THE LIMITS OF CORPORATE GOVERNANCE
An examination of the manager-shareholder conflict

by

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# Introduction

A theory of management

## 1. Is Transactions Costs Economics the answer?

## 1.1 Subjective Knowledge and Communication Costs

## 1.3 Group decision-making and subjective knowledge: the trade-offs

### 1.3.1 The problems of consensus

### 1.3.2 Authority as a solution

### 1.3.3 Who is the leader? The fundamental paradox of authority positions

### 1.3.4 Autonomy

## 1.4 Opportunistic Authority

## 1.5 Summary of the Arguments

## 2. Accountability and Governance

### 2.1 General thoughts

### 2.2 The governance of equity investments in projects and small firms

#### 2.2.1 Projects with significant returns to the manager’s private information

#### 2.2.2 Projects with insignificant returns to the manager’s private information

### 2.3 The governance of equity investments in the widely held corporation

#### 2.3.1 A paradox on the delegation of management

#### 2.3.2 Satisfactory vs. Optimal Firm performance

### 2.4 The mechanisms of governance

## 3. The empirical evidence on resolving the shareholder-manager conflict

### 3.1 Incentives: the role of carrots and sticks

#### 3.1.1 Stock options: the carrot

#### 3.1.2 Management ownership stakes: more carrots

#### 3.1.3 The takeover market: the stick

#### 3.1.3.1 The value effect of merger activity

#### 3.1.3.2 The evidence on anti-takeover resistance

#### 3.1.3.3 Are takeover targets poor performers?

#### 3.1.3.4 Are takeovers part of the agency problem or part of the solution?

#### 3.1.3.5 Reasons for merger activity

#### 3.1.4 Leveraged Buy-outs

#### 3.1.5 Synopsis on incentive mechanisms

### 3.2 Shareholder control mechanism

#### 3.2.1 Direct control mechanisms: shareholder activism

#### 3.2.1.1 Shareholder voting and proxy fights

#### 3.2.1.2 Ownership concentration

#### 3.2.1.3 Does it matter, who the large shareholder is?

#### 3.2.1.4 Institutional investors as activist shareholders

#### 3.2.1.5 Shareholder sponsored proposals

#### 3.2.1.6 Summary on shareholder activism

#### 3.2.2 Indirect control mechanisms: the role of the board

#### 3.2.2.1 Board composition: insiders and outsiders

#### 3.2.2.2 Board structure, size and conduct

#### 3.2.2.3 The different functions of boards of directors

#### 3.2.3 The substitution hypothesis

### 3.3 The legal environment

#### 3.3.1 Accounting and disclosure requirements

#### 3.3.2 Regulation of shareholder voting: rights and conduct

#### 3.3.3 Regulation of takeovers

#### 3.3.4 Corporate charters

#### 3.3.5 Regulation of the board of directors

#### 3.3.6 Minority shareholder protection

#### 3.3.7 The impact of the legal system as a whole

## 3.4 Summary of the empirical evidence

## 4. Summary and Conclusions
Corporate Governance deals with mechanisms by which stakeholders of a corporation exercise control over corporate insiders and management such that their interests are protected.
John and Senbet (1998, p. 372)

When uncertainty is present, and the task of deciding what to do and how to do it takes the ascendancy over that of execution, the internal organization of productive groups is no longer a matter of indifference or a mechanical detail.
Knight (1921, p. 268) quoted in Radner (1992, p. 1387)

... a significant fraction of the industrial labor force is employed in rather large firms, and ... a significant fraction – perhaps more than 40 percent – is devoted to the activity of managing.
Radner (1992, p. 1385)

I suspect that, for economists to contribute to [the management literature] in a scientific way, we shall have to modify our model of economic behavior, not merely – as is beginning to happen on a small scale – to take account of bounded rationality, but also to enrich our model of human motivation.
Radner (1992, p. 1384-5)

Coase (1937) taught us that using the market has its costs, and firms alleviate these costs by substituting the price mechanism with the exercise of authority. By and large, corporate governance is the study of how this authority is allocated and exercised. But in order to understand how this authority is allocated and exercised, we first need to know why it is needed in the first place. We need, thus, a theory of the firm.
Zingales (2000)
Introduction

During the last decade or two, the study of corporate governance has generated increased attention both from economic and legal scholars. However, as the quote by Zingales (2000) indicates, there remain significant gaps in our understanding of this phenomenon as well as the suitable mode of analysis. The introductory quotations set the stage for the analysis provided in this paper. John and Senbet (1998) provide a definition of the subject encompassing all stakeholders. In the interest of brevity, this paper focuses on an examination of the shareholder-manager conflict. Secondly, the definition by John and Senbet puts corporate insiders, especially management, at the center of inquiry.

The quotation by Knight (1921) suggests that a deeper analysis of what constitutes management has long been recognized as central to a richer understanding of the productive process in society. The third quotation by Radner (1992) underlines the empirical relevance of the concept of management, which he used to encourage economists that the study of management is relevant and fruitful.

The fourth quotation, also by Radner (1992), suggests that the tools traditionally employed in economic analysis may not be sufficient to fully understand all aspects of what we consider “management” to be. The last quotation by Zingales (2000) returns to the analysis of corporate governance by grounding it in a theory of the firm which itself is rooted in the authority relationship characteristic of the organizational structure we call “firm.”

In a sense, the objective of this paper is to answer to the challenge posed by Zingales. The first chapter provides a theoretical sketch of authority and management. I shall motivate hierarchical decision-making structures through an analysis of group decision-making situations. The result is a theory of the firm grounded in a theory of management. In chapter two, the governance of this firm will be explored from the viewpoint of equity investors.

The fundamental insight to be communicated by the theoretical inquiry is that both the concept of management as well as its governance are clouded by a significant amount of ambiguity. The sense that all authority relations must by their very nature confront such ambiguity was already conveyed in Arrow’s (1974) seminal inquiry into the nature of organization. By extending this logic to the concept of governance, the title of this contribution is then actually borrowed from Arrow’s (1974) publication.

In chapter three I provide a survey of empirical work related to the shareholder-manager conflict in order to support the thesis that the governance relationship must by its nature be ambiguous and imprecise. Thus, while it will be shown that some value attributes are discernible for the various governance mechanisms, their exact relative contribution has not been extracted from the data: the optimal governance structure for corporate enterprise has not yet been found.

I argue in the spirit of Herbert Simon (1978), that the optimality of a governance arrangement is hard to achieve, and that governance activity is rather to be understood as satisficing behavior. This, however, does not mean that corporate governance is irrelevant, but that the

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1 For example, more than half of the articles published in the Journal of Corporate Finance since its inception have dealt with topics in the wider realm of corporate governance.

2 Not by coincidence, Zingales' paper is titled: „In Search of New Foundations“. 
interplay between various governance mechanisms forms a meaningful governance regime. Thus, the concluding chapter argues that the legal, hierarchical, and market institutions found in an economy should be seen as an accountability framework to support and constrain managerial activity: on the one side, managerial freedom needs to be ensured to reap the full fruits of managerial creativity. On the other side, excesses at the expense of third parties (the stakeholders) need to be curtailed.

The design of governance systems needs to avoid both: the stifling of managerial creativity and the exploitation of stakeholders. Shifting too far in the direction of managerial independence compromises the provision of risk capital. Shifting too far in the direction of oversight and control stifles the engine of economic growth: managerial creativity.

A note on the methodology employed seems in order. This paper is not rigorous in a mathematical sense, which is not judged favorably in the mainstream economic paradigm. In defense, I would like to invoke Krugman’s (1995) essays on economic development and economic geography. These fields, he claimed, have long led a shadow existence in the economic sciences since the available tools at the time did not lend themselves well to the object of their study. Now, with a “bag of tricks” developed in the field of industrial organization, a reintegration into the economic mainstream is feasible. While Krugman favors the approach of rigorous modeling, he nonetheless identifies a trade-off between speedier conjectures absent modeling techniques, and the slower but more precise technical progress.

The theory of the firm as developed by Coase (1937) and Williamson (1975) is now finding re-entry into the economic mainstream through a “bag of tricks” developed in incomplete contracting theories. The objective of this paper is not to develop or apply such a “bag of tricks”, but to sketch in a more heuristic way a path towards understanding phenomena that have not been sufficiently researched both by mainstream economic thought as well as the theory of the firm as developed by Coase and Williamson. Specifically, I intend to provide a richer framework to understand problems surrounding management and accountability.

Finally, there is a question as to the objective of the paper given that there already exists a comprehensive survey on corporate governance by Shleifer and Vishny (1997). The survey on the empirical literature I provide in chapter three not only seeks to include the sizeable literature that developed since the publication of the paper by Shleifer and Vishny, but rather wishes to support the theoretical arguments developed in the first two chapters by examining the empirical knowledge that has been gathered in its totality.

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1 A theory of management

In his survey article, Radner (1992) suggested that the economic theory of management still faces a number of unanswered questions. This chapter tries to address the challenge put forward by Zingales (2000) and analyze the nature of the authority relationship. The authority relationship is here defined as one economic agent doing the economic planning for another, who readily submits to orders resulting from the economic plan worked out by the superior.

Elements of such relationships can be found in the earlier literature, but the economic theory of the firm generally derives the need for organizational integration with the argument that the joint owner of returns from assets which are difficult to allocate to individual parts of the production process due to synergies, quasi-rents or specific assets economizes on "haggling costs." The benefits from integration accrue due to a centralization of residual claims. The issue of authority is generally left indeterminate.

This article intends to endogenously derive authority positions without recourse to opportunism or the exploitation of externalities by defining knowledge and information in a way that allows for communications costs. Authority solutions to decision-making situations arise in order to minimize communications costs, broadly defined.

The line of argument will proceed as follows. Section one reviews, why Transactions Costs Economics leaves the question of authority indeterminate. Section two introduces the framework of individuals' knowledge, information, and belief structures that allow for communications costs. Section three exposes the problem of group decision-making in this environment, and the costs and benefits of different decision-making regimes. Section four discusses the additional complexities resulting from opportunism in this environment. Section five concludes the theoretical arguments of authority and management structures.

1.1 Is Transactions Costs Economics the answer?

Transactions Cost Economics reasons that claimants to returns on relationship specific investments may never see the fruits of their investment due to post-contractual haggling problems motivated by opportunism in the presence of bounded rationality. Vertical integration solves the problem by centralizing residual claims, and guaranteeing performance by fiat.

While the answer is intuitively appealing, due to the assumption of bounded rationality, the solution is not obvious in all situations. The solution is truly unproblematic only in those cases, where the post-contractual problem is perceived ex ante in its entirety. In cases where two contracting parties face a regime shift - say due to a technological innovation - post-contractual problems may not be perceived at the time of the idiosyncratic investment because the contracting parties do not foresee a haggling problem due to bounded rationality.

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5Coase (1937), Simon (1955), and also Alchian and Demsetz (1972), who argue in the end of their paper that the monitor of a team may have superior knowledge about workers' input performance, and may optimize team structure accordingly, hence telling workers which tasks to perform.

6Alchian and Demsetz (1972).

7Klein, Crawford and Alchian (1978).

8Williamson (1985).

9Solo (1967).

10Williamson (1985).
In the case of *ex post* discovery of the haggling problem, it is no longer clear, how vertical integration solves the problem. The appropriable quasi-rent inherent in the specific investment will be vulnerable also in the negotiations of purchase price in an acquisition, or an exchange offer in a merger.

The only problem that vertical integration solves in this situation is that it replaces a continuous recontracting cum haggling scenario with a once-and-for-all fight. Then vertical integration solves the problem of difficult negotiations. Yet, such costs are ill-defined in economic theory, and the purpose of this chapter is to illustrate the source for such costs more precisely. In the absence of such negotiations costs, economic theory - notably in industrial organization - is looking for alternative explanations such as foreclosure theories,\(^{11}\) where a firm extends a natural monopoly downstream through vertical integration. While such a theory provides an appealing reason for vertical integration, it is quantitatively insufficient to more generally explain the sizes of firms in many industries, and the hundreds of thousands of middle management jobs in the US economy alone, as the opening quotation by Radner (1992) suggests.

Neither does Transactions Cost Economics provide an answer for the large number of authority positions in an economy. Consider the case where two contracting parties have recognized a potential post-contractual problem *ex ante*, and decide to integrate their structures. There is no argument, why the new structure shouldn’t be led by two managers. Absent a reason for putting the new structure again under the leadership of one manager, there is then also no reason for the existence of any hierarchy inside any of the pre-merger structures. Transactions Cost Economics provides an answer to the question of vertical integration, but not to the question of management. In the following, I wish to sketch a theory of management, which then naturally extends to a theory of the firm as a hierarchy.

### 1.2 Subjective Knowledge and Communication Costs

First, I would like to present the assumptions on how people hold their beliefs to generate a framework that allows for communication costs. Communications costs are treated as a consequence of the subjectivity of knowledge, and are a vital ingredient to the theory of hierarchy,\(^{12}\) This section will only summarize the arguments on how individual belief structures can be structured as to generate bounded rationality and communications costs. For a representation more closely tied to the formal economic literature, the interested reader is referred to appendix I.

In a nutshell, agents do not only differ in their probability beliefs over a class of states, but may perceive the world through different conceptual lenses: the subjective definitions of “states” varies. These subjectively defined states as well as functional relations between relevant variables represent an agent’s “view of the world”.

Changing their “view of the world” introduces agents to “fundamental uncertainty”, which leads to a stickiness in beliefs. This could be subsumed under the heading “learning costs”. As a

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\(^{11}\) Rey and Tirole (1996).

\(^{12}\) A variant of this approach to organization is taken by Arrow (1991) in a late essay: „I do indeed suggest the possibility that elite control is connected with economies of scale in the process by which information is communicated. Hence, it will pay to reduce the number of individuals among whom information is to be communicated and have each transmit more. However, to the extent that this proposition is true, it calls for new models of optimum communication, since standard models usually lead to what amounts to diminishing returns, in which case there would be no gain in excluding a large number of individuals from the process.”
professor teaching to students it is certainly not implausible to believe that such learning costs are positive and significant. Thus, views of the world must by definition be unique to the beholder which introduces communications costs: even if the same language is used, information is not costlessly communicable.\textsuperscript{13}

I argue that both problems of traditional agency theory (where the agent “knows more” than the principal) and Transactions Cost Economics (where the agent “knows differently” from the principal) can be represented with such belief structure.

In particular, when agents with incomplete “views of the world” cannot communicate perfectly, and language is not capable of defining an unambiguous contract, the post-contractual problem that is central to TCE naturally arises. Communications costs imply bounded rationality.\textsuperscript{14}

Moreover, the belief structure assumed here allows a richer understanding of group decision-making regimes, which I now use to motivate authority relationships.

1.3 Group decision-making and subjective knowledge: the trade-offs

When agents have different “views of the world”, disputes may arise due to "honestly differing opinions." Opportunism exacerbates the problem, since parties have an incentive to favor the viewpoint beneficial to their interests, but I wish to abstract from opportunism in the following to show that authority relationships may arise due to communications costs alone.

Consider the team from Alchian and Demsetz (1972): the team needs to make a joint effort to realize the synergies, but all team members know what to do. The problem is merely how to overcome shirking externalities. However, in the presence of subjective views of the world, team members may have different ideas as to the best realization of synergies. Before tackling the problem of overcoming shirking externalities, the problem of defining the team's agenda needs to be addressed.

This is a group decision-making problem, which may have one of three solutions. Either, the group agrees in a joint effort with a jointly defined decision-making rule. Or the group establishes a leader, whose orders are followed. Or the group is dissolved, and members leave to organize a similar effort themselves. The choices are: consensus, authority, and autonomy.

1.3.1 The problems of consensus

If sufficiently different views are forced together in a group decision-making situation, one of three things can happen: mutual learning may establish decisions superior to those based on the knowledge individuals; bargaining may yield “foul compromises”; or "irreconcilable differences” are established, and no decision taken.

First of all, group decision-making favors the status quo. In the first situation this is limited to the time it takes to arrive at a consensus decision. There is a trade-off between acting immediately, and waiting for consensus, but then enjoying the benefits of a superior decision. Yet, scenario

\textsuperscript{13} Witness the instructive title of Deborah Tannan's books “That's not what I said”, and “You just don’t understand”.

