism	Information and market-based incentives as protection against opportunism

Table 3-1: Features of compliance-focused versus exploratory control hybrids

3.6 Summary and concluding remarks

Within the framework of TCE as it has been specified in the literature, it is quite difficult to explain the observed existence of hybrid governance of specialized transactions in conditions of high uncertainty. In such conditions, the predominantly compliance-inducing safeguards of extant TCE fail to offer sufficient protection against opportunism, because the minimum level of contractual detail required to rely on these safeguards cannot be provided in advance. Hence, extant TCE would suggest the hierarchy to prevail in those circumstances. However, this chapter argues that compliance arrangements are not necessarily the only mechanisms available within the hybrid form to mitigate opportunism. Different mechanisms or configurations thereof which are consistent with TCE's explanatory apparatus and which help to close the gap between theory and reality can presumably be found. This chapter intended to identify one such subcategory. It has sketched the outlines of a governance structure that is able to cope with the contractual problems that predictably arise when autonomous parties engage in transactions that pair

considerable asset specificity with high uncertainty. This structure invokes both market-based incentives and intensive exchange of information. The market-based incentives foster behaviour congruence without requiring the goals to be specified in advance. Information exchange and the resulting transparency allow significant direct control over the actions of the contractual partner based on vigilant monitoring without predefined performance standards. The combination of the two facilitates harmonious interim adjustment and correction, and this configuration of governance devices seems a feasible solution to the relevant contractual problems.

Feasibility, however, does not imply efficiency and the question whether the structure is in fact efficient needs to be addressed. This is essentially an empirical question that cannot be answered fully in the context of the present study. Nevertheless, a few general remarks can be made. Obviously, there are considerable costs involved in attaining the intensity of information exchange on which the structure rests. However, this exchange does not only assist to solve issues of governance, but may serve productive purposes as well: sometimes, the exchange of information adds value. In the automobile industry, it is a conditio sine qua non to meet the market's demand for innovative products of high quality, and in the venture capital case, it helps to improve decision-making by more fully incorporating the myriad of relevant aspects in the decision-making process. In cases like these, information sharing is already there, and one could argue its governance implications to be a byproduct which, as such, comes relatively cheaply. Moreover, the costs of governance need to be assessed in a comparative way. Assuming that in conditions of high asset specificity and uncertainty, the relevant alternative to the exploratory control hybrid is internalization, there is little reason to believe that the differential costs are particularly high. The hierarchy has analogous information gathering and processing needs, and it most probably incurs similar costs. When comparing the hybrid solution with the hierarchy from a contractual point of view, the real trade-off seems to be between the more powerful incentives and larger sensitivity to market developments of the former, and the superior knowledge protecting ability of the latter. Suppose that it is true that only unique knowledge of high strategic importance warrants genuinely vigorous protection. Suppose furthermore that in conditions of significant

uncertainty, the quality of internal supervision tends to relate negatively to the distance between a particular activity and the core competencies of the firm. The upshot would be that for idiosyncratic activities that are hard to specify in advance but that do not require sharing of strategic know-how, hybrid governance is quite likely to be contractually more efficient than hierarchical governance, provided that sufficiently powerful market incentives can be activated[4].

The implications for TCE are threefold. The first is that the economic viability of hybrid governance is less susceptible to uncertainty than has been assumed previously. The second is that the generic cluster of hybrid governance is amenable to further specification and that it subsumes at least two distinct subcategories: the hostage-like type and the class based on exploratory control. The third implication is that, at least for now, TCE seems to do quite well without additional variables.

4. This tendency may be strengthened by (technological) economies of scale, thus shifting the odds in favour of hybrid contracting even more strongly.

Chapter 4

Explaining Management Control Structure Variety: A Transaction Cost Approach[1]

4.1 Introduction

One of the quintessential problems of management control (MC) as a field of scholarly inquiry is to explain control structure variety within and between organizations. Why is it that some organizations use extensive, formal planning to direct their efforts, whereas other organizations seem much less deliberate in their aims and actions? Why do some firms count on rules, procedures and standards to achieve control, whereas others rely largely on individual judgement to guide behaviour? Such fundamental questions, however, have not yet found a fully persuasive answer. To be sure, MC theory has come a long way in addressing the problem of control structure variety. This problem has always been the focal point of contingency theory as one of the more prominent streams in MC-thinking (Fisher, 1995). Also, agency theory has spawned a vast literature that is relevant to this issue (Baiman, 1982; 1990). But these literatures –although the source of many important insights- do not amount to a coherent and inclusive answer to the problem at hand. The contingency approach builds on the central premise that the appropriateness of MC structures is affected by some set of circumstantial factors faced by the organization. But this approach is more a general idea than an articulated theory in the sense that it has no a priori intuition of its own as to what the pertinent factors are and as to their likely consequences. Of course, researchers within that stream do have pretty clear notions about the variables and their effects, but these notions come from sources outside contingency theory per se. These sources are diverse and tend to differ widely across researchers, on account of which the contingency stream is rather heterogeneous (cf. Chapman, 1997; Fisher, 1998; Langfield-Smith, 1997;

1. This chapter is an adapted version of my paper with the same title, published in *Accounting, Organizations and Society*, Vol. 26 (2001): 419-441.

Otley, 1980). Moreover, contingency models tend to be partial, focusing on elements of control systems (e.g. budgeting systems) as opposed to addressing directly the full configuration of control devices. For these reasons, the contingency approach does not provide a self-sufficient and fully fledged perspective on the issue of MC structure variety. Agency theory suffers from effectually similar weaknesses. Because agency theorists are known to have a strong predilection for formal mathematical modelling, they normally choose to focus on a limited number of well-specified, highly stylized elements of MC systems (cf. Merchant and Simons, 1986; Scapens, 1991), rather than attempting to capture control in its entirety. They furthermore tend to confine themselves to single period, single agent models (Baiman, 1982; 1990), which may lack representational validity. Therefore, their contribution to knowledge in the field of MC -as that of their contingency theory counterparts- remains fragmented, whereas more inclusive approaches are also needed to understand MC.

This chapter intends to contribute some insights that may increase the theoretical coherence of the study of MC structure variety. More specifically, it examines the potential of Transaction Cost Economics (TCE; Williamson, 1975; 1979; 1985; 1996) to provide a cogent, parsimonious perspective that is able to inform the study of MC. A prima facie, this seems a reasonable thing to do, because TCE and MC share a common interest in understanding purposive control, and both are committed to the explanation of control structure choice. TCE has proven quite successful at this in its own domain, and trying to transfer the insights accumulated there to the domain of MC might well be worth the effort. Appearances may be misleading, though, and section 2 of this chapter provides a more thorough examination of the degree of correspondence between commonly held perspectives on what MC is about and on the direction in which to search for explanations on the one hand, and the theoretical angle of TCE on the other. This assessment allows a preliminary consideration of TCE's conceptual relevance to issues of MC, and helps to clarify the general nature and scope of TCE's potential contribution. The second step is to move beyond mere consideration and involves a concrete demonstration of what TCE is able to offer. To this effect, the logic of TCE is asked to speak for itself in section 4.3, in which I present a tentative transac-

tion cost theory of MC. This theory being tentative, however, implies that future applications will not be entirely free of problems. Section 4.4 reflects on a number of issues that are likely to arise there. Finally, section 4.5 concludes this chapter with a summary and discussion of the argument.

4.2 TCE and Management Control: some preliminary considerations

Although TCE has some history in management accounting and control (for instance Johnson, 1983; Van der Meer-Kooistra, 1994; Van der Meer-Kooistra and Vosselman, 2000; Seal, 1993; Spicer and Ballew, 1983; Swieringa and Waterhouse, 1982; Tiessen and Waterhouse, 1983), Baiman's observation that TCE "has not, as yet, had a significant effect on the direction of managerial accounting research" (1990: 346) is as true today as it was a decade ago when he wrote these words, and is also true for the wider domain of MC. The reason for this lack of impact is not entirely clear, but it is conceivable that some fundamental discrepancy between the demands of the domain that MC purports to cover on the one hand, and the nature and scope of the explanatory apparatus of TCE on the other explains TCE's virtual absence from MC-thinking. This current section attempts to examine the degree of correspondence -or conflict, as the case may be- between MC and TCE. Such an evaluation of basic compatibility requires an explication of what MC-theory should ideally be able to do, and an identification of the general properties of aspiring core theories of MC that are required to enable sufficient coverage of the domain of MC. To avoid an all too personal bias, this section will start from an examination of some broad definitions of the field of MC. Presuming that such definitions adequately reflect common perceptions about the purposes of MC, they may provide some insight into the criteria and desiderata that are implicit in current MC-thinking and that may be used to explore the conceptual suitability of TCE to inform the study of MC.

4.2.1 What is Management Control about anyway?

MC has been defined in numerous different ways. Nevertheless, the many definitions that are proposed in the literature do share a lot of common ground. Although MC has also been studied in a political arena, e.g. as a tool to conceal or legitimize the exercise of power, as a means to exploit the

working class, or as an instrument to construct an image of rationality that better fits constituents' expectations (see for instance Covaleski et al., 1996 for an overview of this literature), most appear to describe MC as a purposive process or set of devices and mechanisms, that through its influence on the behaviour of actors within an organization, intends to contribute to the achievement of some pervasive objectives of that organization. Thus Flamholtz defines an organizational control system as "a set of mechanisms which are designed to increase the probability that people will behave in ways that lead to the attainment of organizational objectives" (quoted in Merchant, 1985: 5). Ansari's definition is concordant: "a control system […] may be simply described as those organizational *arrangements* and *actions* designed to facilitate its members to achieve higher performance with least unintended consequences" (Ansari, 1977: 102; italics in original). Yet another definition sees MC as "the process of guiding organizations into viable patterns of activity in a changing environment", which statement the authors take to imply that control is about influencing "the behaviour of […] organizational participants so that some overall organizational goals are achieved" (Berry et al., 1995: 4). And after a review of some of the relevant literature, Merchant and Simons (1986) note that control definitions generally include two key concepts: a focus on the behaviour of organizational participants, and a concern with the effect of this behaviour on organizational outcomes. These definitions are presumably quite useful in that they seem to encapsulate a significant part of the work that is being done in the name of MC, and will be used as a reference point in the preliminary assessment of the suitability of TCE to guide research in MC.

4.2.2 The level of analysis

Apparently, MC is regarded as a functional system or process, its purpose being the furtherance of some organizational goal or goals. This view suggests that MC is an instrument of organization and that it must be understood within the organizational context in which it operates and of which it is part (cf. Birnberg et al., 1983; Hopwood, 1978; 1983; Lowe and Chua, 1983; Merchant and Simons, 1986; Otley, 1984). Understanding MC thus presupposes an understanding of organization, and basic theories in MC are likely to share much of their explanatory apparatus with organization theory. At least, they

share a common level of analysis –that of the organization and its substantive parts-, albeit that MC-theory may require a higher level of resolution: since MC concentrates on a particular aspect of organization, more detail may be necessary.

It is quite possible that the lack of impact of TCE on MC-thinking is caused by concerns regarding the level of analysis. After all, TCE has its source in the domain of microeconomics, and has been used primarily to explain the trade-off between the generic modes of governance. MC on the other hand is more interested in trade-offs within just one of the generic modes: the hierarchy. But if this really is the reason, then it may well be mistaken. As has been argued in chapter 1, TCE is not inimical to the view that the distinct generic structures (markets, hybrids, and hierarchies) are heterogeneous categories that subsume a variety of different configurations of control devices –why else would these structures be called generic? Yet, TCE suggests that these diverse control arrangements can meaningfully be addressed as variations on the transaction cost theme, using its general analytical apparatus. And there is no inherent reason why this suggestion would not be valid. Although its application has been confined largely to issues at the level of the generic forms, this emphasis is more coincidental than fundamental. TCE's explanatory structure is highly micro-analytical in orientation, its unit of analysis being the (individual) transaction and its focus being on the problems of governance that are associated with that particular transaction. Now it is true that the problem-solving devices (the governance structures) have been formulated at a markedly high level of aggregation, but that is mainly because the originally envisioned and initially attempted applications happened to demand that level. The micro-level at which TCE's variables are located permits a more detailed study of governance than is usual in TCE-based studies, and on this account, there is no a priori obstacle to TCE's application to issues of MC.

4.2.3 A behavioural focus

There is broad consensus that MC works through its influence on people. As a consequence, not any theory at the organizational level will do equally well, and to succeed as a basis on which to build MC-theory, the candidate theory must incorporate considerations of a behavioural kind in its explanation. A

prima facie, TCE presents no problems here, for the notions of bounded rationality and opportunism are undeniably behavioural indeed. But then again, it is not entirely clear what the academic MC-community in general would consider to be *sufficient* behavioural content. After all, a model of man based solely on these notions is not exactly descriptively rich. It may even be criticized as derisively incomplete. On the other hand, however, it may be argued that fullness of behavioural detail is not a relevant yardstick by which to measure candidate theories. MC does not purport nor need to portray man in his entirety, but may settle for an instrumental understanding of how human behaviour affects control problems and solutions. If one accepts this position, there is not much gain in evaluating the assumptions as if they were a theory of human behaviour in their own right –for obviously, they are not-, but they should be judged by their implications for the domain of MC and predictive value in that field. Both bounded rationality and opportunism are in fact the source of many of the refutable implications of TCE, and are likely to be similarly productive when applied in the context of MC. But whether sufficiently full predictive coverage of the relation between human behaviour and control is included in the bargain is an empirical matter that cannot be settled here.

