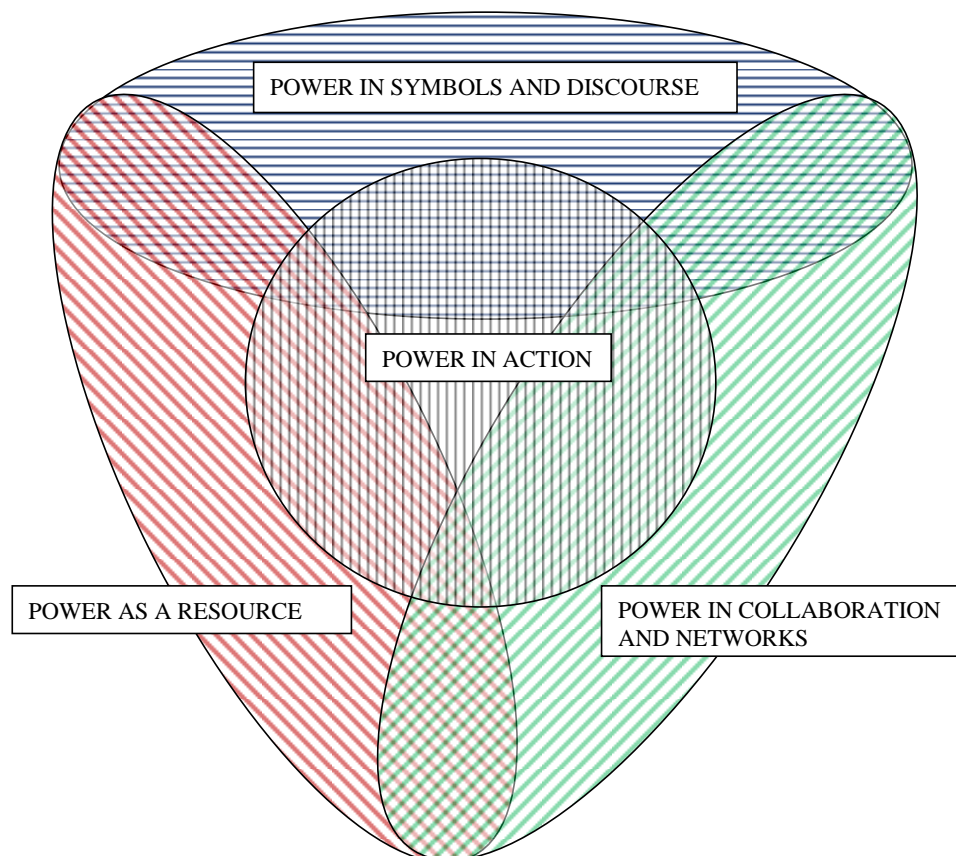# Report

Exploring Power Perspectives on Robust Regulation

Author(s)
Ragnar Rosness
Helene Cecilie Blakstad, Ulla Forseth

Report

Exploring Power Perspectives on Robust Regulation

VERSION	**DATE**
1	2011-12-06

AUTHOR(S)
Ragnar Rosness
Helene Cecilie Blakstad, Ulla Forseth

CLIENT(S)	**CLIENT'S REF.**
Norges forskningsråd	Project number 183251
PROJECT NO.	**NUMBER OF PAGES/APPENDICES:**
50 41 20	97

ABSTRACT

The objective of this report is to explore how various conceptualisations of power can help us understand the robustness of the Norwegian risk regulation regime within the petroleum sector. We outline four different perspectives on power:

1.   Power in action
2.   Power as a resource
3.   Power in collaboration and networks
4.   Power in symbols and discourse.

We explore how the perspectives can be used to help us understand specific issues related to the regulation of risk. We also discuss implications concerning research approach and methodology.

PREPARED BY
Ragnar Rosness

CHECKED BY
Tor Olav Grøtan

APPROVED BY
Lars Bodsberg, Research Director

SIGNATURE

SIGNATURE

SIGNATURE

REPORT NO.	**ISBN**	**CLASSIFICATION**	**CLASSIFICATION THIS PAGE**
SINTEF A21367	978-82-14-05242-8	Unrestricted	Unrestricted

Document history

Table of contents

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

3 of 99

Summary

The objective of this report is to explore how various conceptualisations of power can help us understand the robustness of the Norwegian risk regulation regime within the petroleum sector.