\textsuperscript{14} Bounded rationality can also mean "economizing on time," specifically: information processing time. Solving complex problems takes time (Seiwert (1989)) which is well-known in computer science, where CPU-time is costly. Via the concept of "divide et impera", the literature does not only imply the merits of specialization, but also derives the merits of hierarchy (Radner (1992), van Zandt (1997), van Zandt and Radner (1997)).
two shows that “enlightenment” may give way to “foul compromise” in bargaining. In the third situation, the status quo is maintained indefinitely, as the group members cannot settle for a common course of action due to "irreconcilable differences".

Transactions Cost Economics has the third case in mind, except that opinions are not honestly different, but opportunistically motivated. It focuses on a subset of reasons, where group decision-making fails due to irreconcilable differences of opportunistically motivated opinions. TCE has little to say about authority structures that arise because a) the irreconcilable differences are motivated by honestly differing views of the world, b) consensus can breed “foul compromise”, and c) there is a need for decision-making speed.

The latter point deserves further attention. Situations can be perceived, where "any decision is better than no decision", for example because the Status Quo may represent a dynamic equilibrium of continuously diminishing welfare such as in a company in financial distress. A crucial dimension is the time we perceive to have to come up with a meaningful group solution, and the time we perceive to have until the status quo leads to a dismal outcome.

1.3.2 Authority as a solution

Kenneth Arrow (1974) cites the military as an institutions that is an extreme example of authoritative governance. Clearly, a platoon that runs into an ambush situation doesn’t call for immediate discussion (consensus), but immediate action. If, however, each soldier disperses into a different direction (autonomy), the protection of the group is lost. Then, it is preferable that one leader orders the platoon to escape into one direction. The benefit of the authority solution is to force a cooperative game on the players where consensus fails.

Yet, the decisive point of the authority solution is that any decision is made, not necessarily the benefits of playing a cooperative game. This is illustrated in Herbert Simon's (1978) example of a congressional advisory body on air pollution. The group had, after months of deliberation, come up with the recommendation that "we need more research". This is another way of saying that there was no consensus among group members of what the best course of action would be. But is doing nothing, the status quo, the best alternative in this situation? We can envision situations where it is preferable that some environmental legislation is passed even without knowing the exact causalities of air pollution. Sometimes, going somewhere is better than going nowhere. That we need authority at least in some situations seems clear. Less clear is, who should fill that role?

1.3.3 Who is the leader? The fundamental paradox of authority positions

Carter (1979) distinguishes authority as knowledge and authority as power. Going with the former as a normative prescription, the leader should be viewed as an expert in his or her field of decision-making. Yet, there are some fundamental problems with the selection mechanism and the authority position itself. When a team decides to abandon group decision-making and elect a leader whose orders are to be followed, it requires a belief from every team member that the benefits of swift decisions outweigh the subjective perception of inefficient decisions. Everyone naturally would consider himself the ideal leader.

In addition, stalemate in the group decision-making procedure arises because team members were not able to adequately communicate their views of the world, and improve on them in the

\[15\text{ Alchian and Woodard (1988) also include honest disagreement as a source of haggling problems.}\]
process. Hence, even though the group may decide *ex ante* that it is in its best interest that it elects a leader, individual group members will *ex post* dissent with the leadership. Authority without dissent is redundant. Hence, authority needs power to enforce its decisions.

This implies two problems. First, while the creation of an authority position may be understandable, the selection procedure of the leader is not. Say that a person's track record is an indication for the quality of his "views of the world." With the ambiguities of individual theories as defined above, a good track record may indicate both wisdom and luck. Past performance may be no indication for future performance. Furthermore, in radically changing environments, agents "partial theories" may become obsolete, and a leader should be replaced. Yet, in order to enforce his views, the leader necessarily needs power to override dissent if necessary.

This invokes a fundamental paradox. Authority without dissent is redundant, but should be dismissed if there is "too much" dissent. Authority needs power to enforce its views in the face of dissent. Yet power creates an obstacle to change in the case of "justified dissent." As much as dissent is invoked to defend the leadership position, it is invoked against the leader. This contradiction is inherent in all authority positions, and surrounds it with an aura of ambiguity.

### 1.3.4 Autonomy

Because of this leadership paradox, leadership positions display by necessity a certain stickiness and ambiguity. One answer is to enact clearly defined rules for leadership replacement, e.g. elections in a democracy, or stakeholder votes in the corporation. Yet, these rules are no more than a compromise. The crucial issue is again one of time. Frequent leadership changes leave the respective institution in a permanent state of transition. As soon as one leader's views of the world are materializing in concrete policy, leadership is changed, a new philosophy invoked. These "transition costs" establish a minimum duration for leadership positions.

Yet, the potential fallacy of the leader's opinions creates a need for a different solution: autonomy. The option to leave a team and establish an alternative under a different philosophy counteracts the potentially paralyzing monopolization of opinions in a hierarchy. This is potentially the most important argument against a planned economy, and parallels Hayek's (1945), who argued that a market system incentivizes people to trade on privately held "knowledge of time and place" to the ultimate benefit of all. Here, I argue that a pluralistic society allows experimentation with new ideas, or Hayek's "knowledge of general constructs." The philosopher Karl Popper once said that "science progresses through trial and error". The ultimate cost of authority is to limit "trial" through the monopolization of ideas, and thus impede progress. Today, pluralism is treated as moral "right". I argue that it is also practical.

The central logic of this section runs as follows. The theories economic agents hold are subjective and never totally verifiable in an objective sense, hence never "true." For one thing, this exposes a problem of group decision-making situations favoring the status quo due to communications costs. Yet, if an authority position is created to combat this problem, the person who fills it will ultimately have no *objective* legitimacy to monopolize his ideas, and must thus

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16 This is the note on which Kenneth Arrow (1974) ends his essay: "Authority is undoubtedly necessary for the achievement of an organization's goals, but it will have to be responsible either to some form of constitutionally planned review and exposure or to irregular and fluctuating tides of disobedience."

17 Consider the case of Ross Perot. While at IBM, he proposed IBM to enter the software business. After IBM's management rejected the idea, Perot took a few co-workers with him to create EDS, and became a billionaire. Similarly, in Germany some IBM employees created SAP, a most successful addition to the German stock market.
be subjected to some kind of review. As the review intervals may not be too short, society must allow the exit option to benefit from experimentation with different individual theories, which - individually - are by necessity incomplete.

The insights gained from the above analysis go beyond Transactions Cost Economics. It is possible to use the assumption of subjective and incomplete individual theories to generate a theory of management without recourse to opportunism. Authority solutions economize on communications costs. At the same time, the costs of autocratic regimes are exposed, and yield powerful arguments as to why there is actually a trade-off between market and plan, autonomy and hierarchy. Transactions Cost Economics only gives a partial explanation as to the benefits of vertical integration: all other things equal, increasing asset specificity increases the desirability of vertical integration. There are no sufficient arguments for why the market is seen as *ex ante* superior. With the enriched assumptions about human belief structures, costs and benefits of markets and hierarchies are exposed. The theory of the firm is - in part - a theory of management.

### 1.4 Opportunistic Authority

I will now demonstrate that the introduction of opportunism merely exacerbates the problem of sticky authority positions, but does not fundamentally shift the equilibrium to a new quality. Opportunism has two consequences. First, as in Transactions Cost Economics, haggling about quasi-rents inherent in specific assets occurs because of self-interest, not only honestly differing opinions. Secondly, if people have a utility function that values autonomy or power next to monetary gains, then they will have opportunistic motivations to seek leadership positions. In political philosophy, this was recognized by Karl Marx.

Marx studied authority also in the context of the economic system. He explicitly recognized two sides to authority: management and exploitation. The former kind is needed as a condition of production. Marx's recognition of this aspect is undoubtedly proof that despite his legitimization for the rejection of authority, he was by no means an anarchist. Engels wrote: "There is a kind of authority, which is inseparably linked with all organization, a kind of subordination, based on functional-rational assumptions to genuine management and performance-labor discipline. Such functional authority is necessary in every social organization as a condition of production." Opportunistic authority can abuse the power that is necessary for the enforcement of authoritative rulings, which is what he calls "the private appropriation of social interests." That Transactions Cost Economics has an incomplete explanation for authority structures could be seen in a challenge by Dow (1987), with an insufficient rebuttal from Williamson (1987). Opportunistic authority deserved further inquiry.

To complicate matters, opportunistic authority also faces opportunistic opposition. Dissent - inherent in all autocratic regimes - may be opportunistically motivated. This is an additional reason to endow the authority position with power. This power may in turn be used to defend the authority position in an opportunistic way. Opportunism accentuates the contradiction that dissent is invoked for the leadership position but against the leader. The means of power - an army to fight insurgents, the right to dismiss uncooperative employees - prolong the staying power of the leader, and thereby increase the value of leaving the exit (autonomy) option open.

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18 As argued by Coase (1937).
19 Marcuse (1972, p. 132).
20 Engels (1960), recited in Marcuse (1972, p. 135).
21 Marcuse (1972, p.138).
Yet, the problem of opportunism merely increases the cost of authority as well as group decision-making, as a decision stalemate may be a result of opportunist behavior of team members. The exit option, or autonomous solutions, becomes more desirable. The basic trade-offs, however, between the decision-making regimes can be derived merely through recourse to subjective knowledge and the resulting communications costs.

1.5 Summary of the Arguments

The economic theory of the firm has so far an insufficient theory of management. This chapter introduces a conceptual framework that explains hierarchies characterized by leadership that performs the task of economic planning for subordinates. The trade-offs between group and autocratic decision-making originate from communications costs that result from subjectively held beliefs. Communications costs imply that consensus regimes favor the status quo.

Hierarchical solutions are superior when maintaining the status quo is too costly. Yet, the monopolization of ideas is the major cost factor of hierarchy. It necessitates the creation of review procedures of the authoritative office, and mandates that society keep the exit option open to foster a beneficial marketplace of ideas.

A fundamental paradox of all authority positions is exposed. Without dissent, the authoritative office is redundant. Yet, dissent is invoked against the leader in the review procedure. This contradiction mandates that the authoritative office be endowed with the power to enforce its decisions, while at the same time creating a stickiness in all authoritative positions. The problem is magnified with the introduction of the assumption of opportunism, but can be derived by merely resorting to communications costs.

Then again, the transition costs arising from a leadership change necessitate some minimum time period between constitutional reviews. Once it is decided that a leadership position is created, and once a leader has been selected, he or she needs time to follow through on his or her plans and “visions”. These plans and visions are necessarily subjective and unique. Therefore, the view of management portrayed here is compatible with Schumpeter’s “creative destructor”.

The conceptual framework presented here represents an important addition to agency theory and Transactions Cost Economics. Agency structures and agency problems arise not merely due to ill-spirited self interest seeking, but also due to the ambiguous nature of subjectively held beliefs that yield a communications problem. Agents' theories are ambiguous, because an individuals' answer to the unavoidable infinite regress of knowledge is arbitrary by definition. Teams elect leaders to combat inertia resulting from the associated communications problem. Hierarchy structures arise endogenously because they economize on communications costs. With that, an economic theory of management lays the foundation of a theory of the firm.
2 Accountability and Governance

While the last section has dealt with the general issue of authoritative positions and their alternatives, we will now turn more specifically to the separation of ownership and control. We view it as given that hierarchy is the appropriate organizational form for the modern corporation, thus treating the necessity for management and leadership as exogenous. Instead, we turn to the questions of accountability and governance, specifically why shareholders are the most likely stakeholders to implement the “constitutional review” of a firm’s management, and what mechanisms exist for shareholders to defend their interests versus a firm’s management.

2.1 General thoughts

The agency relationship has long been examined in Financial Economics\(^\text{22}\). All stakeholders in a firm live in an agency relationship with management, since management may take decisions to the detriment of a stakeholder group. Thus, I will first motivate, why the recommendations of traditional agency theory are not sufficient to ensure management accountability.

While the agency problem as posed above is general enough to lend itself for this type of inquiry, the solution to the agency problem depends crucially on the \textit{behavioral assumptions} of economic man. The seminal contribution by Holmlstroem (1979) uses a neo-classical framework of subjective utility maximizing individuals to conclude that the agency problem requires an adaptation of the optimal risk-sharing rule between principal and agent that undercompensates the agent in the bad states, and overcompensates the agent in good states. Nothing is said about hierarchy except that – for exogenous reasons – the principal has to hire the agent as an expert in his or her field. As a consequence, the early literature on corporate governance focuses on incentives (stock option remuneration = overcompensation, disciplinary takeovers = undercompensation, management share-ownership = both) and the reduction of information asymmetry through disclosure or “monitoring”.

The seminal analysis by Jensen and Meckling (1976) recognizes the welfare loss inherent in agency relations, but merely postulates that the agent will have to absorb the costs of his misaligned incentives for perk consumption. This “solution via the price mechanism” is now seen as problematic in models of hidden action and hidden information.

Hierarchy explicitly entered the picture with a new class of models, which assume contracts to be incomplete\(^\text{23}\). Contract incompleteness leads to \textit{ex post} renegotiation, and the allocation of authority is supposed to minimize the frictions of conflict in situations of contract - and legal - failure. Hierarchy becomes a part of an optimal contract design on top of considerations concerning the incentive structure inherent in a sharing rule. Financial contracts featuring such provisions have been examined by Zender (1991), Aghion and Bolton (1992), or Dewatripont and Tirole (1994). These contracts feature hierarchical corporate governance elements.

A question that remains to be addressed why only shareholders should have recourse to governance institutions. To be sure, the case becomes less clear-cut as the literature proceeds. An innovative argument has been forwarded by Zingales (2000). Extending the analysis by Welch (1997) of bankruptcy procedures more generally to corporate governance issues, he argues that the party with the ex ante biggest rent-seeking ability in case of contract failure should have the


\(^{23}\) Grossman and Hart (1986).
residual rights in a firm in order to minimize conflict. In human capital intensive firms, this may well be employees. In this paper, however, I will concentrate on equity contracts.

The rationale to focus on equity contracts is that investors stand the most to lose from managerial failure. Creditors have governance incentives only in times of financial distress. Workers can take at least part of their human capital to the next job, while suppliers as trade creditors often have the possibility to seize their assets. Thus, the approach followed here will be to view corporate governance from a financial contracting perspective using the framework developed in the last section: governance issues will be analyzed with the instruments of institutional economics, building on the assumptions of subjective knowledge, communications costs, and bounded rationality.

These behavioral assumptions were argued in the first chapter to be consistent with Schumpeterian "constructive chaos": inventions by entrepreneurs and managers may only be known to them. The relevance in the context of financial contracts is that the Schumpeterian dynamics makes it more difficult for outsiders to estimate a project's return on investment proposed by an entrepreneur or manager, as the implications of managerial decisions are replicable by outsiders only after (extensive) learning investments.

Secondly, bounded rationality implies post-contractual problems as described by Williamson (1985), and the scope for incentive-compatible contracts to mitigate agency problems is reduced. This part of the analysis will parallel insights gained in the incomplete contracting literature.

First, I will derive, why equity investments in small projects demand property rights. Then I will turn to the widely held corporation. A fundamental paradox in all delegation activity – especially the delegation of management authority – is exposed, and aspects of an efficient governance policy for equity investors are derived, which can be described as satisficing in the sense of Herbert Simon (1978).

2.2 The governance of equity investments in projects and small firms

I will start by applying Williamson's (1985) logic to the investment decision. The question will be, whether the relationship between investor and manager will be governed by vertical integration, contracts, or market forces in a reputational equilibrium such as the one described by Klein and Leffler (1981). The crucial dimension of analysis is asset specificity: the extent to which the investor - manager relationship is idiosyncratic. I argue that financial claims are stereotypical examples of relationships with large specific assets.

An investor looking to place funds not desired for current consumption in a project faces an ex ante competitive situation: many potential "managers" with supposedly valid investment projects may apply and bid for the funds of the investor by promising the highest returns that their projects, given their own expectations of adequate remuneration, will carry. After the investor has chosen a project, he finds himself in a bilateral negotiating situation with the manager. This is what Oliver Williamson (1985, ch.2) called the "Fundamental Transformation".

Assume for the moment that the investor only receives an unwritten promise to get the funds back after some time, including some return on investment. After making the investment, the investor has no legal title, and receiving anything in the future will make him better off than

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24. We start from this extreme case, because the mere fact that other structures besides promise (contracts, ownership titles) have been devised to deal with the problem indicates a choice of governance structure superior to promise.
having nothing. Any payoff to the investor is at the discretion of the manager. In that sense, the entire amount of the investment can be viewed as a specific asset, quasi-rent, or sunk costs. Financial claims can be viewed as the epitome of a product in need for some type of governance structure, and the logic of Transactions Costs Economics applies.