4.2.4 Goals and effectiveness

The generally subscribed to view of MC as a means to assist achievement of organizational goals implies that ultimately, explaining MC must come down to demonstrating the actual contribution of observed MC practices to the attainment of these goals. MC is about organizational effectiveness, whence theories of MC require some form of specification of the objectives of the organization and must be able to relate MC to the attainment of these objectives. This, however, is problematic (Berry et al., 1995; Lowe and Chua, 1983; Lowe and Puxty, 1989; Otley, 1983; 1999). One problem that arises here is the convoluted issue as to whether organizations can in fact have goals or that having goals is the province of the individuals comprising the organization (Cyert and March, 1963). Also, there is the issue as to the source of the objectives, involving questions as to the process by which they are arrived at, by whom they are influenced, and by what means this influence is exerted (Berry at al., 1995; Lowe and Chua, 1983; Otley, 1980). Such issues are absolutely

crucial if one chooses to study MC in relation to power, politics, ideology, and conflict, and in its role in the construction of perceived societal or organizational reality[2]. One could, however, argue that for the purposes of MC in its more conventional conception, i.e. being about the furtherance of organizational goals, these issues are not necessarily part of the core problem. In that view, MC may rest content with the identification of some pervasive objectives that give direction and coherence to the combined efforts of the members of the organization, and need not be concerned with the source and nature of these objectives. Presuming the existence of such objectives, MC may treat these as a given and concentrate on the question as to how MC structures and practices help to accomplish these goals. This is obviously a somewhat blinkered approach, but awaiting a more balanced point of view that integrates the political and conventional perspectives, some abstraction is unavoidable.

But then, concentrating one's efforts on the analysis of how MC supports goal attainment has problems of its own, because the actual goals may be quite difficult to identify. The actual goals do not necessarily coincide with the official goals, for the readily observable, officially stated objectives (e.g. those expressed in mission statements and declarations of corporate policy) tend to be cast in a language that is perhaps inspirational but too vague and insufficiently operational to reflect what really moulds the organization's accomplishments and efforts (cf. Lowe and Chua, 1983), Then, the true operative objectives need to be inferred from what goes on in the organization.

One popular way to deal with this difficulty has been to assume that organizational goals -whatever they are and wherever they come from- are translated into fairly concrete and explicit strategies that are to guide organizational behaviour towards goal attainment. How this translation is being made is an issue that is left to the domain of strategic planning and is considered to be

2. This is not the place to discuss these more 'critical perspectives'. The richness and diversity of these perspectives become quite clear from the paper collections edited by Chua et al. (1989) and Cooper and Hopper (1990). Other useful references would include for instance Carruthers (1995), Covaleski and Aiken (1986), and Covaleski et al. (1996).

outside MC's territory. This approach, epitomized by the influential work of Anthony (1965, 1988), confines the function of MC-systems and processes to ensuring that the formulated strategies are being implemented as planned. This move, however, is unsatisfactory for it ignores that strategies, rather than invariably being the result of explicit and tractable prior decision making, frequently emerge and evolve during the course of business (Mintzberg and Waters, 1985). It also neglects the constituent role of MC in crafting strategy (Simons, 1990; 1995). The Anthony-approach, therefore, is bound to miss much of what drives the organization.

Essentially, there seem to be two different lines of attack to deal with this issue. One is to attempt to identify the general and fundamental objectives that are shared by all organizations alike –as for instance long-run survival (Lowe and Chua, 1983)-, and then to focus on the contribution of MC in realizing these universal objectives. The other is to work from the empirically identified patterns of actions, decisions, and beliefs that characterize the organization and that shape its efforts and functioning. These patterns of "organizational order" (Dermer, 1988) may be taken as the organization's apparent operationalization of the actual objectives, and MC and its contribution to effectiveness may be studied in relation to these patterns. The latter approach seems the more promising, because the former is so broad and indeterminate that it is unlikely to render any discriminating results. It bears notice, however, that taking the second route implies that MC can no longer rightfully claim that it is concerned with organizational effectiveness per se, because by working out of actual patterns of organizational behaviour, it takes the existing patterns for granted. The focus of MC, then, shifts to more instrumental effectiveness –is control effective in supporting what the organization apparently tries to achieve?-, and the higher level question as to the overall efficacy of the particular patterns in light of the organization's ultimate objectives –is the organization trying to achieve the right things?- is neither asked nor answered, at least not in a systematic, comprehensive way. But considering that this more humble aim leaves a lot to be discovered, one may well be prepared to live with that. Be that as it may, no basic theory of MC can avoid to explicate its criterion of effectiveness. Specification of the

goals –fundamental, instrumental, or otherwise- is thus essential, and explication of the way in which MC assists to accomplish these goals is required.

TCE more or less combines the 'universal' and the 'instrumental' approaches. TCE almost profanely submits that whatever the full range of objectives of the organization, there always is the pervasive and dominant need to work out the alignment between transactions and governance structures in respect of transaction cost efficiency. According to TCE, (relative) economic efficiency is a genuine survival condition, and its pursuit –i.e. the avoidance of maladaptation and waste- is crucial, on account of which TCE asserts the urge to economize on transaction cost to be a crucial determinant of control arrangements. But it simultaneously concentrates the analysis on the actual transactions that occur within the organization and on those that cross its boundaries, and confines itself to the question whether these are being controlled efficiently.

Such an analysis is obviously not exhaustive. For one, the analysis ignores objectives of a non-economizing kind. This is 'negligence by design' of which TCE is fully aware: TCE holds economizing on transaction cost to be the main case and not the only case (Williamson, 1996; 1999b; Williamson and Ouchi, 1981). But inasmuch as economizing is in fact a main case factor in control structure choice -and this is an empirical question that cannot be answered a priori-, starting from there is entirely defensible, if only as a matter of priority. The second blind spot is that the analysis more or less takes for granted the existing set of transactions, i.e. the apparent operationalization of the organization's goals and strategies. To be sure, the TCE approach is able to incorporate considerable contextual detail by studying the transactions in relation to the patterns of activities, beliefs and intentions of which they are part in an effort to interpret the concrete transactions in terms of their role and meaning in the organization's endeavours. The resulting insights enter the analysis as elements of the contractual problem, for they either co-define desired performance or influence the characteristics of the transactions that need to be governed. But the approach ignores the question as to the overall effectiveness of these transactions in light of the ultimate objectives of the organization. Referring to the earlier discussion of this point, however, one

may argue that this problem is insoluble –at least for now. This, then, would be 'negligence by necessity' with which one has to learn to live.

4.2.5 Differential effectiveness

Although explaining MC requires explication of how MC supports organizational effectiveness, a simple assessment of the positive contribution of some particular control structure to that end is insufficient. MC is a composite concept, and MC systems, structures or processes as they exist in reality are compositions of a large number of interrelated, complementary or possibly conflicting elements (Ansari, 1977; Flamholtz, 1983; 1996; Lowe, 1971; Lowe and Puxty, 1989; Otley, 1980; 1999; Rotch, 1993). Now assuming that in general, there are many different ways in which elements of MC can be configured to foster the achievement of organizational effectiveness, a first order examination of the contribution of some specific configuration of MC components is inconclusive, and one also needs to show that the particular configuration is preferable to other conceivable arrangements in respect of effectiveness. As a consequence, MC-theory should shed light on the functioning of these configurations of control devices, and it should be able to address these control packages in their entirety in terms of differential functionality.

TCE offers a procedure that may well be used for this purpose. Assessment of transaction cost efficiency within TCE takes the form of a remediableness check (see chapter 2). This comparative approach to efficiency is quite helpful for it circumvents the practically insurmountable problem of quantification of the relevant costs functions associated with control arrangements. It merely requires a (qualitative) demonstration that a particular control structure is better positioned to foster successful contract execution than the available alternatives. Since, however, it is always conceivable that there exists a superior, but hitherto ignored alternative, any such assessment of efficiency is necessarily provisional. But it is at least operational. Moreover, because the procedure urges the researcher to explicate the particulars of the efficiency assessment, it allows theoretical and empirical scrutiny and discussion of the argument. From an academic stance, this seems to leave little to be desired.

4.3 A Transaction Cost Theory of Management Control

An organization depends on the contribution of a large number of individuals to achieve its aims. MC is about controlling these contributions to ensure their quality. TCE suggests that MC-structures can usefully be analysed as (implicit or explicit, formal or informal) contracts between the organization and its members that serve to govern the contributions. More specifically, TCE suggests that MC-structures can be understood as efficient solutions to the incentive and enforcement problems that arise in contracting for and controlling these contributions, and that these problems are predictably associated with the characteristics of the desired contributions. However, to tailor this general idea to the domain of MC, both the variables and the implications that can be derived from these need to be rethought to increase the level of resolution.

This has been attempted before. Based on –or perhaps more accurately: inspired by- transaction cost reasoning, Ouchi (1979; 1980) developed a set of control archetypes to describe and explain variety within the hierarchical mode of governance. His framework, however, does not deplete TCE's explanatory power[3]. Neither does it describe empirically observable variety sufficiently fully. The task of the present section, therefore, is to formulate a more exhaustive taxonomy of control archetypes, alongside with an articulate, theoretically substantiated and empirically testable explication of their respective habitats. For the purposes of this chapter, a control archetype can be defined as a characteristic, discrete configuration of control devices that is descriptively and theoretically representative of a significant group of observable management control structures and practices. The idea of control archetypes seems especially useful for it is compatible with the need to address control in its entirety, i.e. at the level of the organizational (sub-)system rather than at the level of the individual mechanisms or actors, whilst simultaneously reducing the complexity associated with the attempt to deal with control as an organizational phenomenon.

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3. To be fair, it should be stressed that TCE itself is in a much better state now than it was some twenty-odd years ago when Ouchi called upon it to develop his framework.

The framework proposed here features three variables that define the nature of the activities to be controlled and the control problems to which they give rise: (1) uncertainty, or the extent to which the desired contributions are amenable to ex ante programming; (2) the degree of asset specificity; and (3) the intensity of post hoc information impactedness. The first two of these variables are taken directly from TCE. The last one can also be traced to TCE, but is given a more prominent place and is more fully worked out to increase the expressiveness of this variable and its effects on control structure choice. Ultimately, these variables and their consequences are used to explain nine different control archetypes, five of which belong to the hierarchical mode of governance (see tables 4-1 and 4-2 on page 94 and 95 for further detail). However, as a first approximation, figure 4-1 introduces some broader classes of control and indicates their respective habitats in terms of the attributes of the activities with which they are associated.

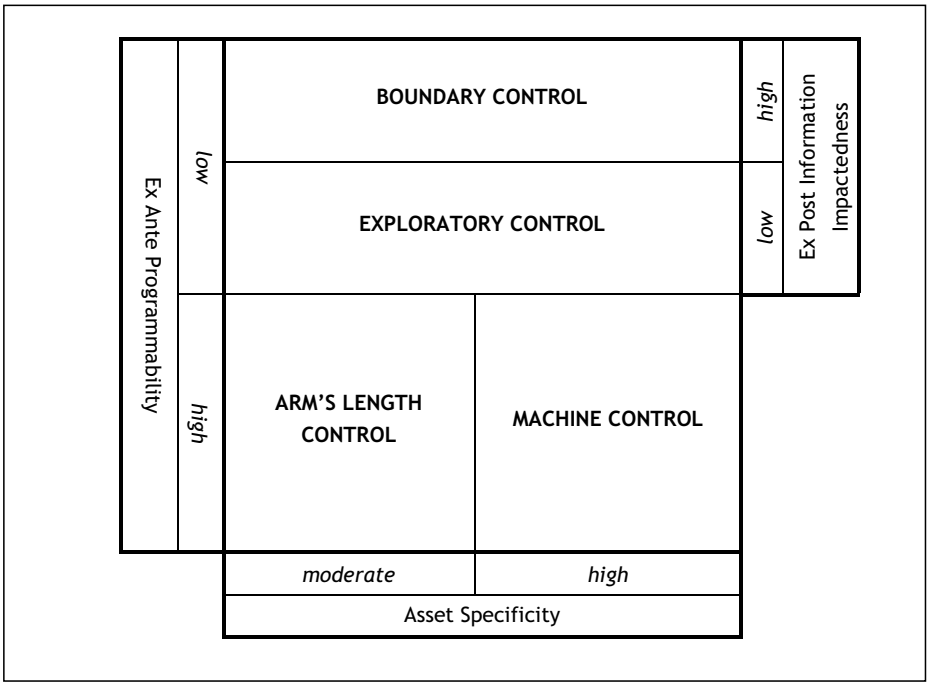

Figure 4-1: Four broad control classes and their habitat

Arm's length control relies to a significant extent on self-enforcing, market-like mechanisms. These mechanisms are called upon to outline adequate performance and to help ensure that actual performance matches that level. It focuses on outcomes, and the contributor retains substantial autonomy as to how these outcomes are to be brought about. Machine control works from predefined norms and standards of administrative origins. These norms and standards may refer to outcomes as well as to actions, and control is essentially involved in compliance to these prescriptions. Exploratory control is characterized by emergent standards and mutual adjustment to insights as they accrue during the activity. It is basically concerned with the provision of incentives to support timely and truthful dissemination of information and with ensuring that information's impact on behaviour. Boundary control is negative or proscriptive in nature. Rather than stimulating desired performance, it concentrates on the prevention of unwanted behaviour.