Of course, investments based on promise could be governed by a reputational equilibrium. Project managers that want to have access to investment funds in the future are "honest", if more profits can be made in the future from other projects instead of "stealing" the investment funds once, and being barred from the markets henceforth. The closest test for such an equilibrium has been sovereign lending, as governments ultimately do not need to honor contracts for the absence of an international policeman. The experience with that experiment demonstrates the limits of its feasibility. Also, while investment banks may live on a reputation to perform "due diligence" carefully, they also have to answer to the Law if they do not. Due to nature of financial claims, where potentially the entire amount at stake is expropriable, a market-only solution like the one proposed by Klein and Leffler (1981) is unthinkable.

In what follows, I analyze an investor, who negotiates a profit share as a pay-off stream for his investment. Governance mechanisms and policies will be derived in an attempt to avoid expropriation by the project manager. The crucial assumption is, of course, that the investor does not know how to manage the project himself, or is unwilling to invest the time to manage it himself. With the assumption of a Schumpeterian entrepreneur, this is not unreasonable.

The investor in a profit sharing agreement has a natural incentive to maximize the final outcome, and is therefore interested in every marginal managerial decision. Under the assumption that the investor is passive - not committed to participate in management - he has delegated management authority to the project manager. Yet, with the interest in every marginal decision taken, the investor has incentives to check all decisions for their viability. Two concerns arise for the investor: first, there may be disagreements with the project manager concerning decisions to be taken in order to maximize the outcome of the project. This could be labeled honest disagreement. Secondly, there may be concerns over conflicts of interest, where the project manager expropriates the investor when deciding in his own favor. Only the latter problem has been given adequate attention in the finance literature, namely agency theory. The problem of a manager with "the best intentions" being in honest disagreement with an investor about the best actions chosen has received little attention.

There is yet another level of complexity that needs to be addressed: Hayek (1945) viewed the market as a superior form of social organization, because the profit motive leads people with private information to engage in socially beneficial trade and investment. If a manager possesses such private information and enters into a bilateral negotiating situation with an investor, the manager may fear expropriation of these returns. I am going to first address this scenario.

25. As defined by Klein, Crawford, and Alchian (1978).
26. See Sachs (1982), for a 100 year history of default and renegotiation of Guatemalan debt.
27. For this line of argument, see already Berle (1928).
28. Franks and Mayer (1990, p.211) recognized that "changes in control may occur ... where there are ex ante differences in expectations," which is economically explained by reference to incomplete markets. The same logic can be found in Franks and Mayer (1996).
2.2.1 Projects with significant returns to the manager's private information

First we need to establish what is an appropriate governance structure for profit sharing agreements. Can the investor bind the project manager into a long-term contract to avoid the potential for expropriation? Since the investor is interested in every marginal management decision, the entire managerial decision agenda defines the contract space. A contractual solution requires that the decision agenda will be known ex ante with a significant degree of completeness. If it is possible to provide rough outlines of situation contingent decisions to be taken in the future, then one can write a contract binding the manager to these decisions.

This, however, contradicts the assumption of a Schumpeterian entrepreneur, and more generally with what we understand management to be. With increased decision complexity, the problem of bounded rationality (contract incompleteness) exacerbates, and the contractual solution is insufficient to protect the investor's interests. Five factors come together:

- the large specific assets (the entire investment),
- the investor's interest in the marginal decision,
- the private information of the project manager,
- the potential opportunism of the project manager, and
- bounded rationality, which limits the scope to protect against opportunistic behavior or influence decisions in the case of heterogeneous beliefs.

For all but the simplest projects, the problem of bounded rationality prohibits a contractual solution, and vertical integration will be preferred: the investor demands a transfer of property rights. This entails the right to dismiss the manager, or liquidate the project to safeguard against opportunistic behavior.

Yet, even a transfer of property rights doesn't rule out opportunistic behavior to expropriate the capital investment. First, there are costs of management replacement, which are particularly high for complex investment projects resulting from the private information held by the Schumpeterian entrepreneur. Secondly, the investment project may have required the purchase of specific assets that are valued at only a fraction in the marketplace (e.g. R&D investments). Hence, liquidation might only retrieve a fraction of the original investment. The cost of finding a suitable replacement for the manager, or the loss resulting from liquidation still defines the appropriable quasi-rent - whichever is lower.

A transfer of property rights also introduces the above mentioned complication of "reverse expropriation". Once the manager puts a structure into place to capitalize on his private information, this information may be revealed, and the investor can opportunistically replace the manager. Another manager arguably cannot negotiate as high a remuneration package, as there is no more private information. The investor will have expropriated the returns to the original managers' private information. The manager will hence insist on a long-term contract at least until the fruits of the investment are reaped, or may want to retain a minority share in the project. Both options, however, will again increase the investor's quasi-rent.

In an incomplete contracting world, the investor will demand property rights to safeguard his investment, while the entrepreneur will demand property rights to safeguard his returns to private

29 Destais (2000) cites project finance as a notable exception.
30 In the incomplete contracting literature, this problem is labelled "double-sided moral hazard", and has been discussed for example by Aghion and Tirole (1994).
information. Strictly, equity investments may not be feasible in this situation. The only solution may be partial ownership by the investor with limited control rights.

Like Fama and Jensen (1983a), we can separate decision management and decision control. Assume that both manager and investor experience "state surprises" as events unfold, and the manager has to act on the spot rather than having had time to contemplate decision options ex ante. This is another way of saying that people are boundedly rational, and do not know the complete state-space ex ante. The investors role is then to sanction these ad hoc managerial decisions. He exercises decision control.

In a bilateral hold-up situation, the investor's decision control may only cover issues of direct conflict of interests. If the owner would be given the right to dismiss the manager because of differing opinions concerning the best decisions in day-to-day operations, contract incompleteness would again make the manager vulnerable to opportunistic dismissal and hence expropriation of his returns to private information. The investor should still be in a situation to veto proposals for major changes, for example to avoid what Stewart Myers (1977) calls "asset substitution". Hence, significant ambiguity in the definition of "decision control" remains.

However, reputational forces may appease the manager's expropriation concerns in an easier manner than the investor's concerns. This is so, because the investor can more easily disassociate himself from the project than the manager, since he has typically a lesser fraction of his human and financial capital invested.

It is then feasible for an investor to establish a reputation in not expropriating the managers in his investment projects, if he disassociates from the project after the initial phase. Such is the function of venture capitalists, who eventually introduce entrepreneurs to the stock markets. The gains from repeatedly bringing companies to the market would outweigh the one-time gain of expropriating a particular manager. Reputational equilibria gain stability with transaction frequency, and investors have more ways to increase this transaction frequency than managers, who typically have 100% of their human capital invested in a project.

In addition to reducing the manager's concern for expropriation, the venture capitalist may have an expertise to bring firms to the stock market, helping the manager in realizing potential returns from his private information by producing the gains that accrue when moving from an illiquid to a liquid capital market. Such gains, coupled with the reduced fear for expropriation of the manager in turn serve to strengthen the venture capitalist's position in defining an appropriate agenda for decision control. The potential from moving to the stock market gives incentives for the manager not to expropriate the investor. The venture capitalist has significantly reduced the bilateral hold-up problem through a reputational mechanism.

The following summarizes the governance requirements for investments demanding a share in the final profit:

- The need for authority to dismiss the manager or liquidate the project.
- The need for the manager to protect his returns to private information.
- The need to delegate decision management to the manager.
- The need for the investor to assume decision control for issues of direct conflict of interest.

These governance requirements are – at least in part – contradictory. The transfer of property rights to the investor effectively reduces the appropriable quasi-rent from the total investment amount to the lower value of the cost of finding new management and the loss implicit in liquidation. Yet, inasmuch the manager is protected against opportunistic dismissal, and inasmuch it is difficult to spell out *ex ante* the conflicts of interest subject to the investor's decision control, the managerial contract remains incomplete, and there is scope for post-contractual problems. The reputational equilibrium established in a venture capital relationship may significantly mitigate these post-contractual problems.

2.2.2 Projects with insignificant returns to the manager's private information

The less there are returns to the private information of the manager, the more likely will the investor increase the domain of decision control over managerial decisions. With that, the feasibility of this governance structure is also tied to the investor's personal characteristics. If the investor could manage the project himself, the amount of the appropriable quasi-rent is limited to the opportunity cost of allocating time to the management of the investment project. This may be lower than the cost of replacing the manager or liquidating the project, and the expropriable quasi-rent is again reduced.

A situation where the investor could perform decision management can be interpreted as an investor being less boundedly rational. However, the less of an expert (the more boundedly rational) the investor is, the larger the potential for post-contractual problems, because of honest disagreement or opportunistic behavior. The success of the governance structure rises and falls with the talent of monitoring the decisions of management. The worse the ability to control, the more likely that the costly event of searching for replacement management or liquidation will materialize for no objective reason, triggered only by the investor's suspicion. This increases the risk of incurring the costs of frequent management transition mentioned above.

The investor may then hire a decision control expert in the area of the investment project. This decision control expert would then be the equivalent of a Board of Directors. The investor would have to retain the authority to dismiss the decision control expert and the manager, or to liquidate the project, but he may have more trust in the expertise of the monitor. This trust, however, is motivated solely on the assumption that it is more unlikely for two people to collude in order to expropriate the capital investment.\(^{32}\) As the investor's monitoring expertise decreases, the likelihood of complete transaction failure increases.

The introduction of an external monitor does not eliminate post-contractual problems, but (perhaps) only reduces them. That fragile gain must be balanced against the costs. Alchian and Demsetz (1972) argued that the monitor must have access to the residual claims in order to have the correct incentives to do the job properly. Thus, the monitor must have a profit share big enough to matter in his general income structure. For small investment projects, this control structure may turn out to be too costly, which may be a powerful argument for why small firms are typically closely held.

We can now summarize the arguments so far. If the investor demands a profit share, he has an incentive to monitor every marginal managerial decision. A contractual solution is precluded due

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\(^{32}\)Fama and Jensen (1983a) suggest a reputational solution: the monitoring expert increases his human capital elsewhere by putting his reputation on the line as an external monitor. This equilibrium seems more fragile, since the penalties for monitoring failure on the human capital of managers are not well documented. However, the argument resembles the equilibrium between investors and auditors, who presumably need a reputation for good monitoring.
to the assumption of bounded rationality, and the investor will demand a transfer of property rights and assume decision control. If the manager has to protect significant returns on private information, both investor and entrepreneur will demand property rights, and the investor's decision control will have to be constrained. Such equilibria are fragile, with a high probability of complete transaction failure, but the reputation of a venture capitalist can significantly strengthen them. With less returns to private information of the manager, the investor will demand more rights to decision control. Therefore, the governance structure depends on the investor's monitoring ability. The more boundedly rational the investor, the higher the likelihood of post-contractual problems and *ex ante* transaction failure. Hiring an outside monitor would improve on the situation only marginally.

2.3 The governance of equity investments in the widely held corporation

With the above analysis of issues linking financing and governance issues, I am now ready to turn to the large, widely held corporation. These firms have matured through the different stages of outside financing, and have issued both debt and equity claims. The issue of equity governance will be addressed in this context.

The widely held corporation has no choice but to employ a board of directors to specialize in monitoring management. Due to the externality described by Demsetz (1982) as rational voter apathy, all atomistic shareholders will choose not to be experts in decision control.

Following in the line of argument presented in chapter 1, there is another reason motivating boards in firms with dispersed ownership: shareholders with heterogeneous belief structures face the problem of finding consensus in their assessment of management's actions due to communications costs. The board answers those problems, yet I argued above that its ability to mitigate agency problems may be overrated. Thus, economies of scale in production, which make concentrated ownership infeasible, have to compensate for the additional layer of governance problems.

The board primarily serves the purpose of replacing a costly group decision-making process by one voice (or a few voices) of a professional monitor. This addresses both collective action as well as heterogeneous belief problems. Only on a second level, the outside monitors are chosen as experts, and thereby reduce the problem of post-contractual disputes with management. Does this solve the governance problem?

2.3.1 A paradox on the delegation of management

In the following, I am going to assume that the manager of a large corporation is less a Schumpeterian entrepreneur himself, but acts as an administrator whose role is to coordinate employee efforts. Then, the top management position has become more of a commodity, and there will be less problems regarding the expropriation of returns to private information. The managerial contract will therefore allow a greater span of decision control. In order to fully focus on the problem of heterogeneous beliefs, I would like to abstract from the well-documented agency problem and assume that the board is acting properly in the interest of shareholders.

Let's examine the functioning of this board structure in terms of Fama and Jensen's (1983a) typology of decision-making. They split the process into four parts
initiation: proposing the course of action
ratification: sanctioning the course of action
implementation: following up on the chosen path
monitoring: making sure that the chosen path is properly followed

Initiation and implementation are decision management and properly belong to the duties of management. Ratification and monitoring are decision control and belong to the duties of outside board members.

One open question in this setup is, which level of detail of proposed actions will have to be ratified. Properly incentivized outside monitors potentially wish to improve on every marginal managerial decision and have every decision ratified. The monitor's incentives are such as to question the delegation of management in the first place. The incentives of the monitor even go so far as to aspire to initiate decisions himself, at which point the monitor will have become a manager as well. The more active the monitor is, the more he questions the concept of management delegation. A more active monitor may develop private benefits from his task - contrary to the interests of shareholders. A properly incentivized outside monitor will end up being indistinguishable from management, and the problem of perceived or actual expropriation of the investor is not solved. This, is a fundamental paradox in all supervisory activity, here discussed at the example of management delegation. The paradox can be derived solely from the incentives of the shareholders and the possibility of heterogeneous beliefs on the best decisions chosen: an honest difference of opinion.

What is the solution to this paradox? How is monitoring in shareholders' interests efficiently performed? At which level of performance will management be disciplined or even dismissed? As argued in the first chapter, I believe that there is a trade-off between the shareholder's incentive to interfere in management, and management continuity. Frequent replacement of management leads to frequent reorientation of the firm's policy, carrying substantial transition costs that need to be considered.

Hence, shareholder and monitor will find a solution in "enlightened self-restraint". This could mean that as long as firm performance is above some - as of yet unspecified - level, the board will not interfere with the decisions of management. Empirically, however, this is indistinguishable from a complacent board, where the hired monitors value their utility of alternative uses of their time higher than active involvement in the supervision of the company's affairs, which may lead to an environment of distrust between shareholders and their hired monitors. Tensions between board and management, and board and shareholders are unavoidable due to the ambiguities inherent in the concepts of supervision and monitoring.

### 2.3.2 Satisfactory vs. Optimal Firm performance

When recognizing the incentives of the monitors to engage in "enlightened self-restraint" in the control of management, the question of disciplining management has no satisfactory answer. Will activism commence when share prices rose 10% instead of a promised 15%? If share prices are flat? If share prices fell? I argue that the efficient response of outside monitors is to define satisfactory firm performance and follow a policy of "enlightened self-restraint" until the standard defining satisfactory is no longer met. The difference to the traditional approach to mitigating the agency problem between manager and shareholder is that shareholders may want

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33. Already Kenneth Arrow (1974) noted that this solution only relocates the agency problem to a higher level, but does not solve it. The same problem arises with shareholder activism.
to optimize their relationship with management, while their cognitive limitations only allow the definition and achievement of satisfactory results. Corporate governance policy represents "satisficing" rather than "optimizing" behavior.

It is important to stress that in every scenario, authority for day-to-day operations rests with management. The Schumpeterian entrepreneur does not allow comprehensive decision control to protect returns from private information. The board of the widely held firm may not be constrained in this way, but the fundamental conflicts inherent in all supervisory activity leads to restraint in the boardroom. Managerial entrenchment follows logically from the theoretical analysis of the shareholder-management conflict.

These insights can be compared to observed boardroom behavior. The accusation of complacent boards is nothing peculiar to any system of corporate governance. The charge has been issued by Redlich (1968, p. 378) for the US during Financial Capitalism, Roe (1994, pp. 9-12) for the US today, Schaede (1993) for Japan, and Edwards and Fischer (1994, p. 151) or Wenger and Kaserer (1996) for Germany. Yet, some correction of managerial failure is observed in all systems. Also, the board is increasingly viewed as a consulting device for management. Lastly, the German Aktiengesetz (the Law that governs share-issuing companies) expressly defines the responsibility of the supervisory board as not covering day-to-day operating decisions. This is consistent with an efficient governance policy of "enlightened self-restraint".

2.4 The mechanisms of governance

Shareholders can defend their claims versus a firm and management as its representative in a variety of ways: markets, contracts, the Law – which can be interpreted as a social contract – and hierarchy.

Market incentives are stock option plans, management ownership shares, and takeover threats. The role of incentives in corporate governance is – if anything – strengthened by the preceding analysis. Rather than relying on active governance in a rather ambiguous environment, incentives can use the specific knowledge of management to the advantage of shareholders. Yet, the above mentioned incentive mechanisms are all associated with problems as well.

For the case of stock option incentives, there is a danger that the mere scale of such payments may invite opportunistic behavior on the side of management when contracts are incomplete. Also, as Frey and Jegen (2000) point out, too much focus on pecuniary incentives may "crowd out" intrinsic motivation. Similarly, management share ownership may be motivating at some level, but further entrench managers at higher levels of ownership. Takeover activity may exist for a variety of reasons other than disciplining poor managers, and may itself be motivated by opportunistic managerial behavior.

Shareholders can hire more vigilant board members. They can pool their votes in proxy fights, or entrust their money to active institutional investors. Large shareholders can try to obtain a board seat themselves. Yet, the above analysis suggests that such mechanisms may have their limitations, and cannot provide complete protection from ill-spirited behavior by managers.

The board of directors was derived above to be an institution surrounded by ambiguity. A paradox in all delegation and supervision activity was exposed in that the delegator has every limitation imposed through the failure of the delegatee to achieve satisfactory results.

incentive to monitor and control the delegatee, but that too much control directly contradicts the principle of delegation, and that “optimal” supervision may overburden the monitor. An added argument for restraint on active control is the costs of frequent management transition. Efficient corporate governance policy defines "satisfactory" performance standards, and excludes managerial operating decisions from decision control during times of satisfactory performance.

This ambiguity of supervisory activity holds not only for boards of directors, but also for all other institutions or groups of individuals attempting to monitor managers, including proxy solicitors, institutional investors, or large shareholders.

Finally, the Law can only be a rather coarse mechanism to improve on management accountability. The merits of all of these governance mechanisms and institutions will be examined in the next chapter, which reviews the empirical evidence on this matter.
3 The empirical evidence on resolving the shareholder-manager conflict

The empirical evidence related to corporate governance mechanisms that has been gathered by the research community at this point is vast. This chapter attempts an overview of the available evidence, which will – due to its sheer amount – have to remain incomplete. The overriding question is, whether controlling the shareholder-management conflict through the various governance mechanisms developed in industrialized countries contributes to the overall value of the firm, be it on a stand-alone basis, or in combination.

I distinguish between incentive mechanisms (management stock options, management ownership participation, and the takeover market), direct control mechanisms by shareholders (proxy voting, shareholder proposals, and the role of institutional investors and large blockholders), indirect control mechanisms through the board of directors (board composition, board structure, and board size), and the legal environment (minority shareholder protection, disclosure rules, corporate charters, and shareholder voting rules).

A note on statistical methodology seems appropriate at this point. It would arguably lie outside the confines of such a survey chapter to discuss in detail the relative merits of the various testing routines employed in the surveyed papers. Rather, I will assume that – at least for the papers published in reputable journals – the statistical methodology employed has been judged appropriate for the respective subject matter by the scientific peer community.

3.1 Incentives: the role of carrots and sticks

Ever since the influential publication of the work by Berle and Means (1932), the separation of ownership and control has been an issue in the academic debate. With the advent of agency theory, economists had developed a framework to understand the principles of delegation and motivation. The traditional agency model proposes to solve the agency conflict by aligning the (pecuniary) incentives of the agent with that of the principal. This will induce the agent to act “more” in the interest of the principal. For the manager-shareholder relationship this can be achieved by performance related compensation as well as the threat of takeovers, which is the first part of the literature to be surveyed here.

3.1.1 Stock options: the carrot

Since the objective of performance remuneration is to align management and shareholder interests, a natural first check in the data is to find out, whether this is achieved in actual compensation practice. Pavlik, Scott, and Tiessen (1993) provide an extensive review of the extant literature up to that point. They survey a total of 34 empirical papers that all deal in one way or the other with the pay-performance sensitivity of CEO compensation.

The early efforts were skeptical, and partially corroborated Baumol’s (1967) sales maximization hypothesis, but suffered from various shortcomings. Later studies found that both accounting and stock price performance determine variation in actual CEO remuneration, while the size of the firm merely determines its level. Accounting measures tend to be more aligned with cash compensation, while stock prices generally explain less variation in CEO remuneration than

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accounting measures. Performance relative to other firms, while theoretically desirable, explains no relation to CEO compensation. At Ralston Purina managers could collect on options yielding almost $50 million while being responsible for an industry-adjusted loss of their firm amounting to $2.1 billion. This suggests short-comings of existing remuneration contracts. Yet, Aggarwal and Samwick (1999) argue to the contrary that industry dynamics in imperfectly competitive product markets can make positive sensitivity of compensation to rival firm performance desirable, which they find evidence for.

Pay-performance sensitivity alone is not sufficient to conclude that stock options achieve the intended ends. For this to be true, the firms with proper incentive plans have to perform better than those without. Here, Pavlic, Scott and Tiessen (1993) survey 16 empirical papers that make a more modest case. Papers linking future performance to pay-performance sensitivity have produced only weak results, while the evidence from event studies on the announcement of incentive plans is slightly positive, although there is significant scope for error in defining the event window. Studies linking CEO compensation to behavior during control contests can typically document the incentive alignment with shareholders.

The comparatively weak case to establish the alignment of shareholder and management interests points at the possibility that explanations other than agency theory are responsible for CEO compensation practice. Indeed, Yermack (1995) refutes the hypothesis that stock options plans are awarded to CEO’s according to the principles of agency theory. Baker, Jensen, and Murphy (1988) demonstrate that compensation practices for middle managers show only remote resemblance to economic theories, although Gibbons and Waldman (1999) recently set out to fill the gap. Three alternatives to agency theory will be mentioned.

Tournament theory argues that CEO compensation must be understood in the context of the overall compensation policy of the firm, and represents the “prize for the winner”. Incentives are provided to find the best manager, not to align shareholder and manager interests. Brickley, Linck and Coles (1999) further complicate the analysis by suggesting that post-retirement board mandates may be a performance incentive. Hence, the CEO position is not the ultimate “prize”, and CEO activity before retirement is motivated by this non-pecuniary incentive.

Managers may use weak internal oversight to award themselves higher compensation, a notion supported in the empirical study by Core, Holthausen, and Larcker (1999). Yermack (1997) shows that CEO’s time earnings announcements to increase the value of option awards. Recently, attention has been given to the practice of resetting option strike prices after performance declines. While Acharya, John, and Sundaram (2000) provide a theoretical model that shows that an ex ante policy involving the possibility of some resetting is always superior to a policy of commitment not to reset, the empirical studies by Chance, Kumar and Todd (2000) and Brenner, Sundaram, and Yermack (2000) find that strike price resetting correlates with conflicts of interests on the respective boards compensation committees: “A stronger version of this claim is that managers use their power over corporate governance to appropriate wealth from stockholders in various forms, including resetting.”

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39 Holmstroem (1982).
40 Campbell and Wasley (1999).
41 Brickley, Bhagat, and Lease (1985) find positive share price effects of incentive performance plan announcements, while Gaver, Gaver, and Battistel (1992) dispute the relation.
Frey (1997) posits that pecuniary incentives are insufficient to explain human motivation, and that an imposition of a strong incentive regime crowds out intrinsic motivation. Support for the crowding hypothesis stems from experimental evidence as well as a survey of the empirical literature conducted by Frey and Jegen (2000). Intrinsic motivation is compatible with the assumptions of agents’ belief structures laid out in chapter 1. Cultural values that support intrinsic motivation, which have been passed on over many generations, have become “institutions of the mind”; and are only questioned and altered after strong conditioning, for example through the imposition of an external motivation system.

The evidence on compensation contracts is then rather ambiguous. While at least some performance enhancing effects have been established in the literature, there is also reason to believe that executive option plans may be part of the agency problem rather than a solution.

### 3.1.2 Management ownership stakes: more carrots

Perhaps management ownership stakes do a better job at aligning management and shareholder interests, and improve corporate performance. After all, lack of ownership stake by management lies at the core of the complaints voiced by Berle and Means (1932).

Studies relating management ownership stakes to performance have found some complex non-linear relationships. Morck, Shleifer and Vishny (1988) use Tobin’s Q as a performance measure, and find that performance increases for management stakes lower than 5%, and decreases thereafter. McConnel and Servaes (1990) find an inverse U-shaped relationship, with an apex between 40% and 50%. The interpretation for such an observation would be that the incentive effect is only evident at lower ownership levels. At higher levels, management becomes entrenched, and negative performance effects result. Yet, Hermelin and Weisbach (1991) find an even more complex schedule with three “turning points” at 1%, 5%, and 20%, beyond which performance decreases, which casts doubt on a simple explanation. To the contrary, Mehran (1995) singularly supports the incentive hypothesis.

Examining management behavior of acquisition targets contingent on management stakes, the entrenchment hypothesis is supported by Hadlock, Houston and Ryngaert (1999) for the case of US bank acquisitions, and St-Pierre, Gagnon and Saint-Pierre (1996) for Canadian firms, while Stulz (1988) documents both incentive and entrenchment effects for US firms.

Mild evidence for entrenchment is provided by Chaplinsky, Niehaus, and van de Gucht (1998), who compare management and employee buy-outs; Brennan and Franks (1997), who document that insiders in IPOs try to act against the formation of large block ownership stakes after the IPO; Weisbach (1994), who shows that divestitures positively correlate with CEO departures; and Eckbo and Verma (1994), who show that Canadian firms with large insider ownership seem to reduce dividends in order to increase free cash flow. The survey by Garvey and Swan (1994) outright rejects the hypothesis that managers act to maximize shareholder wealth.

Manry and Nathan (1999), who relate greenmail premia to management ownership, support both entrenchment as well as incentive hypotheses. Such non-linearity is also documented by Rosenstein and Wyatt (1997), who relate share price effects of insider director nominations to their ownership stake, and Chang and Mayers (1992), who study the announcement effect of

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45 Fehr and Gächter (2000).
46 This may also reflect different beliefs by new CEO’s. Compare the analysis by Franks and Mayer (1996) discussed below.
ESOPs to increase management voting rights without cash flow claims contingent on \textit{ex ante} ownership\footnote{These results improve on the findings by Gordon and Pound (1990), who conclude that only ESOPs without voting rights enhance shareholder value, while most others entrench management to the detriment of shareholders.}. However, Mikkelsen and Partch (1994) find that the separation of managers’ stakes from their voting power through ESOP’s and dual class share issues has no negative impact on performance. Kole (1995) shows that the mixed evidence on the entrenchment hypothesis is not the result of different data sources.

Zhou (1999) provides mild support of the incentive hypothesis, by documenting that the pay performance sensitivity including stock ownership in Canadian firms is smaller than in US firms, and that US firms performed better. However, there is a substantial amount of other potentially relevant factors to explain the results of cross-national comparison. Palia and Lichtenberg (1999) measure performance through productivity, and find that management ownership changes are related to subsequent changes in productivity. Further evidence in favor of the incentive hypothesis is provided by looking at specific events such as liquidation\footnote{Mehran, Nogler, and Schwarz (1998), or Erwin and McConnell (1997).} or divestitures\footnote{Hanson and Song (2000).}.

It is possible that the conflicting evidence on ownership results from empirical models being misspecified because ownership is endogenous\footnote{Hansmann (1988) derives theoretical arguments for the endogeneity of ownership.}. Demsetz and Lehn (1985) find evidence that ownership structure is determined by firm size, profit variability, or government regulation. Cho (1998), and Holderness, Kroszner and Sheehan (1999) also find evidence that ownership variables are endogenous. Thus, ownership and performance may be jointly determined, thereby complicating the empirical verification of the hypothesized relationship.

Regrettably, there is again no significant empirical conclusion by considering the endogeneity problem. Chung and Pruitt (1996) interpret their results as consistent with the notion that firms optimally establish management ownership and compensation plans given their environment. However, Loderer and Martin (1997), and especially the detailed analysis by Himmelberg, Hubbard, and Palia (1999) find no empirical relation between ownership and performance. I conclude this section with the observation that the nature and effectiveness of performance incentive mechanisms have not been conclusively researched.

3.1.3 The takeover market: the stick

If upside profit incentives have yielded only inconclusive evidence, may be the threat of takeovers could motivate managers to perform better in order to retain their jobs\footnote{As theoretically motivated by Grossman and Hart (1980), or Sharfstein (1988).}. The discussion started with Manne (1965), who lamented the narrow Antitrust interpretation of mergers in US courts. He favored the point of view that mergers are a market for corporate control, and represent an alternative to bankruptcy proceedings in imperfect capital markets.

3.1.3.1 The value effect of merger activity

This opened the field to Financial Economists, who produced a wealth of evidence on the financial gains of mergers, largely using event study methodology. Jensen and Ruback (1983) survey the evidence up to that point to find that target share prices in successful transactions rise by 20\% (mergers) to 30\% (tender offers), while bidders tend to break even with 0\% gain for
mergers, 4% for tender offers. Jensen (1988) finds that overall, takeovers create value when judged from the announcement effects on share prices.

Stillman (1983) and Eckbo (1983) deflect Antitrust reasons for the value creation by studying share price reaction of rival firms in the relevant product markets, and verify that merger gains do not accrue due to the accumulation of market power. Conversely, Eckbo (1983) and Weir (1983) show that Antitrust challenges destroy the initial gains from the merger announcement.

The potential self-interest of poor managers to resist takeovers raises two questions: are these defenses initiated to the detriment of shareholders, and are takeovers really targeting poor managers?

3.1.3.2 The evidence on anti-takeover resistance

Concerning anti-takeover resistance (which may lead to ‘hostile’ takeovers) the arguments are not unambiguous, since management that resists initially may only do so in order to increase the ultimate price, thus acting perfectly in conformity with shareholder interests. This notion is supported by Kummer and Hoffmeister (1978), while Dann and DeAngelo (1988) report share price declines in response to defensive asset or ownership restructurings.

Dodd and Leftwich (1980) find no negative share price reaction of US firms incorporating in the State of Delaware, which provides the most liberal contracting environment between management and shareholders. This could theoretically be abused by management.

Firms adopting takeover amendments such as supermajority provisions and staggered boards may do so in managerial self-interest, but DeAngelo and Rice (1983), Linn and McConnell (1983), and Jarrell and Poulson (1987) cannot confirm negative share price reactions upon the announcement of such provisions on average. However, Bhagat and Jefferis (1991) attribute these results to an anticipation bias, finding significant decreases in shareholder wealth.

Poison pills (contingent securities that increase the cost of non-negotiated takeovers) are another defense mechanism. Malatesta and Walking (1988) and Ryngaert (1988) identify shareholder wealth losses from the announcements of such defenses, but Ryngaert concedes that the overall impact on firm value is modest. Indirect evidence has been provided by Datta and Iskander-Datta (1996), who find that poison pills hurt bondholders, who anticipate subsequent leverage increases, and that bondowner losses are correlated with insider ownership in the firm. Also, adopting firms underperform relative to their peers. This suggests that with decreasing insider ownership of shares, agency conflicts between debt and equity decrease, and poison pills are more likely chosen by bad management.

Do legislators act in the interest of shareholders when they make hostile acquisitions more difficult? Szewczyk and Tsetseskos (1992) find large negative stock price reactions to the anti-takeover laws in Pennsylvania, which is corroborated by Karpoff and Malatesta (1995). Garvey and Hanka (1999) show that firms protected by state anti-takeover legislation reduce leverage, while unprotected firms do the reverse. However, Safieddine and Titman (1999) find that targets in unsuccessful takeovers which increase their leverage, later restructure their firms and outperform their benchmarks. They interpret this as leverage not leading to managerial entrenchment, but committing managers to restructure. Comment and Schwert (1995) generally

52 Morck, Shleifer and Vishny (1990) find that acquisition returns depend on bidder objectives. Lower bidder returns result when the firm diversifies, buys rapidly growing targets, or has poor pre-bid performance.
find that anti-takeover measures such as poison pills and control share laws merely increase the bargaining position of targets, but do not prevent takeovers. Then, managers (and legislators) merely raise the prices of firms by improving their negotiating positions.