Some of these broader classes of control (especially machine control and arm's length control) correspond to well-known patterns of control from the MC literature. Others (exploratory and boundary control) are relatively new as theoretical constructs, although I believe that their relevance to the field of MC is easily recognized. Exploratory control for instance seems to capture much of –or at least relates to- what has recently been reported in case studies addressing control in circumstances of ambiguity (see for instance Marginson, 1999; Mouritsen, 1999, and –less directly- Vaivio, 1999a; 1999b). And boundary control is reminiscent of Simons' (1995) use of that term.

4.3.1 The effects of uncertainty: programmable versus non-programmable contributions

In TCE, uncertainty is a condition that can arise from many sources, including market dynamics, disturbances in the external environment, environmental complexity, task uncertainty and complexity, and unfamiliarity. However, whatever the source, the effects are similar: transactions are not amenable to up front programming, and maintaining flexibility to allow adaptation to events as they unfold and to information as it accrues becomes imperative. This basic insight –which also has a long history in MC, albeit under different

names and in various guises[4]- allows organizational activity to be grouped in two broad categories: (1) programmable activities, i.e. activities for which the organization possesses sufficient knowledge and information to decide in advance on the way in which they are to be executed in order to achieve success, or activities for which the outcomes that may realistically be expected to result from them can be defined ex ante; and (2) non-programmable activities, i.e. activities for which the organization lacks the a priori ability and experience to relate actions to outcomes. The availability of norms and standards in the first group permits a fairly comprehensive ex ante articulation of the characteristics of the contribution that is required from the members of the organization, and contracting for that contribution can be reasonably complete. Control, therefore, is expected to be prescriptive or authoritative in nature, featuring rules of behaviour, specific instructions, and relatively rigid performance targets, and to be focused on assuring compliance to these pre-imposed norms. In the second group, in contrast, it is not possible to specify required contributions in advance. Due to the absence of ex ante standards, contracts must be of a general thrust nature, emphasizing a general commitment or sketching the broad confines within which performance ought to fit, rather than delineating a precisely specified contribution.

4.3.2 An interlude: low asset specificity

The nature of control is further defined by the degree of asset specificity or idiosyncrasy of the activities. The level of idiosyncrasy affects the options which are available to secure or elicit contract congruent behaviour. Low asset specificity implies that the desired contribution is of a general purpose kind, not involving assets that are tailored to the organization. Such contributions are likely to be governed by the market mechanism. In this situation of large numbers bidding, the market is quite able to curb opportunism and to secure adaptation when circumstances change; both opportunism and non-adaptive behaviour would mean to lose customers and, therefore, carry their own demise. Moreover, the market mechanisms comes cheaply here, which

4. Early references would include for instance Burns and Stalker (1961) and Galbraith (1973). Some recent reviews of the abundance of empirical work in this area can be found in Chapman (1997), Fisher (1995, 1998) and Hartmann (2000).

makes it the efficient control choice. This prediction is independent of the degree of programmability or uncertainty. Because adaptation is the almost automatic, irresistible result of a competitive process and not the outcome of sovereign decision-making by individual actors with their potentially opportunistic propensities, market governance can tolerate significant uncertainty and does not require ex ante specification of desired performance. The condition of low asset specificity thus suppresses the effect of uncertainty described in section 4.3.1: whatever the degree of programmability, the 'invisible hand' takes care of control. Although a large number of firms appear to rely on market-like instruments for control purposes (e.g. market-based transfer prices or performance benchmarks) the *Market Control* archetype in its pure form is, however, generally considered to be outside the domain of MC, and is referred to solely for reasons of fullness of exposition. Whilst due attention will be given to control archetypes that absorb market discipline in their hybrid or hierarchical structures, no further examination of pure market control will be attempted here.

4.3.3 Programmable activities and high asset specificity: Machine Control

Rising asset specificity implies a decreasing number of potentially competent contributors and an increasing dependency on those few contributors that are in fact available. And inasmuch as the contributor is to invest significantly in specialized assets (including knowledge and skills) as a prerequisite for his or her contribution, a reverse dependency relation builds up as well. The resultant lock-in effect entails the need for special devices to alleviate opportunism.

In the group of programmable activities, where control takes a prescriptive orientation, the emphasis will be on compliance to the predefined norms and standards. Given a high degree of asset specificity, contracts –complete as they may be- are not easily enforceable in a legalistic or formalistic sense, for the (mutual) dependency allows substantial leeway for strategic ploys, if only because high asset specificity tends to involve low observability to outside enforcement agencies. The conflict-evading hierarchical solution of easing the link between individual compensation and the outcomes of the contribution mitigates the incentive to engage in such games. Buttressed with monitoring

and a policy that rewards complaisance, this structure may effectively assure compliance. This type of control strongly resembles the kind of control the proponents of conventional responsibility accounting had in mind when making their recommendations. It is also closely related to the 'mechanistic organization' described by Burns and Stalker (1961) and the 'machine bureaucracy' portrayed by Mintzberg (1983). It features standardization and regulation of behaviour, codification of budget targets, detailed monitoring, systematic measurement of performance on pre-defined dimensions, and clearly identified areas of accountability, usually mirrored in the organizational structure. Its emphasis on programming, progress monitoring, and correcting deviations from pre-set directions suggests the label *Machine Control* for this structure.

The machine control archetype can be refined by distinguishing A*ction Oriented* and *Result Oriented* machine control types. In the action oriented approach, control is predominantly achieved via codification of actions and supervising observance of the rules and instructions, whereas control of the result oriented kind hinges primarily on target-setting, accountability, and reward structures that serve to encourage target-directed behaviour. This distinction has been dealt with quite extensively in the literature -see for instance Merchant's results controls and action accountability controls (Merchant, 1982, 1985), and Ouchi's behaviour control versus output control (Ouchi, 1977)- and need no amplification here, except for the efficiency properties of the alternatives.

In many instances, there will be no real choice between action oriented control and the result oriented approach, simply because the available information enables the one and not the other (Merchant, 1982, 1985). Then, straightforward feasibility considerations will be decisive. But when both approaches are feasible, result control will usually reign for it tends to require less elaborate structuring –thus relieving the pressure on bounded rationality-, is likely to demand less higher level involvement, and is more supportive of adaptation. The latter aspect is important when –low uncertainty notwithstanding- there may still be some unanticipated disturbances or opportunities demanding a flexible response. The result control variant may rely on a per-

formance-dependent reward system to provide the incentive to elicit that response, whereas the action oriented alternative has no such option and needs to revert to time-consuming hierarchical redefinition of required behaviour.

4.3.4 Programmability and moderate asset specificity: Arm's Length Control

Between the extremes of high and low asset specificity (fostering machine control and market control respectively) are the activities of moderate idiosyncrasy. This is the domain of combinatory forms of control, in which residual market discipline is joined with elements of administrative origins (*the hierarchical type*) or with hostage arrangements (*the hybrid type*) to safeguard transactions. These control structures are efficient when competition is too thin to bank on the efficacy of market control, whilst the activities are not sufficiently essential to warrant fully fledged machine control with its bureaucratic burden. Typical for these control solutions is that the contributor retains significant autonomy, whence these configurations of control can be referred to as *Arm's Length Control*. Consider the hybrid variant first.

Hybrid governance structures are defined as "long term contractual relations that preserve autonomy but provide added transaction-specific safeguards compared with the market" (Williamson, 1996: 378). Thus, they refer to contracting between autonomous market parties, i.e. to outsourcing relationships. The long-term nature of the contract is indicated to enable compensation for durable transaction-specific investments. The added safeguards frequently include reliance on hostage arrangements to correct asymmetric stakes in the contract. In such arrangements, parties to the contract are required to make investments or to transfer valuable assets, the full cost of which can only be recovered in case of successful contract execution, thus curtailing the potential gains from opportunistic defection and compensating for the loss of market discipline that results from small numbers bidding. Examples of these hostage arrangements are contracts that specify some form of penalty payment to the compliant party to compensate for any non-salvageable losses incurred because of contract defection by the other party, or the provision that require a party to commit resources that are similarly

affected by the outcome of the transaction to balance specific investments made by the other party to the exchange. In addition to such hostages, specialized arbitration may be installed to settle any disputes that may arise during contract execution.

If, however, efficient hostage arrangements cannot be drafted, hierarchical arm's length control may supplant the hybrid form. Also, the hierarchical variant may arise when (full) outsourcing (the hybrid solution) is considered premature or otherwise undesirable. The organization may for instance want to retain some in-house production as a cost-effective disciplinary device in its relations with outside contractors and as a credible threat in its negotiations with these suppliers. Or it may want to preserve its access to the technology involved in the activity for strategic reasons, as would be the case when the organization regards a technology that is currently hardly vital, to embody a valuable option on future growth. Hierarchical arm's length control relies to a significant extent on market mechanisms, but provides additional and more active means to influence performance. It more or less imports market discipline in the hierarchy, treating the department or division as independent, assessing its record relative to outside competitors' performance, and (probably) tying rewards to performance, whilst maintaining recourse to the rich repertoire of managerial intervention should performance drift out of line.

4.3.5 Non-programmable activities: a note on post hoc information impactedness

The influence of idiosyncrasy on the governance of non-programmable activities is akin to the effects described for the programmable class: low asset specificity favours market control, moderate levels of idiosyncrasy indicate hybrid or hierarchical control, and highly specific transactions request hierarchical governance. A closer examination will follow shortly. But first, another variable needs to be addressed: the level of post hoc information impactedness, i.e. the extent to which the organization is able to observe and to assess perceptively the true quality of actually delivered contributions. The relevance of this variable is confined to the category of non-programmable activities; in the case of the more programmable ones the required information

must by definition be available beforehand. It is also irrelevant when asset specificity is low: in that condition, the market mechanism takes care of performance evaluation and summarizes all relevant information into easily accessible price signals.

Non-programmable activities carry a certain amount of indeterminacy as a result of uncertainty. This condition may dissolve over time when in the process of contract execution, information accrues on the actual state of the world and more intimate knowledge on the particulars of the activities becomes available, allowing the organization to 'recognize the quality of performance when it sees it'. If these emerging insights spread through the organization, gradually becoming common knowledge, post hoc performance appraisal may be fairly uncontroversial. In this case, the organization is able to evaluate performance using emergent standards that are shared (or at least known) by those involved in the process. This is a situation of relatively low ex post information impactedness, in which control is expectedly engaged in creating and preserving information sharing and in (re)adjusting and (re)aligning perceptions on progress. Control structures that can be so described will be referred to as *Exploratory Control*.

It is important to note that the condition of low post hoc information impactedness is not necessarily an exogenous variable that can be treated as a given characteristic of the activities in explaining manifestations of control. It may also be –and often is- the product of control structure choice. There are, however, situations in which ex post information impactedness remains incurably high, meaning that although the contributor may acquire private information on his or her performance, that information cannot be reliably communicated to and evaluated by other members of the organization, due to either its specialized character, or to the impossibility to protect the information from opportunistic manipulation by the sender at acceptable cost. In the case of irremediable impactedness, the availability of control mechanisms that may actively ensure *desired* contributions is severely limited, and the aim of control shifts to the prevention of *undesired* actions or outcomes. As suggested by Simons (1995), such proscriptive control may be labelled *Boundary Control*. And since the feasibility of control instruments is affected by

residual, irremediable information impactedness, this variable can still be treated as a factor that drives the configuration of control instruments.

4.3.6 Hierarchical Exploratory Control

Exploratory control can be either hierarchical or hybrid. Which of these alternatives holds, depends on the degree of asset specificity. *Hierarchical Exploratory Control* is associated with low programmability, high idiosyncrasy and remediable information impactedness. In fact, the elements of this archetype can largely be understood as mechanisms that individually and collectively help to overcome the initial condition of indeterminacy during the process of operationalizing the contribution. But before examining these elements, it may be useful to take a closer look at the problematic nature of control in the described conditions.

At the outset, only vague notions as to the attainable outcomes of the activity exist. Also, there is insufficient knowledge to select in advance the courses of action that are most likely to contribute to satisfactory outcomes, and then to stick to these courses. Since decisions have to be made anyway, they will be based on the little information and knowledge that is in fact available. These decisions are highly provisional in nature, giving only broad guidance, and the process of execution of the activity remains an essentially uncharted route that must be taken one step at the time. This process is very much a learning process in which knowledge and information accrue as to the more concrete properties of required contributions, and on the way in which these can be realized. The accumulating information, however, is likely to be asymmetrically distributed. Moreover, it is likely to be scattered: individual participants gain knowledge of particular aspects of the activity, but although individual sets of information may partly overlap, no single individual's knowledge covers all available information. Therefore, pooling of information is expected to improve the quality of decision making and the selection of appropriate courses of action. Control, thus, is concerned with providing the mechanisms to support timely and truthful revelation and dissemination of these emerging insights, and with assuring their impact on actual behaviour of the participants. This, however, is difficult because prompt and undistorted sharing of

information is not automatically compatible with individuals' perceived self-interest.