Another common defense mechanism are targeted share buy-backs during takeovers (‘greenmail’). While generally the announcement of the issuance of equity and equity-related securities induces negative share price reactions, and the repurchases of common stock show positive effects\(^{53}\), repurchases by targets during takeovers are shown to reduce shareholder value between 1.76%\(^{54}\) and 2.85%\(^{55}\) on average. However, surprisingly, Bhagat and Jefferis, Jr. (1994) find that firms paying greenmail do not underperform versus a relevant peer group. This may indicate that share price reactions upon the announcement of targeted share buy-backs simply reveal the market’s increased assessment of the probability of failure of the takeover, which reverse the previous announcement gains\(^ {56}\).

### 3.1.3.3 Are takeover targets poor performers?

Similarly, the hypothesis of poor performance of target firms has received mixed support in the empirical literature. Hasbrouck (1985) and Morck, Shleifer and Vishny (1988) find that poor performance increases the likelihood of a takeover, while Palepu (1986) and Shivdasani (1993) find no significance on performance related variables. Martin and McConnell (1991) show that targets underperform their industry peers, while Morck, Shleifer and Vishny (1989) find that hostile takeovers concentrate on declining industries, while firms underperforming relative to their industry are more likely to experience internally triggered management changes. Franks and Mayer (1996) use evidence from UK takeovers in 1985 and 1986 to support their argument that hostile takeovers do not appear to have a disciplinary role. Although there was ample evidence of board turnover following the merger, targets did not underperform in the years prior to the deal. Rather than poor performance, they attribute their findings to different \textit{ex ante} beliefs on how to optimally use the firms’ assets, which is consistent with the concepts of subjective knowledge, differing “views of the world”, and ‘Schumpeterian entrepreneurs’ proposed in chapter one.

Indirect evidence on the disciplinary role of takeovers has been provided by Mikkelson and Partch (1997). They examine management turnover frequencies in the US in an active takeover market (1984-1988) and an inactive takeover market (1989-1993), and find less turnover in underperforming firms in the latter period. Yet, Denis and Kruse (2000) examine poorly performing firms in the same time periods, verify that the latter period is characterized by fewer takeovers with subsequent management turnover, but find that poorly performing firms engage in restructuring activity with the same intensity and success in both periods.

The role of takeovers as a means to reduce agency problems between shareholders and managers must be treated with caution after a summary of this evidence. There is some evidence that target firms underperform prior to the takeover attempt, but this is not universally true. Takeover defenses may actually end up favoring shareholder interests. Hostile takeovers are the exception rather than the rule\(^{57}\), and Shleifer and Vishny (1988, p.7) argue that most acquisitions up to that point ‘were not of the disciplinary variety’. Schwert (2000) finds no meaningful way to empirically distinguish between friendly and hostile deals on an economic basis, suggesting that

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\(^{53}\) See Jensen and Ruback (1983, p.26) for a review of this evidence.

\(^{54}\) Dann and DeAngelo (1983).

\(^{55}\) Bradley and Wakeman (1983).


\(^{57}\) Jensen (1988, p.22).
the disciplinary role of takeovers is clouded: “On balance, hostility in takeover negotiations seems to be most strongly related to strategic bargaining.” In particular, Schwert finds that poor target management does not contribute to the perception of hostility. Also Franks and Mayer (1996) have shown that hostile takeovers may not be confused with disciplinary takeovers.

3.1.3.4 Are takeovers part of the agency problem or part of the solution?

While the literature on *ex ante* expectations in mergers is not unambiguous, the *ex post* performance of merged firms is still more controversial. Dodd (1980) and Asquith (1983) report negative bidder returns from the day of takeover announcement to the outcome announcement, while Malatesta (1983) identifies a negative return of 13.7% of the combined firm in the 12 months after the completion of the merger. Kaplan and Weisbach (1992) find that 44% of target companies purchased are eventually divested, and they classify about one third to one half of the divestitures as unsuccessful.


The asymmetry between *ex ante* and *ex post* gains has been examined in the survey by Caves (1989). Mueller (1985) uses data from the Federal Trade Commission to show that unacquired businesses had been able to retain 88% of their market share between 1950 and 1972, while the same number for acquired businesses was 18%. Ravenscraft and Scherer (1987) report that targets subsequently divested achieved 66% profitability of a peer group, while they were indistinguishable from a group of non-acquired business before the merger.

Negative post-merger returns have also been observed in the UK. An examination of post-merger integration by Newbould (1970) reveals that in 50% of the cases examined, no synergies could be reaped. Caves (1989, p.160) assesses the overall UK evidence such that synergies are by and large erased by transition costs, which is consistent with my theoretical prediction on the existence of management transition costs from chapter one.

Caves (1989) interprets the dismal *ex post* performance of mergers in the light of Jensen’s (1986) argument on free cash flow: empire building managers tend to invest free cash flow frivolously. Agrawal and Mandelker (1987), Amihud and Lev (1981) and You et. al. (1986) support general managerial motivations for bidder firms. The free cash flow hypothesis is directly supported by Lang, Stulz and Walking (1991), Mann and Sicherman (1991), and Harford (1999). Thus, in the light of an agency theoretic interpretation of merger activity, Caves (1989, p.171) notes that “mergers and takeovers ... now appear to be part of the problem as well as part of the solution.” Is there only an agency interpretation to mergers?

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58 This may, however, simply be due to the refocusing of the acquired business under new management, or a sample selection bias in that the businesses most likely to be taken over are those serving declining markets, as documented by Morck, Shleifer and Vishny (1989).

59 There is again a large possibility of sample selection bias in the analysis of subsequent divestitures.

3.1.3.5 Reasons for merger activity

Next to agency problems in bidder and target companies, mergers may be motivated by a variety of reasons. Manne (1965) pointed to the avoidance of bankruptcy in imperfect capital markets, where the acquiror may preserve going concern value that would be lost in bankruptcy or creditor-led distress restructurings. This may be important in the restructuring of troubled industries. Auerbach and Reishaus (1987) identify tax reasons, representing 10% of target value in 20% of examined target firms, but dispute the notion that this is a primary motivation for mergers. Jarrell, Brickley and Netter (1988) point to a shift in Antitrust policy around 1980, and deregulation efforts in many industries around the same time.

Finally, mergers may simply be seen in the context of the theory of the firm: a changing market environment requires organizational adaptation. Liquid capital markets may then represent a conduit for change, be it through mergers or spin-offs. Thus, rather than being part of a disciplinary device to ensure managerial accountability, financial markets are a conduit for the market for organizational structures. Management represents an important part of such organizational structures, but is not the sole focus of it. While I do not wish to outright dispute the disciplinary role takeovers can have, and while I do not dispute the existence of ill-motivated managers, the evidence presented above is consistent with the view that the role of takeover markets as a disciplinary device is empirically overrated.

3.1.4 Leveraged Buy-outs

LBOs carry a much greater corporate governance implication, since – unlike mergers – changes are performed primarily on the right-hand side of the balance sheet and the management incentive structure. Thus, their mere existence is troubling to advocates of the widely held firm, which may have led Michael Jensen (1989) to mourn the eclipse of the public corporation. Rappaport (1990) didn’t share Jensen’s skepticism, arguing that LBOs are not flexible enough to generally replace the public corporation, and thought of LBOs as a more transitory phenomenon. This has been supported by Altman and Smith (1991) and Kaplan (1991). Moreover, Kaplan and Stein (1993) find that the buy-out prices of LBOs increased over time, which they interpret as overheating in that market. This evidence suggests that the LBO phenomenon as a whole may be of a more temporary nature, and that LBOs represent a suitable ‘cure’ only for a relatively small subset of firms.

Leverage can entrench managers by discouraging takeovers, and it can motivate managers to restructure, primarily through divestitures. The multi-faceted interrelation between leverage, firm characteristics and managerial motives is documented by McConnell and Servaes (1995) and Berger, Ofek and Yermack (1997). Berger and Ofek (1996) document that the diversification discount in conglomerates is positively related to takeover frequency, and that the firms with the largest discounts are bought by LBO associations. Thus, LBOs seem geared to correct the free cash flow problem identified by Jensen (1986), where the high leverage induces management to engage in divestitures. Surprisingly, this notion is not generally supported in Kaplan’s (1991) data set. Baker and Wruck (1989) find many factors responsible for the success of the LBO at O. M. Scott & Sons Company. Wruck (1994) finds an important role of leverage in the restructuring of Sealed Air Corp, but not necessarily divestiture.

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61 This is pointed out by Morck, Shleifer and Vishny (1989), and Mitchell and Mulherin (1996).
The paucity of studies on LBOs is largely due to their nature as a privately held firm, which does not open its accounts to the public. Thus, only a few researchers were able to gather meaningful data sets: Kaplan (1989), Smith (1990), and Muscarella and Vetsuypens (1990) find that firms’ operating efficiency increases after they go private. Lichtenberg and Siegel (1990) report increases in total factor productivity for LBOs and especially MBO’s. They find that employment and compensation of white-collar workers declines, but not that of blue collar workers, suggesting a problem with central overhead in the pre-LBO firms. Yet, none of the studies is capable of identifying the source of value in an LBO: managerial ownership, close supervision by owners, or leverage.

Denis (1994) compares the leveraged recapitalization of Kroger Co. with the leveraged buy-out of Safeway Stores to conclude that the better incentive structure at Safeway was responsible for its better performance. However, Lehn, Netter and Poulsen (1990) show that they choice between leveraged recapitalizations and leveraged buy-outs is endogenous. The careful analysis by Holthausen and Larcker (1996) attempts to gain insights from studying reverse LBOs. They regress the performance changes after the reverse LBO on changes in leverage, management ownership, and insider ownership to gain insights into the determinants of LBO successes. They find significant coefficients in the ownership variables, but not leverage. However, in the – arguably most relevant – regressions of mean reversion adjusted operating cash flows\[63\], only the change in insider equity remains statistically significant, implying that the close supervision of managers in an LBO firm is the most important feature. In general, the analysis by Holthausen and Larcker conflicts with the results of Mikkelson, Partch and Shah (1997), who find that post-IPO performance in general does not correlate with the reduction in management or director ownership.

Holthausen and Larcker recognize that there is a significant chance that their results are fragile, since the decision to go public again is likely to be endogenous. In particular, if leverage serves a bonding role in LBOs, then an IPO may be staged once the necessary divestitures are completed. Thus, leverage in the post IPO period no longer carries much significance. Inasmuch also ownership by management and insiders is endogenous as discussed above, the results regrettably do not allow much inference on the source of LBO performance. The limited evidence on LBOs must conclude that they are an important governance phenomenon, but with limited significance for the economy as a whole. The exact extent and source of LBO performance will continue to elude us for lack of data.

3.1.5 Synopsis on incentive mechanisms

Anyone living in a market economy must believe that incentives are relevant. This section does not argue to the contrary. It does, however, argue that the role of external incentives on managers is more limited than popularly believed. Carrots and sticks for management have their role, but the contribution of management compensation and ownership to a firm’s success is hard to identify, while the disciplinary role of takeovers may be overrated, at least in an empirical sense. Pecuniary incentives compete with intrinsic motivation, peer pressure, and other little researched motivational sources of human behavior.

\[63\] Mean-reversion adjustment is arguably most relevant here, since firms may overstate performance prior to a public sale of securities, as Rangan (1998) ad Theo, Welch and Wong (1998) have shown. Cash flow can generally be regarded as a safer measure of performance than income.
3.2 Shareholder control mechanism

We now turn our attention to hierarchical means to defend shareholder interests. The first possibility is for shareholders to influence management directly. Secondly, shareholders can hire a group of professional monitors, the board. Of course, the two mechanisms work in tandem in practice, but we shall separate the issues here and abstract from the board for the moment.

3.2.1 Direct control mechanisms: shareholder activism

Figure two illustrates, how this subsection is organized. Shareholders have a variety of ways to influence management. Small shareholders have the option to make voting proposals and vote themselves, they can delegate these tasks to a proxy solicitor, which may be an individual or an institution, or they can invest in the firm indirectly, and institutional investors will effect control. Proxy solicitors, institutional investors, and blockholders may try to influence management directly, which small shareholders cannot do due to their large number. The identity of large blockholders may be important: they can be individuals (professional investors or founding family members), firms, institutional investors investing on their own account, or the government. Management can set the voting agenda and try to influence procedures.

Figure 2: Shareholders’ possibilities of direct control over management

With a large number of shareholders, voting is superior to the consensus procedure due to communications costs. Thus, I first review the evidence on voting and proxy contests. Then, I turn to the issue of ownership concentration, and the impact of large blockholders depending on their identity. Since many companies are too large to accommodate significant owners, the role of institutional investors and proxy solicitors or “lobbying institutions” is examined. To shed more light on the detailed mechanics of shareholder activism, I finally review the available evidence on shareholder sponsored proposals.
3.2.1.1 Shareholder voting and proxy fights

Presumably for its linguistic proximity to democratic institutions, shareholder voting is a hotly debated issue carrying significant political overtones. Shareholders, however, can be expected to suffer a voting externality: it doesn’t pay to get informed. Accordingly, one may ask, whether voting has value at all.

Rydquist (1992) provides an early survey to answer this question by focussing on dual class shares. When shares carry the same cash flow promise and differ only in their voting rights, any price difference should be interpreted as the value of a vote. Indeed, Rydquist identifies seven studies that find significant price differentials in many countries. Yet, surprisingly, the effect on share prices of announcements of dual class recapitalizations is mixed.

While Rydquist points to a possible bias in the announcement effect due to concurrence of stock dividend announcements (generally positive impact on share prices), the results may also indicate that when there is little effect on overall firm value, price differences between share classes may reflect a redistribution of wealth between owners of voting shares and potential bidders for the firm. Compared to the case of new issues of voting shares, existing shareholders then do not lose in dual class recapitalizations (as observed), and the value of a vote is reflected in the issue price of non-voting stock, but not in the announcement effect of voting shares. This would be consistent with the data. Yet, a game between voting shareholders and potential bidders does not necessarily carry a corporate governance interpretation, as the previous section on takeovers suggested. The voting premium is – as of yet – an insufficiently explained phenomenon, both theoretically and empirically. Is voting a meaningful device for the governance of the firm?

Epstein (1986) and Heard and Sherman (1987) find serious deficits in the US proxy system. By the number of contests performed and their success rate, proxy voting doesn’t seem prominent as a successful corporate governance tool. Epstein (1986) likens corporate elections to ‘democracy’ in North Korea, since voters have only one alternative to ‘choose’ from.

Dodd and Warner (1983) find that proxy contests are usually not successful. Pound (1988) confirms that management has a vote getting advantage, that dissidents may be stigmatization due to the existence of ‘crank bids’, and that institutional investors may be subject to conflicts of

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64 Epstein (1986) laments the myth of corporate democracy, and paints a worst-case scenario where the US corporate environment „would not be appreciably different from that of European socialism“ (p. 42).
65 Demetz’s (1982) talks about rational shareholder apathy.
68 Levy (1982) attributes price differences between voting and non-voting stock to the value of control, and finds no arbitrage possibilities in observed prices. Ruback (1988) explains the price differences with reference to an externality when there are many shareholders, which would weaken the argument that there is value in control. Lease, McConnell and Mikkelson (1984) fail to identify any source of relative valuation. Gardiol, Gibson-Asner, and Tuchschmid (1997) find ownership structure and owner ship transfer regimes significant in Switzerland. Nicodano (1998) finds that holding companies carry a higher voting premium in Italy. Weber et. al. (?) find the premium to be related to stock market turnover in Germany. Rydquist (1996) finds the premium in Sweden to be related to ownership and share characteristics.
70 129 between 1981 and 1985. (Schrager (1986)).
71 33% in favor of dissidents, 44% in favor of management, 23% other resolutions. (Schrager (1986)).
interest. However, DeAngelo and DeAngelo (1989) find that even unsuccessful proxy contests are typically accompanied by management resignation and subsequent firm sale or liquidation.

Young, Millar and Glezen (1993) find that the ability to time communication with shareholders is a source of management control. However, Healy and Palepu (1995) find that accounting reports were insufficient to communicate value enhancing strategies at CUC International, Inc. Management is not the only side to be blamed for difficulties in the proxy process.

Brickley, Lease and Smith (1994) examine management sponsored anti-takeover amendments to find evidence consistent with both the hypothesis that management may be too entrenched for voting to matter, and that they may be motivated to act in the interest of shareholders because of the voting mechanism. Mulherin and Poulsen (1998) find that proxy contests for board seats enhance shareholder value, but this is largely restricted to firms that are acquired, making it difficult to separate the effect from normal target gains in takeovers. Thus, we may conclude that there is some evidence that shareholder voting enhances management accountability, but that the value effects are comparatively small.

### 3.2.1.2 Ownership concentration

The problems surrounding the voting mechanism may suggest that it could be better if firms retained at least one significant owner that can either side-step the proxy process and communicate with management directly – in which case small shareholders would free-ride – or that can command or easily solicit a majority in proxy contests. Blockholders would fulfill a beneficial monitoring role, as argued by Shleifer and Vishny (1986), or Admati, Pfleiderer and Zechner (1992). Bebchuk (1999) argues that ownership concentration depends on the size of private benefits of control. However, block ownership may limit firm-specific investments, raise the agency costs of debt and also give rise to a new agency conflict between large and small shareholders.

Indeed, concentrated ownership is the dominating ownership form in most countries. Block trades and private equity sales that retain concentrated ownership seem to suggest that concentrated ownership enhances firm value. While Zeckhauser and Pound (1989) and Ang, Cole and Lin (2000) interpret their evidence as consistent with the notion that large blockholders reduce agency problems, Demsetz and Lehn (1985) found no evidence that ownership concentration affects long term firm performance.

McConnell and Servaes (1995) find mild evidence that ownership concentration is more important for low growth firms (with a potential free cash flow problem) than for high growth firms. Denis and Serrano (1996) show that management turnover of targets in unsuccessful

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72 Burkart, Gromb, and Panunzi (1997). Shleifer and Vishny (1989) conversely argue that manager-specific investments lead to further entrenchment by managers. Obviously, there is a trade-off between the costs of entrenchment and the value of manager-specific investments to the firm.

73 Inderst and Müller (1999).


75 Becht and Roell (1999), Thomsen and Pedersen (1999), La Porta, Lopez-de-Silanes and Shleifer (1999), Harm (1995) for Germany. The use of pyramidal group structures to maintain ownership control is documented by La Porta, Lopez-de-Silanes and Shleifer in many countries, by Bianca and Casavola (1999) for Italy, by van Hulle (1998) for Belgium, and – last not least – by Berle and Means (1932) for the USA at that time. DeAngelo and DeAngelo (1985) argue that the dominant means of retaining majority ownership in the USA today is the issuance of dual class shares.

76 Barklay and Holderness (1989).

77 Wruck (1989).
control contests increases significantly when large blockholders acquire an ownership stake, and that such firms also show more restructuring activity relative to similar firms without a significant owner. Denis, Denis and Sarin (1997) similarly find that the probability of top executive turnover increases with the presence of an outside blockholder. In summary, the results suggest that large shareholders perform an internal monitoring role. The long-run performance of firms with more or less concentrated ownership remains a subject for more research.

3.2.1.3 Does it matter, who the large shareholder is?

Owners have different incentives and abilities to perform efficient oversight over corporate affairs. Thus, there is a legitimate question, whether the identity of owners matters.

Government ownership is a case in point. Jones et al. (1999) analyze privatizations in many countries to conclude that political rather than revenue motives determine the process, which is in keeping with the theoretical predictions of Shleifer and Vishny (1994). Accordingly, Megginson et al. (1994) and D’Souza and Megginson (1999) find significant performance improvements of privatized firms. Megginson et al. (2000) show that newly privatized firms even outperform relevant benchmarks. These results should not come as a surprise, since the objective function of the firms change after privatization. The issue, whether political objectives in publicly owned firms can be justified on aggregate welfare grounds shall not be pursued here.

Companies can themselves have controlling shares in other companies. Given the ability and incentives of corporate managers to control their domain of influence, such participations should not be treated differently from units within the corporate empire, and the question should turn to the optimal degree of “focus” in the corporation. Viih (1999) finds that equity carve-outs do not underperform their benchmarks, which he attributes to increased focus and a continuing monitoring stake of the former parent in the firm. On the reverse transaction, Slovin and Sushka (1998) find positive restructuring effects in parent-subsidiary mergers. Both studies together suggest that the results may be driven by their sample selection routine, and that corporate owners “know what they are doing”, an issue we’ll return to below.

More difficult is the subject of corporate cross-holdings. Osano (1996) argues that cross shareholdings may counter managerial myopia in the face of takeover threats. Prowse (1992) shows that ownership concentration in Japan is linked to the value of control over management in independent firms, but not in keiretsus in which firms own each others shares. Ownership concentration and cross-holdings may thus be substitutes, which is also observed by Bohren and Norli (1997) in Norway. Yet, they find that cross-ownership occurs mostly in firms with large free cash flows, suggesting an entrenchment motive. This is also hypothesized by Adams (1999) for the German case.

Family and individual owners may reap the benefits from close control over management, but they may lack monitoring expertise, and are subject to the problem of generational change. Denis and Denis (1994) examine a sample of owner-manager controlled firms – largely individuals and families – and cannot find any evidence that they perform poorly. Smith and Amoako-Adu (1999) find that management appointments in the course of the generational succession in family controlled firms is greeted by stock price declines to the order of 3.2% in Canada, but this is explained largely by the (young) age of the successor rather than the ownership form.

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78 John and Ofek (1994).
79 According to Hansman (1988), ownership structure is situation-contingent and therefore endogenous.
A special form of family ownership is a trust with family heirs as beneficiaries. Typically, such trusts leave little to no control on the side of the beneficiaries. Thus, there is no economic incentive emanating from shareholders, and this corporate form should show inferior performance. Yet, Thomsen (1996) finds no evidence for underperformance in such firms in Denmark, and Hermann (1996) presents similar results for Germany. Similar to the conclusion reached above for executive stock options and ownership titles, this evidence casts significant doubts on the pecuniary incentive motivation theory. Management in such companies has a virtually unlimited reign, but negative performance effects are hard to find. Intrinsic motivation?

3.2.1.4 Institutional investors as activist shareholders

In today’s large corporation, closely held ownership becomes ever more difficult to achieve, be it due to diversification incentives by owners or the sheer size of the stakes required to have meaningful influence. Thus, there has been some hope that the institutions that collect and invest the savings of millions of investors in equity titles could come to the rescue. Institutional investors could perform a meaningful monitoring role in lieu of large blockholders.

The modern institutions of capital accumulation are insurance companies, banks, mutual funds, and pension funds. These institutions could serve a monitoring function. Anecdotal evidence is provided by Bruner (1999), who documents that institutional investors were vital to halt the destruction of shareholder value in the once proposed merger between Volvo and Renault. Generally, Del Guercio and Hawkins (1999) find a monitoring role for US institutional investors.

The performance effects of institutional investors activism are more mixed. Nesbitt (1994) and Smith (1996) find positive performance effects in Cal PERS activism. Karpoff, Malatesta and Walking (1996) and Wahal (1996) find no performance increases due to institutional investors’ activism. Faccio and Lasfer (2000) examine UK occupational funds, concluding that these funds neither add value, nor do the firms they invest in comply with the governance Code of Best Practice. Most notably, Duggal and Millar (1999) recognize that institutional ownership itself is determined by other variables. When they accommodate this endogeneity in the regression specification, all results between institutional ownership and firm performance break down. This is symmetric to the analysis by Himmelberg, Hubbard and Palia (1999) with respect to managerial ownership.

To be sure, there is a long list of papers arguing that institutional investors are not made to be activists. The ‘Wall Street Rule’ to be quiet and exit when discontent (Heard and Sherman (1987)) seemingly has a long tradition. Institutions shun anti-management activism because of conflicts of interest, or because even they are not large enough to overcome the free-rider problem. Bhide (1993), Bolton and von Thadden (1998), and Maug (1998) argue that less liquid markets mitigate the monitoring externality. Supporting an activist stance would be that their holdings are too large for the exit option in that they would move prices too much, or because they may index their holdings. Suto (2000) expresses hopes that the recently documented shift in Japanese household portfolios from individual ownership to investment funds could unleash similar forces in Japan as in the USA.

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There is significant heterogeneity among institutional investors. Van Nuys (1993) supports the contention that US banks and insurance companies tend to vote with management. Peck (1996) documents that – during MBOs – professional investors (Carl Icahn etc.) work more in the interest of shareholders than institutional investors. We need to turn to the microstructure of shareholder control over management.

3.2.1.5 Shareholder sponsored proposals

What do institutional investors do? There is widespread agreement that institutional investors cannot be experts on corporate policies in all industries, in which case they would contradict available evidence on the poor performance of conglomerates. Gillian and Starks (2000) note that the activism by institutional investors centers on governance rather than management issues. Do these initiatives create value? Which initiatives create value?

In general, shareholder sponsored proposals in proxy contests are evidence of significant shareholder frustration with management. Karpoff, Malatesta and Walking (1996) show that shareholder sponsored proposals are concentrated in poorly performing firms. Yet, they find no evidence that operating returns improve after proposals. Strickland, Wiles and Zenner (1996) on the other hand document a positive effect of shareholder proposals initiated by the United Shareholders Association (USA). Moreover, Carleton, Nelson and Weisbach (1998) find that TIAA-CREF successfully negotiate with managements directly so that shareholder voting turns out to be unnecessary in 30% of the examined cases.

To shed some light on different institutional investors’ role, Gillian and Starks (2000) examine the relative merits of governance proposals sponsored by different groups of shareholders, examining both voting outcomes and market reactions. They find that institutions are typically more apt to garner support for their voting proposals than individuals. However, the stock market reaction to such proposals is typically small. Proposals by individuals show small positive announcement effects, while proposals by institutional investors are associated with small but measurable negative impacts on stock prices.

The latter result may be explained by the fact that institutional investors like TIAA-CREF tend to negotiate issues directly with management prior to an actual vote. In that case, the announcement may signal that private negotiations have failed. To distinguish between the real and information effect in all corporate announcements is a general problem as argued by Jensen and Warner (1988). Thus, Chidambaran (2000) examines only withdrawn proposals to conclude that they tend to add value, if sponsor and management end up compromising on the issue. If the sponsor forces the issues on management they have negative value.

Forjan (1999) finds that shareholder sponsored proposals imply for the largest part negative value effects. Only those proposals that are supported by management, where management negotiates a settlement, or where the proposal passes at the annual meetings actually have positive value implications.

Romano (2000) concludes that many shareholder sponsored proposals have no value effect because they do not address issues that have empirically been demonstrated to contribute to firm value. I would tend to follow this line of argument here with one important exception: while Romano suggests that fund managers should improve their scrutiny to identify value enhancing proposals, the objective of this survey is to document that most governance mechanisms individually have only limited empirically discernible performance effects on firms. The search
for globally efficient governance mechanisms is likely to be frustrated by the nature of governance and supervision, which – in this case – explains the limited value of shareholder proposals trying to improve on the governance regime through marginal adjustments of individual mechanism designs.

3.2.1.6 Summary on shareholder activism

Observers of the US situation conclude that voting contributes to management accountability, but that the issuance of non-voting stock does not seem to be penalized by the market, which may cloud the performance-enhancing role of voting. Similarly, it has been established that large blockholders and institutional investors perform a monitoring role, but the performance effects of such activities still tend to be camouflaged by various measurement errors.

These are likely due to the endogeneity problem. Crutchley, Jensen, Jahera and Raymond (1999) provide evidence that institutional ownership and insider ownership are endogenous variables. Danielson and Karpoff (1998) document that various different governance provisions are interrelated. Hansmann (1988) argues that corporate ownership structures in general are endogenous to a firm’s market environment. These issues severely complicate the problem of empirical support, and throw many of the studies mentioned in this section into doubt.

While it is safe to argue that ownership structures and governance matter, it is not entirely clear why and how they matters. CalPERS, the expert institutional investor on governance matters, has declared General Motors as a benchmark case that conforms with best practice in governance matters. Did that help General Motors? We can safely conclude that institutional investors such as CalPERS are not intending to imitate conglomerates. While Coffee (1991) thinks that limitations on diversification requirements on institutional investors’ portfolios could end the quagmire of these institutions by being allowed to settle for more active control, the evidence on conglomerates would not look favorably on such a development. The ambiguity in all acts of supervision as derived in chapter two is consistent with institutional investors restricting themselves to the implementation of a governance regime they view as appropriate. Whether such governance innovations – especially alterations at the margin – are apt to create lasting value has not been conclusively demonstrated in the empirical literature.

3.2.2 Indirect control mechanisms: the role of the board

With all ambiguities surrounding direct control efforts by shareholders, we turn to the indirect mechanism of a board of directors, which could potentially provide checks and balances on management more actively. In the Anglo-Saxon governance structure, the board is the center of decision-making, hosting both management insiders as well as outsiders. In Germany and other European countries, the functions of managing and supervision are organized into two separate institutions. In keeping with the discussion so far, much of the literature reviewed below will deal with the Anglo-Saxon model, since it represents the focus of much of the empirical literature. Since the board commands such a central role in the corporation, there is a wide literature analyzing its functions. More detailed surveys of the available evidence are provided by John and Senbet (1998) in the finance literature, and Johnson, Daily and Ellstrand (1996) in the management literature. I will focus on board composition, structure, and conduct, and examine monitoring and performance implications of board activities.
3.2.2.1 Board composition: insiders and outsiders

There is a presumption that the Anglo-Saxon board staffed by insiders degenerates to a “rubber stamping device” or “corporate clubhouse”. Boards submit voting proposals to shareholders, including proposals for the staffing of the board. Insiders can use this mechanism to perpetuate their tenure. Indeed, Shivdasani and Yermack (1999) find that stock price reactions to independent director nominations are lower when the CEO is involved in director selection. CEO’s try to use their influence to reduce pressure from active monitoring, and stock markets react accordingly. To counter the threat of the corporate clubhouse, activist institutional investors in the USA, or the Cadbury Committee in the UK proposed a strong presence of outside, or non-executive, directors. Do outside directors add value?

We can first look at the monitoring ability of board members. Hermalin and Weisbach (1988) show that poorly performing firms tend to add more outsiders to their boards. Yet, Denis and Sarin (1999, p. 208 Table 7) find no strong evidence in this direction. Weisbach (1988) finds a stronger association between past performance and CEO turnover in firms with outsider dominated boards, leaving the conclusion that outsiders tend to perform a more diligent monitoring role than insiders.

The wealth effects regarding outsiders are less clear. Rosenstein and Wyatt (1990) find positive share price effects from outsider appointments. Byrd and Hickman (1992) provide weak evidence that takeover bidders with outsider dominated boards have higher announcement date returns than others. Brickley, Coles and Terry (1994) find positive announcement effects of poison pills in outsider dominated boards, and negative effects otherwise. Core, Holthausen and Larcker (1999) find greater potential for abuse of executive performance compensation in firms with weak boards. Cotter, Shivdasani and Zenner (1997) show that takeover targets with outsider dominated boards earn higher returns by pushing up prices with hostile defense tactics. When examined in isolated events, outsiders seem to create value. In more general studies trying to link performance to board structure, Fosberg (1989) and Hermalin and Weisbach (1991) fail to find any evidence that would support a more generally beneficial role of outside board members.

Denis and Sarin (1999) provide a partial explanation for this. They document that ownership structure and board composition are largely endogenous variables, determined both by agency related variables as well as – to a lesser extent – firm characteristics. Thus, empirical regressions will suffer an endogeneity problem, as has already been discussed repeatedly above in other contexts. Conclusive evidence is then difficult to achieve.