Because of high uncertainty, explicit contracting for concrete actions or contributions is not feasible. The organization cannot define what it expects from its employees other than in the vaguest of terms ('do your best'). Such open-ended exhortations may well be sufficient to elicit appropriate behaviour, but to actually rely on that, it seems that at least two conditions must be met simultaneously: (1) individual actors must understand quite thoroughly how their choices fit the organization's emergent strategy to be able to select goal congruent actions, and (2) the organization must be able to assess the quality of performance after the fact to create a general expectation that achievements will be recognized and rewarded, thereby providing an incentive to seek premium performance. Fulfilment of the first condition hinges on the quality of information exchange. This would perhaps be relatively unproblematic, were it not that meeting the second condition also requires information sharing. That, however, is inevitable because the organization is unable to infer the quality of performance from simply monitoring the outcomes of actions taken by the contributors. Since employees select their actions in conditions of uncertainty, they cannot be held fully accountable for the ultimate outcomes of their decisions. These outcomes may be as much the result of judgement and effort as they are the result of unforeseeable circumstances and events. All that can reasonably be required from contributors is that they select the actions that appear best given the information available to them at the time they make the selection. Because that is unobservable to management, participants must be asked to explain their actions and the reasons for choosing them to allow ex post performance appraisal. But then, the explanations offered must be expected to be biased in an attempt to inflate the perception of the quality of performance. In that process, relevant details may be suppressed or become twisted, thus diminishing the value of the information flows for evaluative purposes, but also for learning purposes. Information sharing, thus, is not a neutral endeavour. Rather, one must suspect it to be influenced by considerations of a self-interest seeking kind, at least to some extent.

From a control point of view, then, the fundamental challenge faced by organizations involved in activities characterized by low programmability and high asset specificity is to overcome the condition of information impactedness, i.e. to elicit timely and sincere dissemination of information as and when it accrues. Information sharing is vital for the organization for it enables learning, helps to achieve coherence in its members' efforts, and supports convergence in its members' perceptions on how to proceed, sequentially increasing the precision of the knowledge as to what is expected from them. Furthermore, it enhances the observability of actions and efforts, allowing the organization to motivate appropriate behaviour by simple 'do your best' contracts. For purposes of information sharing, a number of formal instruments may be used. Pre-action reviews (Merchant, 1985) may be relevant here, as may participation in budget setting –although it should be noted that the budget itself is a rather insignificant control device in these circumstances. Budgets may serve planning and financial coordination, or they may be used to constrain expenditure, but they play only a minor role in contracting for the contributions and in subsequent performance assessment. And also more generally, it bears notice that formal instruments of control are of very limited importance in hierarchical exploratory control. In stark contrast to the machine control archetype, exploratory control is highly informal in nature. It may even seem disturbingly disorganized, with diffuse responsibilities, omnipresent interdependence, a lack of explicit guidance, and a predilection for frequent but ad hoc communication. Yet, as will be explained, these same ambiguities are precisely the mechanisms that serve to activate goal-directed search behaviour and that necessitate the desired interaction and sharing of information between participants in the process.

A typical feature of this archetype is its unwillingness to define and limit individual responsibilities. In part, this is a predictable response to the impossibility to define in advance what to expect from those involved in the organization. But it is also a means to encourage a problem-solving mentality. By "shedding of responsibility as a limited field of rights, obligations and methods" (Burns and Stalker, 1961: 121), problems are less easily referred to other regions of the organization as being someone else's responsibility. In the expectation that one's efforts will be recognized and valued by the organiza-

tion, a more rewarding strategy may be to try and solve that problem oneself. Frequently, however, solving such problems extends beyond the capacity of the individual, and he or she must solicit help from other members of the organization. A dependency relation thus builds up. This is in fact a more general characteristic of the hierarchical exploratory control type: individuals in this archetype are often reliant upon one another for the accomplishment of their own assignments. These mutual interdependencies reinforce information sharing, cooperation, and continuous adaptation to new insights as they emerge, but they also create an incentive to strive for at least satisfactory performance. Since substandard achievement by some individual is not exclusively the problem of the organization at large, but interferes with the performance of direct colleagues on whom the individual depends himself, opportunistic inclinations (e.g. shirking, withholding or manipulating information) become hard to sustain. Moreover, top management is also involved quite closely in the entire process in a supportive role (reinforcing strategic intentions, giving advice, questioning decisions, asking for explanations et cetera). This involvement is valuable in serving coordination and information sharing purposes. But in addition, it ensures that information relevant for assessment of individual performance reaches the proper hierarchical levels.

Performance assessment adopts a long term orientation, reflecting the period of time required for the full effects of decisions and actions to surface, and immediate financial compensation for some individual superior contribution is, if it exists at all, of secondary importance. The primary reward structure usually takes the form of a promotion scheme (including periodic salary increases), emphasizing long-term performance and encouraging consistently valuable contributions, rather than instant but possibly ephemeral success.

Marginson's (1999) study of control practices at Telco –a subsidiary of a major Britain-based communications organization operating within a fast-moving, dynamic business environment- seems to illustrate some of the points made here quite tellingly and will therefore be reproduced here at some length. During Marginson's investigation, Telco was engaged in a strategic reorientation and invested rather heavily in innovative projects, giving its activities a significantly non-programmable flavour. Learning was a key factor, and the

various projects and programmes were of an acknowledged exploratory nature, being subjected to modification and adjustment as events unfolded.

In this setting, Marginson found that although senior management remained involved in the strategy formation process by sketching the broad contours within which initiatives were to fit and by emphasizing high priority issues and objectives, strategy formulation was to a large extent delegated to lower levels in the managerial hierarchy. Strategy formation very much became a collective exercise and joint responsibility that involved frequent interaction between managers of all levels in the organization, fostering a shared sense of direction and a mutual understanding of were the company was heading. Marginson also reports that instead of relying on formal, vertical lines of authority, Telco's organizational structure was fluid and permeable with managers having different roles, serving different units, and participating in different teams and projects simultaneously, thus facilitating and promoting information sharing and supporting convergence of insights as to how to proceed. Furthermore, Marginson found that Telco gained cooperation and effort through the way in which it organized its activities, featuring a high level of mutual interdependence of managerial activity, thus creating a social pressure to cooperate. That pressure also ensured that each individual delivered his or her contribution, mitigating opportunistic shirking or manipulative behaviour.

The resulting common understanding of how to move the company forward was in fact the major means to achieve coherence in the organization and to motivate individuals to contribute to the emerging agenda. It supplanted most formal mechanisms that commonly serve this purpose. Strategy, as described, was a collective endeavour rather than an instrument to set preconceived direction. Although senior management used a number of key performance indicators, these provided but general guidance and were more an attention-directing tool than hard targets to achieve, especially at the level of the individual. Budgets were not used as motivational devices, but were just a way to allocate funds. They played no role at all in assessment of individual performance. Other formal instruments of control were mostly notable for their absence. For instance, whereas Telco did have a formal objective-

setting and appraisal system that meant to specify expected individual contributions and was designed to evaluate achievement in relation to these agreed upon contributions, Marginson found that this system was not actually used. In fact, most managers held a rather dismissive attitude towards that system, considering it redundant and irrelevant.

All this seemed to work quite well in the Telco case. But in general, it must be noted that the hierarchical exploratory control type is also a markedly indulgent structure, featuring only low-powered incentives. These incentives may be sufficient to prevent excessively destructive behaviour; they cannot be trusted to induce but top-notch performance. Its reliance on cooperation and mutual adjustment foster close personal relations, which may easily create a lenient atmosphere in which it is hard to blow the whistle, allowing considerable leeway to engage in playful or otherwise disfunctional behaviour. Its information flows are rich but subjective and imperfect. In addition, this archetype's demand for extensive communication and consultation is resource-consuming. That is why as soon as insight into the properties of required contributions settles, elements of machine control gain importance, ultimately to supplant the exploratory form. But until then, hierarchical exploratory control may be comparatively efficient, which explains its existence.

4.3.7 Hybrid Exploratory Control

There is, however, a potential alternative. The *Hybrid form of Exploratory Control* may offer partial relief for the problem of indulgence inherent in its hierarchical counterpart. Hybrid exploratory control is akin to the hierarchical variant in its reliance on close interaction, joint responsibility, and the resultant information flows to achieve cooperation and behaviour congruence, but it provides additional, higher-powered market incentives. These incentives serve to elicit commensurate rather than perfunctory performance. More specifically, hybrid exploratory control involves the establishment of outsourcing relations with a limited number of suppliers. Due to the high level of uncertainty, contracts must be of a general thrust nature and require subsequent operationalization; a process that requires joint efforts from supplier and buyer and in which knowledge and information builds up as to

the quality that can reasonably be expected. However, because the buying firm engages in more than one of these processes simultaneously, a comparative assessment of performance becomes possible. Since it is in the buying firm's interest to favour the best-performing suppliers when new bids are invited, each supplier has an incentive to offer value beyond that of their competitors to acquire a larger share of future business. This structure, which is exemplified by the well-known Japanese outsourcing practices with their merit ranking of suppliers, implicit but credible contract renewal promises, and strong emphasis on information sharing between incumbent suppliers (see chapter 3, section 3.3 for a fuller examination) may, therefore, be more efficient than the hierarchical variant. Viability of hybrid exploratory control, however, is limited to transactions of moderate specificity. The higher the idiosyncrasy involved, the less likely it is that suppliers are prepared to invest when the buyer is unable to offer exclusive, long-term contracts. Since exclusive contracts are obviously unacceptable –they would imply full dependency without an enforceable, sufficiently complete contract and without access to the intricate mechanisms of the hierarchy to influence behaviour- the hybrid form is simply not on in conditions of high idiosyncrasy. But even when asset specificity is moderate, there is an additional proviso. Exploratory control depends significantly on the sharing of private information and know-how. Therefore, parties to such an exchange are exposed to the risk of information spill-over. If contracting requires sharing of genuinely important strategic information, it may well be that hybrid exploratory control gives way to the hierarchical variant, because despite its less powerful incentives, the latter may be more efficient for its superior information-protecting ability.

4.3.8 Boundary control and differential asset specificity

Boundary control relates to the governance of non-programmable activities that feature incorrigibly high levels of post hoc information impactedness. This condition implies a seriously limited possibility to define and evaluate performance, even after the contribution has been made. In that situation, there is really not much more one can do than to attempt to specify behaviours that are to be avoided at all cost and to stipulate the boundaries. This is *Hierarchical Boundary Control*, which is very much the structure of last resort.

An interesting example of this archetype can be found by Helliar in her study of control of the treasury function in eleven companies in the UK (Helliar, 1998). She found that generally, top management (and the rest of the organization as well) was unable to understand the sometimes exotic particulars of the treasury process and products. As a result, the treasury departments were largely left to themselves. Most companies used some broad performance targets based on a few pre-defined benchmarks, but these had very limited meaning. Interpreting performance was highly problematic because of lack of standards to give the actual outcomes some contrast, even for the treasurers themselves. And although the departments were held to report on their activities on a regular basis, there was a general feeling that the recipients of these reports lacked the level of financial literary required to understand them. In this setting, Helliar found a tendency to emphasize formal rules such as authorization levels and procedures and policy restrictions (for instance: 'we don't do naked options'), i.e. a focus on preventing unwanted behaviour[5].

Boundary Control of the hierarchical kind is an archetype with a distinctly haphazard quality, for the information impactedness that defies performance assessment will also defy a reasonably complete ex ante specification of actions to be avoided. The proscriptions, therefore, tend to be limited to unwanted behaviours that were actually experienced by the organization in the past (and that were detected on that occasion), to those that occurred elsewhere and became front-page news, and to those that just happened to cross top management's mind. A related problem arises in enforcement of the proscriptions. Given the low observability of actions, it is far from obvious that management is able systematically to detect rule-breaking behaviour[6].

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5. The label boundary control is only appropriate for control of the treasury function as part of the organization at large. *Within* the treasury department, control was more exploratory in nature, featuring consultation, joint responsibilities, and shared expectations.

6. In her treasury control study discussed earlier, Helliar (1998) for instance found that the Barings collapse had a significant impact on the tightness of control experienced by the treasury departments in her sample, illustrating the 'incident-driven' nature of boundary control. Also, she reports that typically, definition of some of the more important boundaries was largely done by the treasury department itself. Her

Additional safeguards may thus be needed. These can take various forms, including periodic external audits and tie-in arrangements featuring severe sanctions should employees be discovered to cross the line. An example of the latter would be the practice commonly found in the case of employees charged with some 'embezzlement-prone' task, e.g. cashiers, money and security dealers, and some warehouse-personnel. Organizations tend to take an especially unforgiving attitude towards such employees if they are found to misuse their positions; the most minor of mistakes being sufficient reason for instant dismissal. With this stern policy, the organization makes sure to reinforce the boundaries, signalling that it is quite serious about them, and reminding remaining personnel of its commitment to these rules. But in addition, the employees frequently receive a premium wage, i.e. a wage that exceeds the amount that would be required to mobilize their contributions; this premium serving to increase the employee's stake in respecting the boundaries.