3.2.2.2 Board structure, size and conduct

Next to the Insider – Outsider debate, researchers have focused on other issues surrounding the board. The union of CEO and Chairman of the board in the same person may be a source of management entrenchment. Thus, shareholder activists exert pressure on US firms to separate these functions. However, Brickley, Coles and Jarrell (1997) identify significant costs of dual leadership that outweigh potential benefits for most large firms. Fosberg and Nelson (1999) take up the issue by separating agency related changes to dual leadership from succession related changes, where the retiring CEO becomes Chairman of the board. The former panel shows significant performance improvements after the switch, the latter shows no change. Of course, there may again be an endogeneity problem due to sample selection bias: non-succession related changes to dual leadership may be performed only by those firms, who benefit the most from it.
Lipton and Lorsch (1992) argue that added monitoring capacity of larger boards may be more than outweighed by increased problems of communication and group decision-making, which is consistent with the arguments presented in chapter 1. This notion is supported by Yermack (1996) as well as Eisenberg, Sundgren and Wells (1998) on Finnish data. Particularly Yermack’s (1996) results cast additional doubt on the value of outside directors, since outsiders tend to be hired in addition to existing members, thus increasing board size. Accordingly, he cannot support the notion that outsiders tend to add value as measured by Tobin’s $Q$.

A separate question is, whether the board needs better incentives to perform its role properly. Theoretically, this issue is not undebated. Fama and Jensen (1983) argue that reputational concerns should be sufficient. The models by Hirshleifer and Thakor (1994), Maug (1997) and Warther (1998) motivate board members through incentive compensation. Yet, Vafeas (2000) fails to find any relation between the adoption of director incentive plans and post-adoption operating performance, concluding that these plans are not the remedy commonly suggested.

Vafeas (1999) documents that the frequency of board meetings increases with deteriorating performance as measured by share price declines. In addition, operating performance improves in the years following increased board activity, and that these improvements are more pronounced for firms not engaged in corporate control transactions. Similarly, Warner, Watts and Wruck (1988) find that poor stock price performance can predict management turnover, but that the logit regressions have no predictive ability outside extreme performance experiences. Both results are consistent with my hypothesis of satisficing behavior of boards, which become active only after a threshold has been passed.

### 3.2.2.3 The different functions of boards of directors

Johnson, Daily and Ellstrand (1996) identify three broad categories of what functions corporate boards serve. Next to the control function motivated by agency theory, boards fulfill a service function by consulting management, and may invite members according to resource dependency theory. The control aspect is thus important, but not dominant. Johnson, Daily, and Ellstrand (1996) provide examples which show that events typically associated with the control function of boards may be seen in the light of the boards other roles.

Thus, when a new CEO appoints outside directors, it may be so to add expertise to a board in an environment where he or she does not yet have insider knowledge of the firm. Similarly, outsider nominations are often seen as surrogates of the board’s resource dependence role. This may insert a note of caution to financial economic research that control issues may not be at center stage of the board’s agenda, and may in effect only come to the fore in times of very poor performance, as the evidence by Warner, Watts and Wruck (1988) and Vafeas (1999) suggests.

This line of reasoning is further supported by Demb and Neubauer (1992), whose interviews with numerous board members from large corporations in many countries offer a rare glimpse inside the boardroom. The recurring theme surfacing in those interviews is the realization that societal demands on the corporate board are exaggerated: “The outside perception of non-executives is that they can safeguard the company and make sure everything goes well – that’s

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83 John and Senbet (1998) quote the Economist (Aug. 9th 1997): „Efforts to reform company government have concentrated on making managers afraid. It’s time now to make boards greedy.”
84 A view supported by Schneider-Lennee (1992) from her boardroom experiences in Germany.
85 This may explain, among other things, corporate demand for a bank officer on the board.
rubbish! The explanation this paper has to offer is that the ambiguity inherent in all supervisory activity leaves little room for optimization at the margin.

Demb and Neubauer argue that there is no perfect board structure, but that boards must “fit the specific circumstances of ... company and national setting” (p.7). Thus, also board structure is an endogenous variable, which explains the mixed evidence generated by financial economists.

3.2.3 The substitution hypothesis

Of course, also financial economists have long argued that individual governance mechanisms should not be judged in isolation, but rather as a small wheel in the clockwork of a governance regime. Williamson (1983) argued that internal and external control mechanisms are to be seen as substitutes – a presumption also found in the model by Hirshleifer and Thakor (1994). Mørck, Shleifer and Vishny (1989) showed that takeovers are characteristic in declining industries, where boards may have trouble measuring managerial failure. In firms with substandard performance relative to their industry, internally motivated management turnover is more frequently found. The substitution hypothesis is also confirmed in the findings by Kini, Kracaw and Mian (1995).

Linking board composition and takeover markets as substitute mechanisms is not sufficient. Kole and Lehn (1999) examine the US airline industry after its deregulation, and find trends towards more ownership concentration, smaller boards, and changes in compensation practices. Several of the studies mentioned above have documented the interrelated nature of the various governance mechanisms. Yet, it is precisely those studies that attempt to account for the endogeneity of governance variables that have the weakest results. Naturally, this may be an econometric problem if no suitable instruments for the endogenous variables are found, as Himmelberg et al. (1999) note. A general discomfort on the value of corporate governance remains.

Yet, it would be wrong to argue that governance plays no role in correcting managerial failure. The evidence generated by Warner, Watts and Wruck (1988), Kaplan (1993), Kaplan and Minton (1994), or Parrino (1997) strongly suggests that poor managers have to leave, and this is true in many countries with different financial sectors or governance regimes. However, the question whether there is an optimal structure to achieve this result continues to elude us.

3.3 The legal environment

Demb and Neubauer (1992) asked their interviewees to characterize the relative merits of various sources of corporate governance in different economies. Surprisingly, the roles of boards and owners was viewed as comparatively unimportant in the USA, when compared to regulation and

...
‘society’. While interview responses can be viewed as less reliable than empirical analysis of more ‘objective’ data, these observations would provide an explanation of the generally lackluster support generated by the (largely US-focused) empirical literature on corporate governance. We now turn to an analysis of the legal environment.

### 3.3.1 Accounting and disclosure requirements

In a perfect market, all the Law needs to do is to define property rights and enforce contracts\(^89\). In that spirit, Watts and Zimmerman (1986) argue that disclosure standards should emerge as solutions to individual contracting problems between firms and financiers. The complexity of legally mandated accounting standards for public disclosure suggests that the contracting costs of individualized reporting standards are prohibitive. Also, investors want to compare performance across firms, making standardization desirable.

Whether the reporting standard should be defined by a professional association or the legislator is a different level of debate. Whittington (1993) discusses the trade-offs between public and private regulatory bodies. While the latter suffers a potential enforcement problem in the presence of free-riders, the former may be less flexible in its evolution. Whittington argues that self-regulation is – at best – a transitory phenomenon. In practice, there is a division of labor between expertise (private standard bodies), and enforcement (the Law).

Another question is the suitability of accounting standards pertaining to corporate governance issues. Benston (1982) argues that accounting measures are too coarse to compete with governance mechanisms aimed at the accountability of individual managers. While accounting information can support a conclusion that “a firm is doing good or bad”, it is not suitable to support (and verify) a statement such as “a manager is doing good or bad”.

Hence, disclosure of corporate information based on accounting standards is necessary for distant investors to make a financial decision, but it is not sufficient to trigger managerial replacement or other individually targeted action. Moreover, recent evidence suggests that accounting data are anyhow just a very crude information source. Rangan (1998) and Teoh, Welch and Wong (1998) examine seasoned equity offerings in the USA to conclude that firms use available discretion to over-report earnings prior to such offerings, and that a significant portion of post-issue underperformance can be attributed to investors not rationally absorbing all available information.

Furthermore, Alford and Jones (1998) compare US companies with foreign firms listed in the USA, which are exempt from certain SEC registration and reporting requirements. They conclude that their evidence does not allow the inference that the less stringent requirements on the foreign firms leads to greater information asymmetries. Of course, a plausible explanation could be that listing requirements on US exchanges are stringent enough to signal firm quality to investors, and that SEC regulation adds only little value on top of that. In countries with less stringent exchanges, the Law may take a greater role. Accounting information and disclosure standards can be thought of as a rather crude measure to aid investors, but they do have a role in helping markets to function ‘better’.

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\(^89\) Coase (1962).
3.3.2 Regulation of shareholder voting: rights and conduct

Pound (1991) looks in detail at the role of the SEC in shaping a governance framework for market participants to act in. While the efforts of the SEC to regulate shareholder communication and voting must also be seen as an effort to limit (fraudulently motivated) market failure, the results seem to confirm the proverb: “The road to hell is paved with good intentions.”

Pound documents how the SEC’s efforts have increasingly stifled shareholder activism, possibly leading to further management entrenchment. In 1992, the SEC has changed its rules, but up to that point, a shareholder, who communicated his ideas to more than 10 other shareholders was acting in violation of SEC regulations. According to Pound, this has increased the cost of proxy fights substantially. Thus, proxy fights tend to focus on contests for full control, rather than on more marginal issues such as the divestiture of parts of a business. The regulation induced costs of proxy contests has reduced the effectiveness of shareholder activism.

A similar force was at work in Germany, albeit from a rather different corner. The 1976 Co-determination Law granting labor participants a seat on the board has consistently reduced the number of decisions which the management board has to present to the supervisory board for approval. The result was diminished communications between shareholders and management, which equally led to diminished shareholder activism.

Yet, in the spirit of the analysis of chapter 1, we might argue that this may not have reduced the value of the firm much, if any. Increased management entrenchment is only a negative, when managers can rightly feel that they are accountable to nobody. Neither in the USA, nor in Germany this is the case. In that sense – while not intended that way – legislation that reduces the effectiveness of shareholder activism grants some degree of independence on managers that is vital to execute efficient leadership in large organizations.

3.3.3 Regulation of takeovers

While disclosure laws and proxy regulation are passed so that markets can function better, takeover laws – especially those passed in the late 1980s in the USA – can serve to limit the functioning of markets. The literature on US anti-takeover laws has been discussed above, and has yielded mixed results. Similarly, we argued that takeover defense mechanisms installed by management rarely have negative consequences for shareholder wealth. Schwert (2000) argues that they merely improve the negotiating positions of target management. Then, a hardly noticeable effect of anti-takeover laws shouldn’t come as a surprise.

Yet, if anti-takeover defenses and laws are of limited importance, the US is – by itself – not a suitable laboratory to examine the effect of the relevant legislation. In a study comparing the UK, France and Germany, Franks and Mayer (1990) concluded that the different level of takeover activity in the three countries was to a significant extent due to regulation rather than market forces. Takeover legislation is then part of a whole package of financial market legislation, and the legislative portfolio has been shaped over time to yield an internally consistent regime, but one that may take very different forms.

We talked above about substitution effects between different governance mechanisms. What is true for different governance mechanisms invented by market participants seems to be equally true for the legislative portfolio, albeit in a more inflexible framework over time. Takeover legislation may serve as an example for this pattern.
3.3.4 Corporate charters

The SEC and equivalent organizations in other countries regulate institutions that wish to sell financial claims in public markets. Yet, in most economies this is only a small fraction of companies, even when measured by the share of totally produced revenues they account for. All other firms have their degree of negotiating freedom limited at least in part by laws offering corporate charters.

A firm can decide between charters depending on whether it wants more than one shareholder, if these shareholders want to commit to the venture with their full wealth, if they want to limit their liability, if they want to receive their gains in the form of profits or improved purchasing conditions (co-operatives), or if they want to have traded securities that are easy to liquidate. Shareholders can decide which option appeals to them the most, but each option is regulated by the legislature: if you decide on a give option, you are bound by the rules. This is, of course, the argument by Hansmann (1988) that ownership is in part endogenous: firms structure in a way that they see fit.

We have mentioned above studies that examined the shift of corporate headquarters in the US to the State of Delaware, and found little effect. Yet, the set of choices to be examined is larger than taking one legal form and arbitraging between different varieties across States, but within the same national legislature. In the logic of Hansmann, the Law provides a self-selection mechanism, and firms optimize around the ‘grand choices’. Efforts to relocate to Delaware or reorganizing as a Master Limited Partnership in the US, or organizing as a GmbH & Co. KG in Germany will then be rather marginal ventures.

3.3.5 Regulation of the board of directors

One element of regulating corporate charters of public corporations is to prescribe form and conduct of the board of directors. In France, companies have the choice within the Law to select a monist or dual board. In Germany, the supervisory board is expressly prohibited to meddle in management’s operating decisions, and focus on supervisory activities exclusively. Yet, the Law fails to clearly distinguish between supervisory responsibility and operational decisions.

In the USA, board obligations and responsibilities are established by the business judgement rule stipulates that “directors make their decisions on an informed basis, in ‘good faith’ .... and that directors be disinterested and independent”. To make this concept operational, legal precedent has created the concepts of ‘duty of care’, and ‘duty of loyalty’.

Boardroom regulations in all countries share the problem that the Law tries to describe concrete phenomena that consistently resist a precise definition. Demb and Neubauer (1992) subtitle their book on corporate boards with ‘confronting the paradoxes’. The survey by Johnson, Daily and Ellstrand (1996) is unable to give a precise definition of what boards are supposed to do, exactly. Meanwhile, the Law defines categories such as supervisory vs. operational activities, or duty of care, without any guidance as to how to meaningfully interpret such concepts: “We don’t know what directors are supposed to do; we only know that they have to do it ‘with care’.” The ambiguities left in the legal definition of board responsibilities give rise to frivolous law suits,

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90 For a generalized version of this point of view, see Baums (1999).
91 Ciccotello and Muscarella (1997).
and disorientation on the side of directors: “Being on the board used to be a pleasure, then it became an honor, now it is slowly turning into a burden."94

### 3.3.6 Minority shareholder protection

The dispersion of ownership opens the door to a new agency problem between small shareholders and large blockholders, who have more direct access to management. Holderness and Sheehan (1991) describe organizational mechanisms to limit minority stockholder abuse in the presence of a large owner at Turner Broadcasting by concentrating voting rights in the hands of few ‘outside’ investors, and improving their voice in the board. Since organizational mechanisms are arguably not always a feasible solution, the Law steps in to provide an alternative protection mechanism for small shareholders.

Yet, the impact of such legislation is not uncontroversial. Becht (1999) examines the trade-off between market liquidity, which provides a cheap exit option, and control, when illiquid markets force large investors to engage in active monitoring. He argues that minority shareholder protection Laws have competing effects on monitoring incentives and market liquidity. While the primary effect is to encourage investment by small shareholders, thereby making markets more liquid and reducing monitoring incentives for large shareholders, the secondary effect is to encourage pyramidal holdings in the presence of one-share-one-vote restrictions.

The former prediction is supported by La Porta, Lopez-de-Silanes, Shleifer and Vishny (1998), who find that the quality of investor protection legislation and ownership concentration across 49 countries are negatively related. Investor protection Laws tend to add to market liquidity. The same authors (2000) find that the quality of minority shareholder protection Laws correlates positively with the level of dividends firms pay across countries, thus shedding light on a direct mechanism as to how shareholder protection legislation creates market liquidity.

### 3.3.7 The impact of the legal system as a whole

In a more broad-based study regarding the effect of the legal system on financial intermediation, Demirgüç-Kunt and Maksimovic (1998) show that more efficient legal systems provide an environment, where a greater proportion of firm growth is financed externally. This suggests that the Law is successful in mitigating agency problems between providers and users of financial resources. Similarly, Levine, Loayza and Beck (2000) demonstrate that countries with more developed legal and accounting systems have more developed financial sectors, and that – more importantly – a more developed financial sector can be causally linked to improved economic growth.

These studies suggests that the Law is an important cornerstone to reduce agency problems between firms and investors, and that they cannot be fully substituted by organizational or market means. Thus, while we may believe that various market mechanisms of corporate governance may substitute for each other, there is an incomplete substitution between market and legal mechanisms, and a supportive legal environment is conducive to financial sector and ultimately firm performance.

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3.4 Summary of the empirical evidence

Governance mechanisms cannot be viewed in isolation. The firm is embedded in a legal system that provides the basic infrastructure for the accountability of management to shareholders. In different legal systems, various governance mechanisms substitute for each other to create an overall governance regime. Roe (1994) argues that financial intermediaries in the USA have been consistently impeded by legislators to actively monitor the firms they invest in. This may explain the weight given to incentive mechanisms of governance in the public debate in that country, as well as the importance of a portfolio of legislation to protect small shareholder rights directly rather than through encouraging efforts of institutional investors.

With the relative merits of individual governance mechanisms in the USA left unclear, the adoption of such mechanisms in other countries may show only limited effect. Management ownership of shares have not demonstrated conclusive performance effects. Option-based compensation plans and takeover markets may actually add to the portfolio of governance problems. Direct monitoring through active shareholders and indirect monitoring through boards of directors are important, but limited in their effectiveness due to the ambiguous nature of supervision. Only the interconnectedness of the various components establishes a fruitful regime for management accountability.

4 Summary and Conclusions

This paper advances the hypothesis that management and governance are subject to significant ambiguities due to their very nature. In chapter 1 I argued that award and termination of leadership positions can never be the result of precise analysis. Managerial selection and dismissal cannot fulfill optimality criteria in any meaningful sense of the word.

In chapter 2, I focused on the supervision of management, and derived that the ambiguity of management naturally extends to an ambiguity inherent in governance activity. Overly active supervision and control stifles managerial creativity, and may question the principle of delegation in the first place. However, a regime that does not attempt to demand any accountability from management risks the failure of financial market transactions. Governance regimes must find a suitable “middle ground”, but there is again no meaningful sense to apply an optimality criterion to a particular governance regime.

Governance policy adheres to Simon’s principle of satisficing. Activism by shareholders or their representatives commences only, when firm performance does not achieve a satisfactory level. Thus, the recommendations of traditional agency theory, to align managerial incentives with those of shareholders, seem attractive: superior knowledge of managers would be channeled to the cause of shareholders. Yet, the customary incentive mechanisms all carry different problems.

Management performance remuneration can be abused in an environment of incomplete contracting. Management share ownership can lead to further entrenchment. Takeovers can become part of the problem when empire building managers of cash rich firms bid too much for their targets.

Chapter 3 reviews the empirical evidence on the shareholder manager conflict, to conclude that the various governance mechanisms have only limited potential to create lasting shareholder
value on a stand-alone basis. It is typically true that studies linking managerial behavior in specific decision-making situations to governance mechanisms are more supportive of a beneficial role than studies trying to identify value improvements in the firm more generally.

The benefits of incentive mechanisms for shareholder value are hard to discern. General performance improvements due to stock option awards to managers have not been conclusively established, possibly because they violate intrinsic motivational sources. In addition, abuse of incentive-based remuneration contracts cannot be ruled out. Actual top management compensation practice does not seem to be explained well by agency theory predictions.

Ownership shares of managers may have both incentive and entrenchment effects, depending on the size of the stake, and more recent studies fail to identify value enhancing features, presumably because management ownership stakes are endogenously determined. In that case, such ownership stakes only compensate for deficiencies elsewhere in the firm.

Likewise, the substantial experience with US takeover activity has yielded only modest results pointing at a governance role. Management takeover resistance has by and large not been identified as harmful to shareholders. Nor is it clear that takeovers, especially of the hostile variety, target poor managers. There is more reason to believe that managers of cash rich firms engage in frivolous acquisition activities. The empirical evidence suggests that the governance role of takeovers is overrated. LBOs seem to be performance enhancing, but only for a relatively small subset of firms in the economy.

The evidence regarding more direct means of ensuring management accountability is consistent with the theoretical predictions developed in the first two chapters. Shareholder activism, be it led by blockholders, institutional investors, individuals, or proxy solicitors has yielded modest if any discernible value effects. Ownership structure has no significant bearing on firm performance, and is likely to be endogenously determined. In that case, it may again be true that ownership structure merely compensates for possible shortcomings elsewhere. With the exception of government owned firms, few value effects can be measured contingent on the identity of a majority owner. Even foundation owned firms, in which managers experience no immediate profit pressures, do not seem to perform worse than appropriate benchmarks. Most notably, also the evidence on board structure and conduct favors the interpretation that active corporate governance policy represents satisficing behavior.

The available evidence suggests that the multitude of governance mechanisms defines a regime demanding management accountability, and the various individual components can substitute for each other. The only exception seems to be the legal environment, which may have to adhere to some minimum standards. Organizational or market means of governance cannot completely compensate deficiencies in the Law.

In summary, the empirical evidence on the shareholder-manager conflict that is available today supports the conjecture that governance is a concept resisting optimization at the margin. Leaving managers in an accountability vacuum is certainly detrimental to economic performance, but many different institutional structures mandating management accountability can achieve similar results.
References


54


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Subjective knowledge will here refer to the notion that ultimately our conception of reality is created by a mapping of external stimuli onto our brain, and that this mapping is unique for all individuals. To quote von Hayek (1942, p. 280): "The knowledge and beliefs of different people, while possessing that common structure which makes communication possible, will yet be different and often conflicting in many respects". Later (1943, p. 37), he argues: "All mental phenomena, sense perceptions and images as well as the more abstract "concepts" and "ideas" must be regarded as acts of classification performed by the brain."

Like Vilfredo Pareto (1935, paragraph 1689, p. 1122) I want to avoid the metaphysical debate whether "subjective existence" does or does not imply "objective existence". However, Pareto made an important point regarding inference between subjective and objective: "The concept of sodium chloride 'exists in the minds of men'. From that it is possible to conclude - though in actual practice the opposite course is followed, that a thing called sodium chloride must 'exist'." This shall be our working hypothesis: objectivity is established by consensus. Like Vilfredo Pareto (1935, paragraph 1689, p. 1122) I want to avoid the metaphysical debate whether "subjective existence" does or does not imply "objective existence". However, Pareto made an important point regarding inference between subjective and objective: "The concept of sodium chloride 'exists in the minds of men'. From that it is possible to conclude - though in actual practice the opposite course is followed, that a thing called sodium chloride must 'exist'." This shall be our working hypothesis: objectivity is established by consensus. Let me then sketch, how in a more rigorous tradition subjective knowledge could be understood.

As in Jensen (1983, p.320), agents understand the world according to a positive theory:

\[ Y_i = f_i(X, Y_{-i}, Z) \]

where  
X is the (1xK) vector of decision variables  
\( Y_{-i} \) is the (1xN-1) vector of endogenous variables except \( Y_i \)  
Z is the (1xL) vector of exogenous variables  
and \( f_i \) is the functional relationship determining the value of the endogenous variable \( Y_i \).

Every individual is characterized by an information partition over each variable.  
P = \{P_0, P_1, ..., P_n\}

The variable is assumed to have outcomes lying in some measurable domain, and the information partition cuts this domain into \( n \) segments, where this number \( n \) is different for each of the variables. This information partition symbolizes what I call structural equivalence. Take for example, the vector of the exogenous variables Z. We will say that a realization \( Z^1 \) is structurally equivalent to \( Z^2 \), or

\[ Z^1 \sim Z^2 \text{ iff } Z^1_j, Z^2_j \in [P^i_k, P^i_{k+1}] \text{ for all } j=1,...,L \text{ and for all relevant } k=0,...,n-1 \text{ hence } f_i(X, Y_{-i}, Z^1) = f_i(X, Y_{-i}, Z^2) \text{ for all } i=1,...,N \]

This hold similarly for the X or Y variables. The best information partition would be one that covers every conceivable realization of the respective variable, in the extreme case the entire real line, while the worst information partition would cover only the end points of the domain \( P = \{P_{\min}, P_{\max}\} \). Next I define a measurement partition:  
Q = \{Q_0, ..., Q_m\}

95The notion of the subjectivity of knowledge has received some backing by neuroscientists, (Maturana and Varela (1987)), who studied cognitive processes taking the workings of a nervous system as a starting point. Their theory is an evolutionary theory of the interaction of the mind with its environment.

96This definition of an information partition is slightly different from Aumann's (1976). His definition is here split up into two parts, an information partition and a measurement partition (explained below).
This partition splits the domain of the respective variable into segments within which the person cannot distinguish among events\textsuperscript{97}. The measurement partition may be finer or coarser than the information partition. It is conceivable that I can exactly measure a variable, but its outcome doesn't matter in my theory. Likewise, I can measure a variable only to some extent, possibly only so bad that several segments of the information partition fall within one segment of the measurement partition. A person's knowledge is defined by an L-dimensional probability density function over all exogenous variables, $g(Z)$. Now define a payoff function of returns

$$ R = r(Y, Z) = r(F(X, Y, Z), Z). $$

A person's utility function is defined as

$$ U(R) = U(r(Y, Z)) = U(r(F(X, Z), Z)), $$

where $F$ is the reduced form functional relation between all decision and exogenous variables that determine all endogenous variables. Decisions are made to maximize expected utility:

$$ \max \left[ E(U(R)) \right] $$

$X$

The agents' characteristics are completely specified with the sixtupel $(f, P, Q, g, r, U)$\textsuperscript{98}. I assume that refinements of the measurement and information partitions as well as updates of the functional relationships $f_i$ and $r$ as well as probability beliefs $g(Z)$ can be purchased at some cost (which may be infinite).

The time frame of events is such that at time 0 the decisions $X$ are made, while in time 1 the true outcomes of $Y$ and $Z$ are revealed, and the associated payoffs are distributed. The payoffs are determined by the true realizations of $Y$ and $Z$, not the ones that the agent can identify through his measurement partition $Q$, or that matter in his theory through the information partition $P$.

In this situation, the agents perceive some uncertainty ex post: the payoffs may be different from those expected given realizations of $Y$ and $Z$. This ex post uncertainty has three sources:

a) The agent cannot observationally distinguish within a given class of realizations. True realizations cannot be observed with a coarse measurement partition.

b) The agent cannot understand, why different outcomes of $Y_i$ matter for payoffs when the information partition is too coarse.

c) The function $r$ that translates true outcomes into payoffs is not correctly specified by the agent.

In addition, there are two sources for ex ante uncertainty. First, there is the subjective probability distribution over the exogenous variables. Then there is uncertainty about the subjectively held functional relationships $f_i$.

\textsuperscript{97}In the sense of von Hayek (1945, p.521), the information partition and the functional relationships correspond to knowledge of general principles, while the measurement partition as well as the probability beliefs $g(Z)$ over the exogenous variables correspond to knowledge of time and place.

\textsuperscript{98}Some variables $Y_i$ or $Z_j$ may not matter in some people's "view of the world". This is taken care of in this setup through the information partition: in the coarsest information partition $\{P_{\min}, P_{\max}\}$, variation in the respective variable does not determine other variables through the function $f$, or payoffs through $r$.  

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68
Theory updating and the infinite regress of knowledge

Agents with beliefs defined in the previous section are averse to variation between anticipated and realized payoffs, which leads to inefficient choices in the decision variables $X$. The method to reduce payoff uncertainty is to use past data realizations to update our "view of the world."

I argue that the economic profession has captured only some elements of uncertainty inherent in the above structure: probability distributions over the exogenous variables are updated according to Bayesian principles or hypothesis testing. Similarly, the functional forms $f$ between variables or payoff functions $r$ are improved through hypothesis testing.

The methodological innovation here is the possibility to update the information partition $P$. Agents can reduce payoff uncertainty by redefining the general concepts that in their view "make sense". Thus, an Eskimo may know fifty types of snow, because the distinction enables him to adapt more successfully to his environment: the refined information partition reduces outcome uncertainty and leads to more efficient choices in $X$. At the same time, the Indian in the Amazon basin has no concept of the construct "snow", as it doesn't matter to his survival (utility).

Generally, the information partition $P$ extends beyond the concept of variables. A more appropriate definition of $P$ would be the following: an agent's information partition separates the totality of all observable events into different general constructs - the variables. An agent defines these variables, because variation in them ultimately affects payoffs and utility. The variables an agent can observe are then a result of the agent's information partition, the different outcomes the variable can take are a further refinement of the information partition.

Thus, $P$ is called an information partition because it corresponds to a utilitarian definition of information. Information is defined as the way a person organizes all observable events into logical constructs. The constructs are created by the agent so as to minimize variation between anticipated and realized outcomes given his actions, in order to ensure efficient choices.

The measurement partition $Q$ - what the agent can actually observe - can be finer or coarser than $P$. A theory created by deductive reasoning may allow variation in constructs that are difficult to measure. Then, $Q$ is coarser than $P$. $Q$ may be finer than $P$ if - for example - other agents have a theory in which a certain variable matters, the variable outcomes are made public, but some agents do not have a refined concept as to how variation in these outcomes affects their payoffs. This may be the case when depositors read their bank’s financial statement.

All elements of theory updating ultimately lead into an infinite regress. In the area of probability beliefs this has been pointed out by Harsanyi (1967-1968). In a game-theoretic setting, players have to develop "compounding expectations" over the possible player types: a probability distribution over player types, a probability distribution over other players' probability beliefs, and so on ad infinitum. The process has to be truncated arbitrarily by assuming some probability beliefs at some level to be common knowledge. Likewise, Stigler's (1961) model of information acquisition can only work, if the agent knows the Bayesian update function. Failure to know this leads to an infinite regress.

Similarly, altering the information partition after the advent of "new data" invokes an infinite regress. In the words of Machlup (1966, p.60): "there is no such thing as `mere description'. The pre-scientific reports are already permeated with some theorizing on the part of the reporters as
well as of those whose instructions or directions they follow.99 Observations require the existence of an information partition, but where did that originate? If all knowledge is subjective, the infinite regress is only avoidable by choosing an arbitrary truncation level. This truncation level forms the "root knowledge" that people rarely - if ever - question. Such root knowledge can be seen as a result of successful institutionalization100, and forms the basis for habitual behavior101.

Elsewhere in the social sciences, the problems arising from the recognition of an infinite regress of knowledge can be found in institutional theory102. Accepting some knowledge as a root (whether consciously rationalized or not) can be viewed as an internal institution, which in Simon’s view forms the basis of any rational reasoning process. Also North’s (1987) definition of institutions could be applied to the level of the individual in the same manner.

A culture could then be characterized by those roots of knowledge that its members have consented on by communication. In this sense, institutional theory can talk about institutionalization as a process of creating reality103. Recognizing the inevitability of an infinite regress of knowledge opens the way to view knowledge held individually or collectively in a culture as a self-referential system104 such as the social systems discussed by Luhmann (1987).

The infinite regress of knowledge implies that the definition of root knowledge is always to some extent arbitrary (opposing belief structures may be supported by the same set of observations). Yet, relegating decision patterns to the realm of habit is "cost-effective" for the individual decision-maker. The more deeply rooted a paradigm, the more costly to replace it.

With all the deficiencies an agent’s theory may have, a fundamental shake-up such as a substantial revision of the information partition is likely to increase the subjective beliefs about the variance between anticipated and realized payoff outcomes. The result is a stickiness in the agents' belief structures perhaps related to the psychological concept of cognitive dissonance: it is - at least to some extent - rational to discard information that seemingly contradicts previously held theoretical beliefs.

The updating problem is complicated by the necessity to attribute outcome variation to the correct source of ex post uncertainty: variable definition, refinement of the information partition and measurement partition, and the return generating function r. This further contributes to stickiness of beliefs, while the truncation point of the infinite regress remains arbitrary. Sticky belief structures have one important consequence: the coexistence of at times fundamentally opposing views, which - subjectively - are all not contradicted by the same set of observations.

Using the information partition, it is possible to define a distance measure between two "views of the world." For every separation point P1 of one information partition, find the separation point P2 of another information partition that deviates least from it, and define distance as the

99 By the same token, Zingales (2000) disputes that „the disproportionate amount of research of research dedicated to the study of large publicly traded companies is simply an effect of data availability. ... [This] ignores the extent to which the availability of data is endogenous to the interest of the researchers.”
100 In Simon’s (1983, p.78) view: “But institutions provide a stable environment for us that makes at least a modicum of rationality possible.”
101 In this sense, Rothenberg (1966, p.233) argues that “utility maximization ... is compatible with habit”.
102 See Scott (1987b) for a survey of institutional theory.
103 Scott (1987a, p. 495).
104 In a sense, a dictionary is a self-referential system, as all words are defined by other words.
numerical difference between the two points. Ignore those separation points that merely represent a refinement of the other information partition. These mean that one person can distinguish more events within a class. The communication problem is supposed to be reflected in disagreement of the definition of the class itself. The extent of the communication problem could be defined as the sum of the numerical differences in the non-overlapping separation points of the respective information partitions.

Thus, I posit that the “model of man” suggested here implies bounded rationality, in that the views of the world of the agents inhabiting this world are by necessity incomplete. The structure that is set up here is capable of encompassing both problems associated with traditional agency theory as well as Transactions Cost Economics. The traditional agency analysis would be modeled such that information and measurement partitions of the agent are a refinement of those of the principal. This would be simply “asymmetric information”, but would not yield post-contractual problems. Those would be generated by non-overlapping information and measurement partitions of principal and agent: the state contingent contract they write (the contract partition) would not be capable of eliminating ex post conflict.