Sometimes, however, definition and enforcement of the boundaries can be relegated to the market. This requires moderate asset specificity and the availability of sufficiently powerful reputation effects in the supplier's market. Audit services and specialized legal assistance would seem to qualify as examples. In buying these services, the buyer frequently has insufficient knowledge to appraise the quality of the services rendered. Yet, the buyer can –to some extent at least- rely on reputation effects to assure that the services meet some minimum standard of professionalism. In such markets, reputation is essential to attract clients, and not meeting these professional requirements would expose the supplier to the risk of severe loss of reputation, and perhaps even a ban from the profession. Although the supplier might be pretty confident that sub-standard performance will go undetected in some individual case, he can never be really sure about that. And since the potential consequences of detection are enormous, the best policy is simply not to engage in malpractice at all. Then, relation-specific safeguards and explication of the boundaries that are to be observed are redundant, and *Market-Based Boundary Control* is an efficient archetype.

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respondents were unanimous in their opinion that it would be relatively easy to bypass the controls without being found out.

4.3.9 A summary statement

Having developed and described the contours, concepts, and operative mechanisms of what amounts to a Transaction Cost Theory of MC, the essence of this theory can now be stated more succinctly. The main argument is that -given opportunism and bounded rationality- the specific nature of the required contribution –to be expressed in terms of programmability, asset specificity, and ex post information impactedness- gives rise to distinctive and predictable contractual problems that need to be solved by the organization. These same attributes also affect the viability of control devices available to cope with these problems. The degree of programmability influences the availability of norms and standards to direct behaviour and, consequently, the feasibility and strength of prescriptive control. Asset specificity is relevant for it defines access to market-based incentives and, more generally, the mechanisms available to cope with opportunism. The degree of ex post information impactedness denotes the possibility (or impossibility) to transform in the process of execution of the activity a condition of ex ante uncertainty into a situation of shared understanding of what constitutes good performance and how such performance can be delivered. These variables and their effects on the efficacy of individual instruments of control are used to identify nine distinct control archetypes i.e. consistent clusters of control devices. The control archetypes differ in their problem-solving ability and in respect of cost, and the alignment between a control archetype and a required contribution is explained by demonstrating the archetype's comparatively efficient ability to deal with the contractual problems inherent in the contribution which it is supposed to control. Tables 4-1 and 4-2 summarize the details.

Ex ante programmability of contributions	*Asset specificity*	*Impactedness of information for post hoc performance assessment*	*Control archetypes*
High	Low		**Market Control** Control based on competition
	Moderate		**Arm's Length Control (hierarchical or hybrid)** (Quasi) independent: outcome control based on market-derived standards or predefined contractual provisions
	High		**Machine Control** Administrative control based on codification of behaviour (**action oriented**) or predefined performance targets (**result oriented**)
Low	Low		**Market Control** Control based on competition
	Moderate	Low	**Exploratory Control (hierarchical or hybrid)** Control based on converging insights that accrue and spread during the process. Convergence either administratively induced or based on market-disciplined information sharing
		High	**Boundary Control (hierarchical or market-based)** Market procurement if reputation effects are reliable; otherwise proscriptive control of administrative origins
	High	Low	**Exploratory Control (hierarchical)** Administrative control based on converging insights that accrue and spread during the process
		High	**Boundary control (hierarchical)** Administrative control through interdictions, emphasizing behaviour to be avoided

Table 4-1: Control archetypes and their determinants

Control archetype		*Characteristic features (indicative)*
Market Control		• Competition-induced standards and compliance
Arm's Length Control	Hierarchical	• Significant autonomy; control is mostly achieved through market exposure • Little attempt to fix performance standards in advance • Performance related compensation • Little hierarchical involvement as long as performance conforms to (ex post) market standards
	Hybrid	• Detailed, reasonably complete contracts • Hostage arrangements to ensure compliance to contractual provisions • Arbitration to resolve conflicts
Machine Control	Action oriented	• Standardization of behaviour • Codified norms, rules, instructions, and the like • Detailed monitoring and supervision to ensure compliance • Low tolerance of deviations from norms or instructions
	Result oriented	• Predefined and codified performance targets • Task-defining budget targets • Performance dependant bonuses • Budget-constrained style of evaluation
Exploratory Control	Hierarchical	• Information sharing entrenched in organizational structure and process design (vague responsibilities, mutual dependencies) • Performance evaluation based on emergent standards • Rewards through promotion (including periodic salary revisions), based on long term performance • Little emphasis on formal instruments of control
	Hybrid	• Relatively unspecific 'general thrust' contracts • Latent (but easily activated) or endogenized competition to ensure commensurate performance • Performance assessment based on broad, emergent standards • Information sharing self-enforcing because of the participatory, interactive nature of the process of contract execution
Boundary Control	Hierarchical	• Proscriptive codes of conduct/boundary systems • Budget → authorization of (maximum) expenditure • Tie in of agents through hostages • External audits
	Market-based	• Market procurement of goods or services • Reliance on reputation effects to avoid substandard performance

Table 4-2: Characteristics of the control archetypes

4.4 The way ahead: precursory remarks on application

The theoretical approach advanced in this chapter is obviously not full-blown. In a sense, it is very much a ground-clearing exercise, and a lot of work remains to be done. As they now stand, many of the concepts that figure in the theory may be considered somewhat hazy, their substance and meaning being suggested rather than defined. Moreover, the scale on which to score the attributes of the desired contributions from organizational participants is markedly rough and the boundaries of the intervals are left implicit. And the archetypes are constructs that help to recognize and expound general tendencies, but they are not fully compelling categories. For these reasons, the application of this theory is bound to command considerable interpretative efforts from the researcher to deal with the shades of grey one is bound to come across.

I do, however, believe that although these problems are quite real, they will turn out relatively easy to manage when encountered in a specific empirical setting. Asset specificity for instance is an expansive concept that can mean different things to different people in different situations at different times. Trying to anticipate these different potential manifestations of that condition and folding these back into a more precise definition of the term is unlikely to make it any clearer. In any case, such efforts are not very useful when in some particular context, the specific meaning of asset specificity is sufficiently obvious to be beyond controversy. A similar argument applies when it comes to defining the boundaries between the scoring intervals. Whereas in general, it may well be impossible to identify the exact point where, say, programmability shifts from low to high, it may be perfectly clear how to score a specific activity in a specific context on this dimension. And even when the appropriate score is not obvious, it is far easier to settle any discussion that might arise in the concrete context at hand than in general, abstract terms. Then, there is not much gain in trying to correct definitional vagueness up front. There may even be some danger involved in early attempts to attain precision: rough definitions have the advantage that non-standard practices -the ones that are likely to be overlooked when drafting one's definitions but that may nevertheless be important in understanding what is going on- may relatively easily be incorporated in the analysis, whereas such practices may

remain unobserved when working from strict but insufficiently rich definitions[7]. Definitions may provide focus, helping to see things more clearly, but they may also focus too much, resulting in things not being seen at all. Therefore, further refinement and elimination of ambiguities is better left to future applications.

The foregoing discussion suggests that the transaction cost approach to MC is not particularly well-suited to inform large scale, cross-section survey-type research. This is indeed the case, for such research requires the design of measures for the independent variables (the attributes of the activities) that hold across a variety of different firms, and thus demands clear-cut definitions. This problem, however, is not unique to the particular theory advanced in this chapter, but applies to MC-research more generally. Consider for instance the issue of goals and effectiveness raised in section 4.2.4. In that section, I argued that MC is about organizational effectiveness and that explaining control must ultimately come down to explaining its contribution to the attainment of organizational goals. I also argued that a sufficiently rich appreciation of organizational goals requires identification of patterns of organizational order, i.e. the patterns of actions, decisions, and beliefs that shape the organization's efforts and functioning. Such an understanding is unlikely to arise from processing questionnaires. Nor is it likely to result from any other data collection instrument usually relied on in survey research. And since no theoretical treatment of MC can proceed without that understanding, the usefulness of large scale surveys as a research strategy is limited accordingly -not just when one chooses the transaction cost approach as one's theoretical starting point, but always. This problem of goals is just one example from a long, long list. Note in this context that the only large scale surveys that have been attempted in the discipline stem from the contingency tradition, and that this tradition has been criticized for precisely this reason; that it works from a shallow understanding of organizational reality and the functioning of control (Chapman, 1997; Fisher, 1995; Langfield-Smith, 1997; Merchant and Simons, 1986; Otley, 1980), without much consideration for the question whether the theoretical constructs capture real phenomena suffi-

7. This argument is similar to Hendrikse's remarks on the risks of premature formalization of theories (Hendrikse, 1996).

ciently fully, and if they do, whether they mean the same thing to different respondents and to the researcher.

In MC, therefore, in-depth studies are required, which almost inevitably implies small sample case-like research. That is also the natural way to proceed with the transaction cost theory of MC proposed here. This suggestion may meet with some reservations, though, for despite a large number of methodological contributions building the case for case study research (Birnberg et al., 1990; Kaplan, 1986; Lukka and Kasanen, 1995; Otley and Berry, 1994; Ryan et al., 1992; Scapens, 1990), and notwithstanding the rapidly growing stream of case-studies in MC suggesting that field research has become an accepted research strategy, there is still some trepidation as to the scientific stature of the case study method. These reservations mostly relate to the problem of generalizability of case study findings: how can insights that were formed in a particular, highly specific situation be transferred to a larger population? This problem, however, is irrelevant here, because unlike most uses of case studies -that are exploratory in nature and intend to provide some basis for further theorizing- I suggest to use them to vis-à-vis a theory that is already there.

This has also been the path taken in TCE-based research. TCE is similarly affected by problems of measurement when it comes to designing grand scale, cross-industry surveys, because it suffers from similar vagueness in definitions. Even the central notion of transaction costs itself is a highly elastic concept (see section 2.5.1). However, that has not impeded empirical application. To be sure, the empirical literature is full of struggles with problems of operationalization, and the proxies chosen are sometimes open to serious criticism. But in case analyses of various kinds and in the study of single industry contracting practices, its application has been proven to be both feasible and helpful (cf. Masten, 1996; Rindfleisch and Heide, 1997; Shelanski and Klein, 1995, for recent overviews of empirical research in TCE). And by now, these applications are so numerous that they amount to an empirical basis for TCE's conjectures that is solid enough to declare TCE an empirical success story, as least in comparison to competing approaches (Williamson, 1999b).

4.5 Summary and discussion

This chapter has argued that the discipline of MC is likely to benefit from theories that provide a cogent and comprehensive perspective to address the issue of MC structure variety, and examined the potential of TCE to inform such theories. TCE approaches phenomena of organization from a comparative point of view in which different organizational arrangements are studied as alternative ways to govern economic transactions. Essentially, TCE is about understanding the match between activities to be controlled and control structures, and holds that the characteristics of the activities and the credentials of the structures determine and explain which structures are appropriate and which are not. TCE shares its central problem –explaining control- with MC, albeit that the latter requires a higher level of resolution. The logic of TCE, however, is receptive to refinement, and supports a reasonably detailed study of control issues at the level of organizational subsystems –which level certainly is appropriate for research in MC. At that analytical level, this chapter has proposed a transaction cost theory of MC. This theory intends to explicate the link between various archetypal configurations of control devices and the kind of activities they are expected to control. The nature of the organizational activities and the contributions from organizational participants that are required to perform these activities can be discriminatingly defined through their scores on three dimensions: (1) the extent to which the contributions are susceptible to up front programming; (2) the degree of asset specificity; and (3) the intensity of ex post information impactedness. Given bounded rationality and opportunism, these features are predictably associated with distinctive control problems that need to be dealt with. The control archetypes –nine of which have been identified and described- differ in their problem-solving ability, which makes them appropriate for the governance of some contributions, but not for others. Moreover, they differ in respect of cost, and ultimately, an empirically observable alignment of a contribution with a control archetype is held to be explainable by delineating the relative efficiency properties of the match, either quantitatively or –more likely- in a qualitative way.

It would seem that this theoretical approach has a good deal to recommend it. If MC is about enhancing organizational effectiveness -and that is a gener-

ally accepted position-, MC-theory should specify the modus operandi of MC-structures in delivering their contribution, and it must be able to evaluate these structures explicitly in terms of (differential) functionality. Especially this last aspect has received remarkably little attention in MC-theorizing, and effectiveness is more usually assumed than demonstrated. TCE's remediableness criterion moves beyond paying lip-service to effectiveness, and offers a reasonably concrete and practicable procedure to address this issue. Furthermore, the proposed theory suggests a pragmatic way to handle the issue of defining the organizational goals that MC is supposed to serve. These goals are notoriously elusive, but they can be presumed to affect the more easily identifiable patterns of actions, decisions and beliefs that shape what the organization is doing. The presented approach concentrates on the actual activities in which the organization is engaged, but studies these in relation to the patterns of which they are part to include in the analysis an understanding of the meaning the organization attaches to these activities. Such an understanding provides the means to relate concrete activities and contributions to what the organization apparently is trying to achieve, and allows to differentiate realized from desired activities and contributions. The proposed framework, then, focuses on the way in which MC helps to reduce the gap that may arise between the two in a cost-effective manner. This is a shamelessly instrumental approach in that it ignores more high-brow questions as to the contribution of MC to overall organizational effectiveness. But it is operational, and this mere fact puts the approach ahead of most alternative approaches –at least of those with similar wide-ranging ambitions.

The reference to these ambitions suggests another asset of the transaction cost approach to MC. Whereas traditionally, the focus of MC has been on the individual organization, there is a growing concern that this focus may be too restrictive (cf. Berry, 1994; Otley, 1994; Otley et al., 1995). Since coordination and control of economic activity is increasingly often the province of all kinds of collaborative structures between firms (e.g. strategic alliances, supply networks, and joint ventures), the scope of MC-theory must be broadened to allow coverage of these arrangements. The theory proposed in this chapter –and TCE as its intellectual ancestor- are well-positioned to answer this challenge, for they offer an integrative and symmetrical point of view

from which to address issues of control of any kind, irrespective of the particular organizational arrangement in which they arise. That is undoubtedly a welcome prospect.

Finally, the proposed theory is empirically testable –in principle at least. To be sure, the variables have been described at a conceptual level and their substance is suggested rather than defined. Moreover, the scale on which to score the variables is markedly rough and the boundaries of the intervals are left implicit. And the archetypes are constructs that (presumably) help to recognize and expound general tendencies, but they are not fully compelling categories. When applied in an empirical setting, the archetypes may not be descriptively accurate in every respect, and the observed configuration of control may not fall neatly into any of the pre-identified classes. For these reasons, the application of this theory is bound to command considerable interpretative efforts from the researcher to deal with the inevitable shades of grey. However, I submit that the approach is flexible enough to cope with the ambiguities, and that it is sufficiently cogent to ensure satisfactorily restrictive interpretations that preserve the general logic of the argument and on which academic consensus can be reached. Anyway, since TCE itself suffers from similar vagueness, and since that has by no means impeded empirical application and testing, there seems to be no basis to be particularly wary, and the best way to go is probably just to give it a try.

Chapter 5

Looking Back: Some Closing Reflections

5.1 In retrospect: an insight to expound and methods to justify

This study is an attempt to add detail to the generic modes of governance as they figure in TCE. As has been argued in chapter 1, this is a sensible project for two main reasons: (1) refinement of the generic modes may increase the accuracy of TCE's predictions and may improve the expressiveness of its style of explanation, and (2) it may enlarge the conceptual scope of the approach, opening up problem areas that previously did not fit neatly into the realm of TCE, but that could benefit from TCE's structured approach. But it has also been argued that the disaggregation project must proceed in small, incremental steps without much a priori general guidance. Lacking preconceived and universal answers to questions as to the appropriate level of resolution, the place to look for additional detail, and the helpfulness of supplementary classifications, one is left with little else than to study specific research problems and to decide in these specific contexts on the way to go. And that is what I have done in this study. Starting from the empirical observation that hybrid structures do sometimes survive conditions of substantial uncertainty -an observation that does not go well with received TCE- chapter 3 examined two generalized cases of hybrid contracting in such conditions. In this chapter, I found that both cases are examples of a hitherto ignored subcategory of hybrid governance -referred to as the *Exploratory Control Hybrid*-, the operation of which is analysed and described. The second step was taken in chapter 4. Here, the disaggregation efforts were guided by the needs of the academic discipline of management control; not by the particulars of a concrete empirical phenomenon, and these efforts resulted in a taxonomy of control archetypes featuring nine different (sub)categories of governance that help to explain control structure variety. Although these steps were taken from different starting points and with different ideas as to where they should lead to, when looking back at them, a common pattern appears to emerge. This

pattern involves a focus on information impactedness and the mechanisms available to cope with that condition.

Received TCE tends to treat information impactedness as a more or less autonomous condition that is largely beyond the influence of contracting parties, and to which they adapt rather passively. These adaptive responses involve either realignment of incentives -which, if effective, reduces information requirements and increases the ability to tolerate information impactedness-, or internalization –which attenuates the incentives to exploit information impactedness opportunistically and has better monitoring or auditing potential- (Williamson, 1975; 1985; 1996). With this tenet, TCE seems to assume that the possibility to confront information impactedness directly is seriously constrained, and that –to the limited extent that it can be confronted- the ability to do so is confined to the hierarchy because of its superior monitoring potential. My study, however, suggests that this tenet does not tell the full story. In my study, I found that the hybrid governance structures examined in chapter 3 actually match the hierarchy in respect of monitoring effectiveness. Thus, it is sometimes possible to influence information impactedness directly, even outside the hierarchical structure. Furthermore, I found in chapter 4 that the mechanisms available within the hierarchy to cope with information impactedness sometimes go beyond simple monitoring to include the provision of incentives that motivate information sharing. In both chapters, including feasibility considerations as to the access to such mechanisms proved helpful in arriving at the level of resolution appropriate for the problems these chapters intended to address. These findings suggest that TCE may benefit from a closer examination of the mechanisms to cope with information impactedness. This suggestion will be considered more fully in section 5.2.

Another issue that may warrant some extra thought is about method. This study aims to speak to those involved in the disciplines of organizational economics and management control, respectively. Although far from being the only position in these fields, both disciplines are quite firmly entrenched in the tradition of positivism. In that tradition, the hallmark of scientific stature is empirical success, i.e. the extent to which a theory survived chal-

lenging confrontations with reality. In light of this tradition, the empirical component of this study may be considered somewhat atypical. For one, whereas chapter 3 builds quite explicitly on empirical observations, these are culled exclusively from secondary sources. This is an uncommon procedure, on account of which it probably is not beyond debate. Chapter 4, however, is more likely to be controversial, because there the empirical foundation is largely implicit, and no attempt is made to test the proposed theory. Nevertheless, I believe that I should be allowed to get away with both of these choices. The reasons for them will be discussed in section 5.3.

5.2 Information impactedness and control

As has been noted in the previous section, received TCE tends to treat information impactedness as a more or less autonomous condition that is largely beyond the influence of contracting parties. That is not to say that TCE treats it as static and as fully independent of the actions of those involved in the transacting process. TCE has always had an open eye for the fact that the intensity of information impactedness may change over time, and that these changes do sometimes have contracting origins[1]. Neither does it imply that TCE completely rules out the possibility to actively and deliberately induce change in that condition[2]. Nevertheless, the general tendency is to assume that information impactedness is a condition to adapt to, rather than one that can be confronted directly.

TCE identifies two basic responses to a condition of information impactedness. One of these involves realignment of incentives, creating a significant degree of goal congruence between contracting parties. The other is to internalize the transaction, subjecting it to unified, hierarchical governance. The realignment alternative does not affect information impactedness as such.

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1. This is clear even from one of the earliest discussions of information impactedness in the TCE-literature (Williamson, 1975: 31-37). This treatment distinguishes between ex ante and ex post information impactedness. It is also receptive to the fact that information impactedness may be path-dependent, being influenced by prior transactions.
2. See TCE's position on hierarchical monitoring described below.

The impactedness condition remains unaltered, but congruence of goals renders it harmless because it can no longer be exploited at the expense of the other party. The consequences of internalization are held to be twofold: (1) the hierarchy has superior monitoring properties which may enhance observability of effort or performance quality; and (2) its incentive structure loosens the connection between rewards and performance, thereby weakening the impetus for deceit. The incentive feature of internalization has no effect on information impactedness per se, but mitigates the stimulus to engage in strategic exploitation of information advantages. Monitoring is primarily a means to detect deviant, rule breaking behaviour. As such, monitoring does in fact alter the intensity of information impactedness, but its effect is limited to potential information asymmetries that are associated with actual efforts and performance in relation to some pre-set standards. These asymmetries by no means exhaust the full gamut of information impactedness; the most important restriction being perhaps that monitoring cannot be trusted to reveal privately held information about a situation in which the standards do not reflect optimal performance in the circumstances that obtain. Moreover, TCE's position implicitly suggests that monitoring is the only mechanism available to mitigate information impactedness directly, which suggestion could be taken to imply that the hierarchy is unable to overcome information impactedness in the absence of relevant behavioural norms and process or output standards.

It is noteworthy that, apparently, TCE does not explicitly acknowledge the possibility to confront information impactedness directly, either through incentives that support information sharing, or through the use of mechanisms that penalize non-sharing behaviour. Yet from my study, it is clear that such incentives exist and that they are being used to safeguard transactions. Specifically, I have argued that these very mechanisms are important in explaining why some hybrid structures are able to resist uncertainty –they gain access to enforceable emergent standards-, and that TCE's failure to recognize and exploit this point is at least partly responsible for its inability to capture hybrid contracting in conditions of uncertainty. I have also argued that differential access to such incentives is important in explaining control structure

variety. Thus, information impactedness and the mechanisms to cope with it deserve a more pronounced position than it has been given in the past.

These mechanisms seem a worthy subject for further research in organizational economics and management control, for such research may bring back the explanation of control in conditions where neither required behaviour, nor desired performance can be specified in advance in the realm of 'the usual'. My analysis of control in these conditions of indeterminacy builds on the same general premises and mechanisms (such as the assumption that extrinsic motivators are important, the reliance on economic incentives to motivate desired behaviour, the perceived need to monitor behaviour and performance et cetera) that are called upon to explain control in circumstances where contracting can be more complete and explicit. In this respect, the different archetypes of control are really just variations on a common theme. Previous explanations of control in conditions of indeterminacy have at times been less symmetrical. An illustration of this point can be found in the work of Ouchi (1979, 1980). When no relevant behavioural or output standards exist, Ouchi assigns control to the clan structure with its organic solidarity, socialization, immersion in group values and beliefs, and selective entry of individuals. In light of the rest of his framework, which works from notions such as market discipline, hierarchical order-giving, bureaucratic surveillance and standard-based performance evaluation, the clan mechanisms are quite exotic. This gives the argument an unbalanced flavour. It is almost as if Ouchi suddenly shifts perspectives, adopting a fundamentally different view of the world. Implicitly, individuals in market and bureaucratic control archetypes are treated as 'economic men' (or perhaps 'administrative men'), whereas those in clan-like organizations are apparently held to be more aptly described as 'social animals'. It is hard to escape the impression that this sudden shift is ad hoc, in the sense that it is made solely to enable his theory to explain some phenomenon that could not be explained with the concepts and constructs that were already in that theory, without due concern for the question as to how the newly invoked notion affects the old ones[3]. Similar remarks may

3. The need to address this concern could only be evaded if one assumes these metaphors of man to faithfully represent actually existing subspecies of mankind *and* if one assumes effective entry selection: bureaucracies employ economic men only,

perhaps apply to the work of some of those suggesting that trust is a necessary addition to TCE (see chapter 3), at least when these suggestions are made in the exclusive context of hybrid governance (Noorderhaven (1994) might be a good example). A research focus on the more conventional repertoire that is available to confront information impactedness –a repertoire that is far richer than previous treatments suggest- may prevent the temptation to prematurely close one's theories by resorting to alien constructs[4].

5.3 Some notes on method

As has been noted in section 5.1, my methods are probably not uncontroversial. Two specific issues require some elaboration: (1) the use of second hand data in chapter 3, and (2) the lack of empirical testing of the transaction cost theory of management control developed in chapter 4. These issues will be dealt with in sections 5.3.1 and 5.3.2 respectively.

5.3.1 The use of data from secondary sources

Chapter 3 addressed the question as to how hybrid governance structures are sometimes able to thrive in spite of high levels of uncertainty. To answer this question, two cases were studied in which uncertainty is paramount, but in

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whereas clans restrict themselves to hiring specimens of the social animal type. These, however, are problematic assumptions. The first of these will probably not find many proponents anyway, and as to the second: it is far from evident that an organization that is unable to specify desired behaviour and performance is in fact able to specify the required mindset of its employees. And even if it could, it is doubtful whether the organization is able to observe up front a candidate's true frame of mind to decide whether it fits the profile. It is equally doubtful whether the organization is able timely to dispose of individuals that erroneously passed the selection screen.

4. I want to emphasize quite strongly that I do not imply that social mechanisms or trust *as such* are alien to the study of control. On the contrary, inasmuch as control focuses on human behaviour –which it does-, and if these mechanisms are important in understanding the control implications of that behaviour –which is plausible-, they are an essential ingredient of the study of control. But then, they must be applied consistently to the full domain that is being studied, not just to some particular isolated subset thereof.

which hybrid control is chosen nonetheless. One of these is about Japanese subcontracting in the automobile industry, the other involves venture capital financing. The descriptions of these cases are not based on direct observations collected personally in field research. Instead, they are construed from observations reported in the literature. The descriptions, then, present a summarized and aggregated image of what goes on in reality, i.e. the 'stylized facts' of the cases.

Admittedly, working from stylized facts in not without risk, for the image may get somewhat blurred in the compilation process, frustrating a clear view of the details involved. But the stylized facts approach is not without benefit either, at least not when one is interested -as I am- in generic, common patterns rather than in individualistic characteristics. Identification and especially empirical grounding of such general tendencies, themes, and motives call for access to as large a set of observations as one can possibly get. Then, the stylized facts approach is valuable for it allows incorporation of a large quantity of observations, the collection of which would go well beyond the resources of most individual researchers. More important, however, is that this approach may result in a more credible, better substantiated reflection of reality. Because the stylized facts are compiled from contributions from different authors with different backgrounds about different cases, individual biases and blind spots are more easily detected and corrected, and individual peculiarities of the cases may even out, thus supporting a more representative description of the relevant patterns. Now of course there are no hard guarantees that the resulting image is in fact more representative. That also depends on the skills and integrity of the compiler. But the alternative of original field research offers even less assurance as to the quality of the data and their presentation and interpretation. In the stylized facts approach, at least the compilation and interpretation process itself –being based on publicly accessible publications- can without much difficulty be verified or replicated by the academic community. For these reasons, the stylized facts approach has much to recommend it. And given the fact that both the subcontracting and the venture capital cases have spawned generous literatures, covering substantial empirical ground and a diversity of perspectives, original

field research is not likely to offer many additional insights in the subject matter of this study, justifying exclusive reliance on the literature.

5.3.2 On not testing the Transaction Cost Theory of Management Control

The transaction cost theory of management control which I developed in chapter 4 has been presented without much formal and explicit empirical backing. To be sure, this chapter includes a discussion of the findings of a number of empirical studies, but these serve to illustrate individual archetypes and have limited meaning for the theory at large. At best, they demonstrate the existence of some of the archetypes and their association with particular configurations of control problems. However, the illustrations leave open important questions as to the link between these problems and the characteristics of the activities (can the control problems really be attributed to the characteristics of the activities as described in terms of the variables of the theory?), the efficiency of the archetypes (do efficiency considerations really account for the association between the control structure chosen and the control problems to be confronted?), and the completeness of the framework (do the identified archetypes cover empirical variety sufficiently fully?). The fact that these questions remain essentially unanswered is likely to arouse some suspicion, leading to questions as to the credibility of this untested theory. And indeed, why should one trust a theory that has no proven ability to survive vigorous empirical testing?

One answer is that trust is irrelevant here. Theories are not meant to be trusted –on the contrary, rather. They are meant to be considered, applied, tried, amended, as long as they are deemed to offer insights that one accepts as being relevant to the understanding of the phenomena involved. Theories must be helpful, and one does not need to trust one's theories to appreciate them as such.

Another and seemingly opposite answer is that we seem to do it all the time; that is: trust untested theories. Many theories that turned out truly seminal were almost instantly embraced by significant parts of their target academic communities, even though at the time of their original presentation, they could rely on little formal empirical backing. The adoption histories of for

example Agency Theory, the Behavioural Theory of the Firm, and Transaction Cost Economics may illustrate this point. These examples demonstrate that substantial empirical corroboration of a theory is not essential for its initial acceptance. Rather, their initial success seems to have something to do with their ability to integrate existing but scattered knowledge, providing a fresh view on familiar issues, perhaps solving along the way a few puzzles that previously could not be resolved satisfactorily. Also, the force of their logic and the perceived soundness of the underlying fundamental views of the context within which the variables and their effects are embedded seem pertinent (cf. Whetten, 1989). These theories, then, met with broad approval because they offered a perspective that was at the same time sufficiently new to indicate progress, sufficiently grounded in accepted knowledge to be plausible, and sufficiently logical to persuade. Now, if there is a grain of truth in this speculative account of the theory reception process, there are at least two different reasons for the academic community to endow a theory with credence. One of these is rooted in compelling empirical evidence offered in favour of the theory; the other derives from the theory's sensible and eye-opening arrangement and explication of hitherto somewhat implicit and latent (relations between) insights. Theories in the latter group, then, are trusted because they speak to a knowledge base that was already trusted[5]. Or to reconcile this answer with the first one given above: they are not genuinely trusted –at least not necessarily so-, but they are deemed worthy of consideration, application, trial, and amendment because they are believed to offer insights that are regarded as being relevant to the understanding of the phenomena involved. They are simply being appreciated as helpful …

This is a reassuring thought, for it implies that my transaction cost theory of management control may actually be tolerated for a while by the academic community despite its lack of empirical buttressing. Provided that my audience attributes some sensibility, integrative potential and eye-opening qualities to it, it may be given the benefit of the doubt. In fact, this is the only way in which my proposal may be saved from instant dismissal. Whereas the

5. This relates to Kaplan's "norms of coherence" (Kaplan, 1964: 314). Although Kaplan discusses this notion in a context with normative overtones, I believe that is has descriptive relevance as well.

empirical route to credence seems practicable for the more incremental or auxiliary contributions, i.e. those that attempt to improve an established theory through a relatively minor amendment to that theory's structure[6], extensive empirical buttressing of more fundamental and wide-ranging theoretical contributions prior to their publication is simply impossible. Fundamental, intendedly paradigm-shifting theoretical contributions tend to possess a 'universalistic' quality in the sense that the empirical domain they purport to cover is enormous. They are about the world rather than about particular instances, and they aim to affect the way in which one looks at that world. Evaluative decisions on the empirical quality of such theories need to be based on a massive amount of observations. These cannot possibly be collected by an individual researcher; certainly not within reasonable time limits. Requiring immediate substantive empirical backing, then, is not very practical, and the evaluative decisions must be postponed until sufficient experience with the theory's application has accumulated to allow a well-considered assessment of its success. The somewhat ironic conclusion is, therefore, that whereas one would perhaps prefer to use only theories with persuasively demonstrated empirical usefulness, one's theories can only gain that exalted status through their use.

I believe that it is not too presumptuous to claim that mine is more a fundamental than an incremental contribution. In any case it is similarly affected by the limits on manageable empiricism. My conceptualization features three transactional variables, each with two or three scoring intervals, resulting in nine alternative control archetypes, every one of which is described by its typical configuration of four to five different control instruments with their particular situation-dependent meaning and effect. To provide only a beginning of solid empirical backing would require dozens of case studies –a task of Herculean proportions indeed. Since I am not nearly a Hercules, I must put my cards on the possible integrative and eye-opening quality, plausibility, and logic of my proposal, and await -with bated breath- the verdict of my audience.

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6. My chapter 3 is an example of such an incremental contribution.

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Samenvatting (summary in Dutch)

1. Het thema van dit proefschrift

Een van de invloedrijkste theoretische stromingen binnen de institutionele economie is de benadering die bekend staat als Transaction Cost Economics (TCE). TCE is een theorie die een verklaring wil bieden voor de relatie tussen economische activiteiten enerzijds en de organisatievorm (governance-structuur of beheersingsstructuur) die wordt gekozen om die activiteiten te beheersen anderzijds. Deze verklaring verloopt langs de volgende lijnen. TCE onderscheidt drie verschillende generieke governance-structuren: (1) beheersing via de markt; (2) hybride beheersing; en (3) hiërarchische beheersing. Deze structuren onderscheiden zich van elkaar door hun eigen, specifieke verzameling van instrumenten waarop zij een beroep kunnen doen ten behoeve van de beheersing van economische activiteiten. In de marktgeoriënteerde vorm is de activiteit onderworpen aan de tucht van de markt. Bij de hybride variant wordt beheersing in hoofdzaak gevonden in contractuele bepalingen. In de hiërarchie tenslotte is beheersing vooral gebaseerd op interne normering en autorisatie. Die verschillen in het control-instrumentarium leiden ertoe dat elk van de generieke governance-structuren toegerust is met een uniek, maar beperkt probleemoplossend vermogen. Dit vermogen stelt hen in staat om aan bepaalde problemen het hoofd te bieden, maar aan andere niet. Economische activiteiten (of in het jargon van TCE: transacties) verschillen eveneens van elkaar. Vanuit de optiek van TCE is het belangrijkste verschil gelegen in de beheersingsproblemen waartoe zij aanleiding geven. Die problemen zijn te herleiden tot de kenmerken van de transacties. Deze kenmerken worden uitgedrukt in een drietal variabelen: (1) de onzekerheid waarmee de activiteit is omgeven; (2) de mate van specificiteit van de met een activiteit samenhangende investeringen; en (3) de frequentie waarmee de transactie wordt herhaald. Op basis van de score van een transactie op dit complex van variabelen en in combinatie met een tweetal veronderstellingen met betrekking tot menselijk gedrag (beperkte rationaliteit en opportunisme), is het vanuit TCE mogelijk om voorspellingen te doen over de met de transactie samenhangende beheersingsproblemen, zowel qua aard van de problematiek als ten aanzien van de intensiteit daarvan. De verklaring voor de relatie tussen trans-

acties en governance-structuren wordt gevonden in de efficiëntie van de match tussen beide: een bepaalde transactie wordt ondergebracht in een bepaalde beheersingsstructuur omdat het unieke probleemoplossende vermogen van die structuur een efficiëntere oplossing biedt voor de kenmerkende transactionele problemen die samenhangen met de activiteit dan geboden kan worden door de andere vormen van governance.

TCE's economische benadering van organisatievraagstukken heeft veel weerklank gevonden. Zonder overdrijving kan worden gesteld, dat TCE aan de basis ligt van een uitzonderlijk levendig en succesvol onderzoeksprogramma, zowel in theoretisch als in empirisch opzicht. Desondanks is TCE nog niet tot volle wasdom gekomen en bestaat er ruimte voor (en behoefte aan) versterking van deze benadering. Zo moet worden geconstateerd dat terwijl TCE contractuele problemen bestudeert op een uitgesproken micro-niveau, de op die analyse gebaseerde uitspraken met betrekking tot de oplossing van die problemen zeer globaal zijn en zich bevinden op het niveau van de generieke governance-structuren. Deze generieke structuren zijn evenwel heterogene categorieen, die bestaan uit een verzameling van gelijksoortige, maar niet identieke en niet nader gespecificeerde control-arrangementen. Een verdergaande specificatie van de subcategorieën is dan zinvol, omdat dat de nauwkeurigheid van de voorspellingen –en daarmee de toetsbaarheid van de theorie- vergroot en omdat daarmee nieuwe onderzoeksvragen binnen het bereik van de theorie worden gebracht.

Met dit proefschrift wil ik een bijdrage leveren aan deze nadere detaillering. Meer in het bijzonder wordt onderzocht (1) of een uitvoeriger specificatie van de subcategorieën van hybride governance licht kan werpen op de empirische constatering dat hybride beheersingsvormen soms worden gekozen voor de beheersing van transacties in condities van onzekerheid –een constatering die zich slecht verdraagt met TCE-; en (2) of een gedetailleerdere uitwerking van (vooral) hiërarchische besturing inzichten oplevert die relevant zijn voor een verklaring van management control structuur variëteit –een vraagstuk dat binnen de management control theorie nog geen bevredigend antwoord heeft gevonden.

2. Hybride beheersing in onzekerheid

Binnen TCE bestaat de algemene opvatting dat hybride beheersingsstructuren slecht bestand zijn tegen onzekerheid. De hybride vorm wordt geassocieerd met een lange termijn contractuele relatie, waarbij partijen hun autonomie behouden, maar toegang hebben tot additionele beheersingsinstrumenten (in vergelijking met de op marktwerking gebaseerde structuur). Hierbij wordt aangenomen dat die additionele instrumenten vooral bestaan uit mechanismen die het risico op contractbreuk beperken en die de kans vergroten dat de feitelijke uitvoering van de transactie binnen vooraf afgesproken grenzen blijft. De hybride structuur kan dan dus alleen effectief zijn als het mogelijk is om op voorhand met een redelijke mate van nauwkeurigheid aan te geven wat men precies van de transactie verwacht. Bij onzekerheid is aan die voorwaarde niet voldaan. Als men dan toch een contract zou opstellen, dan moet men er rekening mee houden dat dit contract in de toekomst moet worden herzien om tegemoet te komen aan sindsdien opgetreden, onvoorziene (onvoorzienbare) gebeurtenissen. Dat is problematisch omdat de hybride structuur geacht wordt niet over een instrumentarium te beschikken dat ervoor kan zorgen dat de wederzijdse bereidheid bestaat om de noodzakelijke aanpassingen tijdig en in harmonie door te voeren. De hybride structuur biedt dan te weinig bescherming tegen opportunisme en afhankelijk van de mate van specificiteit van de met de transactie gemoeide middelen, komen de alternatieven marktbeheersing en internalisatie in de plaats van de hybride vorm.

Deze opvatting is echter slecht in overeenstemming te brengen met de groeiende hoeveelheid empirisch materiaal die aantoont dat hybride structuren wel degelijk en met kennelijk succes worden aangetroffen in condities van onzekerheid, ook als het daarbij gaat om transacties die gekenmerkt worden door aanzienlijke specificiteit. Er is hier dus sprake van een empirische ongerijmdheid, en die kan verschillende reacties oproepen. In een daarvan wordt de geconstateerde discrepantie gezien als een aanwijzing dat TCE een te groot belang toedicht aan de gedragsveronderstelling opportunisme. Deze insteek accepteert de algemene opvatting dat de hybride vorm weinig bescherming biedt tegen opportunisme, maar stelt daar tegenover dat aan die bescherming ook helemaal geen behoefte bestaat als contractpartijen elkaar

vertrouwen en er vanuit gaan dat de tegenpartij de bestaande ruimte voor opportunistisch gedrag niet zal benutten. Door nu in TCE een nieuwe variabele 'vertrouwen' op te nemen, wordt hybride governance alsnog een optie in condities van onzekerheid.

Er is echter ook een andere reactie denkbaar. Deze laat de variabelen van de theorie ongemoeid, maar richt zich op de nadere bestudering van het beheersingsapparaat waarvan in de werkelijkheid gebruik wordt gemaakt door in onzekerheid opererende contractpartijen die hebben gekozen voor een hybride besturingsalternatief. Het idee hierachter is dat het denkbaar is dat er varianten van de hybride vorm bestaan die wel degelijk bescherming bieden tegen opportunisme bij contractaanpassing en die bovendien begrepen kunnen worden vanuit TCE's ongeamendeerde verklaringspotentieel. Als het lukt om zo'n subcategorie te identificeren, is de eerder beschreven empirische discrepantie ook opgelost, maar nu zonder de theorie zelf aan te passen door daarin nieuwe variabelen op te nemen.

Beide strategieën kunnen er dus (in potentie) voor zorgen dat de empirische constatering dat hybride besturing zelfs bij aanzienlijke specificiteit bestand is tegen onzekerheid, alsnog binnen het bereik komt van TCE. Anders dan de eerste strategie, doet de tweede daarvoor geen beroep op nieuwe variabelen. Algemeen wordt onderschreven dat als twee theorieën hetzelfde kunnen verklaren, maar een van beide minder variabelen nodig heeft om dat te doen, de 'kalere' variant de voorkeur geniet. Om deze reden is de tweede strategie te prefereren voor onderzoek dat zich richt op het dichten van het onderhavige empirische gat en komt de eerste handelwijze pas in aanmerking als de tweede geen bevredigende resultaten oplevert.

Dit proefschrift volgt dan ook de tweede weg. Gebaseerd op de empirische literatuur met betrekking tot uitbesteding in de Japanse automobielindustrie en venture capital financiering, is onderzocht hoe beide voorbeelden van hybride contractering bij substantiële transactie-specificiteit het hoofd weten te bieden aan onzekerheid. Daarbij tekende zich een patroon af in de wijze waarop in beide gevallen de beheersingsstructuur is ingericht. Dit patroon bevat de volgende elementen: (1) een redelijke en gedeelde verwachting dat

de relatie een lange termijnkarakter heeft –mits adequate performance wordt gerealiseerd; (2) het gebruik van weinig specifieke raamcontracten die eerst gaandeweg concrete invulling verkrijgen; (3) de aanwezigheid van marktmechanismen die ook onder wijzigende omstandigheden wederzijdse doelovereenstemming kunnen bewaren; (4) een in de wijze van contractuitvoering verankerde informatiedeling waaraan geen der partijen zich ongestraft kan ontrekken en die tussentijdse afstemming bevordert.

Met een uit deze elementen bestaande beheersingsstructuur hebben partijen in de onderzochte gevallen inderdaad toegang tot een effectief en efficiënt opportunisme-resistent instrumentarium dat gecoördineerde aanpassing aan wijzigende omstandigheden en voortschrijdende inzichten kan bewerkstelligen, hetgeen hun bestaan verklaart. Bovendien is gebleken dat de werking van dit instrumentarium kan worden begrepen vanuit (de standaardvariant van) TCE, zodat (althans voor het hier onderzochte probleem) geen behoefte bestaat aan de introductie van nieuwe variabelen.

3. Transaction Cost Economics en Management Control

Een van de belangrijkste uitdagingen van het vakgebied Management Control (MC) is het vinden van een verklaring voor de variëteit die wordt aangetroffen in de inrichting van controlstructuren. Dit probleem heeft dan ook veel aandacht getrokken in de literatuur. Toch heeft de bestaande MC-theorie nog geen bevredigend antwoord voor dit vraagstuk weten te formuleren. Het is echter goed voorstelbaar dat TCE een bijdrage zou kunnen leveren aan de verklaring van de empirische diversiteit op het terrein van de inrichting van controlstructuren, maar daarvoor is het nodig TCE nog eens goed door te denken om te kunnen komen tot gedetailleerde, nauwkeuriger uitspraken ten aanzien van de inhoud van de controlconfiguraties. MC is immers vooral geïnteresseerd in verschillen binnen de hiërarchische besturingsvariant. Dit proefschrift onderzoekt hoe binnen TCE het vereiste niveau van detail kan worden bereikt en formuleert een op TCE gebaseerde theorie van MC.

Evenals dat het geval is in TCE, worden in de door mij voorgestelde benadering vanuit de kenmerken van de te beheersen activiteiten de te verwachten controlproblemen in kaart gebracht. Uit het vakgebied MC is veel kennis

beschikbaar omtrent het control-instrumentarium waarover ondernemingen kunnen beschikken. Voorts is vanuit dat vakgebied veel bekend over de werking van de individuele instrumenten van control. Door nu een link te leggen tussen de aard van de activiteiten en de daarmee samenhangende controlproblemen enerzijds en de kennis omtrent het probleemoplossend vermogen van het control-instrumentarium anderzijds, is het mogelijk om consistente, onderscheidende clusters van control-instrumenten te definiëren die als pakket een op de problematiek toegesneden oplossing bieden. Het resultaat is dan een verzameling van control-archetypen, waarvan elk element in een gespecificeerde relatie staat tot een bepaalde categorie van activiteiten.

Meer concreet behelst de door mij voorgestelde theorie het volgende. Diversiteit in controlstructuren hangt samen met diversiteit in controlproblemen waarmee organisaties worden geconfronteerd. Die controlproblemen op hun beurt hangen samen met het karakter van de activiteiten waarbij de organisatie is betrokken. Dat karakter wordt gevormd door de score van de activiteit op een drietal variabelen: (1) de mate van onzekerheid waarmee een activiteit is omgeven; (2) de mate van specificiteit van de activiteit; en (3) de ex post beschikbare informatie en de verdeling daarvan over participanten in de activiteit. De mate van onzekerheid bepaalt de mogelijkheid om op voorhand standaarden te definiëren die kunnen worden ingezet ter sturing van gedrag. De mate van specificiteit beïnvloedt de toegang tot marktgerelateerde sturingsinstrumenten en, meer in het algemeen, de beschikbare mechanismen om opportunisme te bestrijden. De ex post informatieverdeling heeft betrekking op de al dan niet bestaande mogelijkheid om gedurende de uitvoering van de activiteit convergentie te bewerkstelligen in de opvattingen van participanten ten aanzien van de aan de activiteit en de uitvoering daarvan te stellen eisen en de mate waarin aan die eisen is voldaan.

De benadering onderscheidt een negental verschillende (varianten van) control archetypen, waarvan er vijf deel uitmaken van de generieke governancecategorie hiërarchische beheersing. De andere worden gerekend tot het markt- of hybride type. Elk van deze archetypen beschikt over een uniek probleemoplossend vermogen, dat ze geschikt maakt voor de beheersing van

bepaalde activiteiten, maar niet voor andere. De geïdentificeerde archetypen zijn de volgende:

- Market Control
- Arm's Length Control (hybrid)
- Arm's Length Control (hierarchical)
- Machine Control (action oriented)
- Machine Control (result oriented)
- Exploratory Control (hybrid)
- Exploratory Control (hierarchical)
- Boundary Control (market-based)
- Boundary Control (hierarchical)

Bij het *Market Control Archetype* is beheersing gestoeld op concurrentie. Dit archetype veronderstelt de aanwezigheid van alternatieve vragers en aanbieders, en wordt derhalve aangetroffen in condities van een lage specificiteit. *Arm's Length Control* wordt aangetroffen bij activiteiten die gekenmerkt worden door lage onzekerheid en beperkte specificiteit. In dit archetype is beheersing in hoofdzaak gebaseerd op expliciete contractuele bepalingen met betrekking tot de te leveren prestatie (de hybride variant) of op marktgerelateerde interne performance standaarden (de hiërarchische variant). De principaal blijft op afstand staan zolang de uitkomsten corresponderen met die standaarden. Karakteristiek voor *Machine Control* is standaardisatie en monitoring van handelingen (action oriented machine control) of van uitkomsten (result oriented machine control). Anders dan bij arm's length control, zijn de standaarden afkomstig uit de organisatie zelf (het zijn administratieve in plaats van marktstandaarden). Dit archetype is verbonden met activiteiten die een lage onzekerheid paren aan een hoge specificiteit. *Exploratory Control* werkt met normen en standaarden die niet reeds op voorhand beschikbaar zijn, maar ontstaan tijdens de uitvoering van de activiteit. Exploratory control biedt een oplossing voor activiteiten die moeten worden getypeerd als onzeker, maar waarbij een structuur kan worden ontworpen die ervoor zorgt dat de inzichten die ontstaan tijdens de uitvoering van de activiteit gedeeld worden, waardoor convergentie in opvattingen en verwachtingen kan worden gerealiseerd. Daarnaast is het nodig dat -wil een dergelijke groeiende consen-

sus ten aanzien van de normen een feitelijke invloed hebben op het gedrag van bij de activiteit betrokken individuen- naleving steeds in het belang is van alle betrokken partijen. In de hybride variant wordt dat gerealiseerd via marktwerking (hetgeen beperkte specificiteit vereist); in de hiërarchische verschijningsvorm (die wordt gekozen bij hoge specificiteit) door beloning te baseren op de achteraf te beoordelen kwaliteit van de individuele bijdrage. Als in condities van onzekerheid de voor exploratory control vereiste informatiedeling niet kan worden gewaarborgd, en als de specificiteit te groot is om te kunnen vertrouwen op market control, dan komt *Boundary Control* in aanmerking. Beheersing binnen dit type is gebaseerd op grenzen waarmee wordt geprobeerd om ongewenste gedragingen te voorkomen. De vraag naar de bron van de grenzen in afhankelijk van de specificiteit van de activiteiten. Bij beperkte specificiteit is het soms mogelijk dat de markt de grenzen definieert en kunnen reputatie-effecten zorgdragen voor inachtneming van die grenzen. In andere gevallen worden de grenzen gesteld binnen het hiërarchisch verband en is toezicht op naleving een kwestie van monitoring.

De ontwikkelde theorie is niet getoetst –dat zou gegeven de aard van de theorie het bestek van een proefschrift als individuele prestatie verre te buiten gaan. Toch is er reden de theorie serieus te nemen. Hoewel niet is aangetoond dat de beschreven archetypen de empirische variëteit voldoende afdekken, is wel aandacht besteed aan de herkenbaarheid (het bestaan) van de beschreven archetypen in de werkelijkheid. Van sommige daarvan stond het bestaan al bij voorbaat vast, maar ook de minder bekende structuren bleken geïllustreerd te kunnen worden met bestaand empirisch materiaal, hetgeen hun bestaan bevestigt. Omdat bovendien gesteld kan worden (1) dat de theorie –hoewel niet getoetst- wel degelijk toetsbaar is; (2) dat mijn benadering gedetailleerdere uitspraken doet over de vraag wanneer welke controlstructuur wordt aangetroffen dan concurrerende benaderingen met een vergelijkbare scope en daarbij tevens niet-hiërarchische control omvat; en (3) dat deze uitspraken tezamen een coherent geheel vormen en hun oorsprong vinden in een consistent geheel van variabelen en relaties daartussen, lijkt het verdedigbaar de theorie aan te bevelen in de aandacht van degenen die zich bezighouden met vraagstukken op het terrein van MC.

Curriculum Vitae

Roland Speklé (1966) studied business economics at Erasmus University Rotterdam. After graduating in 1991, he joined Deloitte & Touche, where he worked in the audit and consultancy practice. Although he really enjoyed his time with Deloitte, he came to realize that his more urgent ambitions were in academe, and he went back to Erasmus University -initially just for a couple of years to write his Ph.D.-thesis. That, however, took more time than originally envisioned, and having been exposed to the joys of the academic life for a substantial period of time, he is now no longer sure about the temporary nature of his move. But then again, he is not sure about this move being permanent either.

At Erasmus University, his teaching responsibilities have been quite diverse, ranging from grand-scale introductory courses in business economics and accounting with audiences of over 700 students (for which he has been nominated "lecturer of the year" in 1998) to in-depth seminar courses on management control with attendance limited to 20 participants. He also teaches management control in the postgraduate chartered controller programme of Erasmus University.

His research interests are in the field of the economics of organizational control and –albeit as a side-line project- in the history of accounting thought.

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Beyond Generics: A Closer Look at Hybrid and Hierarchical Governance

The main theme of this thesis is that the general logic of Transaction Cost Economics (TCE) is receptive to refinement, allowing a disaggregation of the hybrid and hierarchical modes of governance. It is argued that such a disaggregation is useful for two main reasons:

(1) it may increase the accuracy of TCE's predictions and may improve the expressiveness of its style of explanation, and

(2) it may enlarge the conceptual scope of TCE, opening up problem areas that previously did not fit neatly into the realm of this approach.

This general idea ties together the two substantive parts of this study. The first of these parts starts from the empirical observation that hybrid structures do sometimes survive conditions of substantial uncertainty -an observation that does not go well with received TCE-, and examines two cases of hybrid contracting in such conditions. It is argued that both cases are examples of a hitherto ignored sub-category of governance that, once identified, restores TCE's ability to explain this observation. The second part brings TCE's explanatory apparatus to bear on issues of management control. It is shown that TCE supports a highly detailed study of control issues, and that it has much to offer when it comes to explaining control structure variety within (and beyond) the hierarchy. Based on these insights, this part proposes a theory of management control that specifies the composition of various archetypal control structures, and links these to the characteristics of the activities they are expected to control.

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