We outline four different perspectives on power and a synthesising framework:

1. *Power in action.* This perspective addresses the things actors do or may do to achieve their objectives against the preferences or interests of other actors. This is the most concrete perspective on power, because it looks at power as it is manifested in specific actions and strategies. This is also a highly dynamic perspective. Power is manifested in actions that take place at specific points in time, and timing may be essential for the actors' success in achieving their objectives.

2. *Power as a resource.* In this perspective, power is something actors *have*, and which they use to make other actors do things they otherwise would not do. The actors are well-defined – for instance individuals, groups or organisations or governments. This perspective is an important complement to "power in action", because some actors may possess resources that enable them to achieve their objectives without manifest actions that display the use of power.

3. *Power in collaboration and networks.* This perspective extends the previous perspective by conceptualising how actors may achieve their objectives by collaborating and creating coalitions and alliances. As a consequence, power is no longer located "in" specific actors but distributed in networks of actors. A central topic in this chapter is discipline, which may involve extensive control of the details of behaviour, and even cognition and emotions, of many people.

4. *Power in symbols and discourse.* In this perspective, power is not primarily something specific actors have, and which they deliberately use to achieve their objectives. Rather, power resides in discourse, i.e. in our use of language and symbols. Within a given domain of discourse, some statements appear meaningful and relevant and perhaps obviously true, whereas others appear meaningless or irrelevant. Knowledge entails constraints, regulation and the disciplining of practices (Hall, 2001). Power may be hidden in things that are tacitly assumed rather than displayed in what is stated explicitly.

5. *A synthesising framework.* In his book "Frameworks of Power" Clegg (1989) proposes a framework for analysis of power with the purpose to help sketching plausible narratives. The framework is based on thorough discussions about different theories of power. It connects different theories and opens for the opportunity to take advantage of different perspectives. Even more important, the framework proposes how different perspectives may be interconnected.

The aim was to capture a reasonable range of relevant conceptualisations of power in the social sciences, and to make the diversity of the field salient by grouping the conceptualisations into distinct perspectives. In hindsight, we realise that the perspectives can hardly be characterised as distinct. This is due both to the complexity of the phenomena covered and to the diversity of the literature on power.

Finally, we explore how the perspectives can be used to help us understand specific issues related to the regulation of risk. As an illustration, we indicate how the perspectives may be used to analyse the revival of tripartite collaboration on health, safety and environment in the Norwegian petroleum sector around year 2000:

- Using the perspective "power in action", Moen et al. (2009) explored the tactics and strategies used by the parties (a) to defend their positions in controversies with the other parties, and (b) to reverse a trend towards disintegration of collaboration. They found that the parties continued to use a variety of power tactics even as they agreed to establish new arenas for tripartite collaboration. The Norwegian authorities went far beyond a narrow regulatory role when they took actions to revive tripartite cooperation and establish a consensus concerning the safety level and the need for safety. Moen et al. concluded that the capacity of the parties to build new trust even as they continue to fight for their interests, and the willingness of the authorities to intervene contributed to the robustness of the regulatory regime in the Norwegian oil industry.

- The perspective "power as a resource" leads us to examine the power base of the actors, in terms of their control of the interests of other actors. For instance, the regulatory authorities may exert an influence on the allocation of new licences for exploration and production. One may hypothesise that the "exchange value" of this control increases with increasing expected prices of oil. Consequently, the "bargaining position" of the regulatory authorities would be improved during periods when oil prices increase or are expected to increase. Another interest controlled by the authorities is the form and content of the HSE regulations. The regulatory authorities may, e.g., threaten to introduce stricter regulations, or to replace goal-oriented rules with prescriptive rules. The oil companies may threaten to reduce their activity level, and thus threaten employment both in their own organisations and in their suppliers' organisations. Such threats may appear particularly realistic when oil prices are low.

- The perspective "power in collaboration and networks" invites us to ask whether all parties can be said to have increased their power by turning from a confrontational to a collaborative mode of interaction. Can the transition to increased cooperation be conceived as a transition from transitive to intransitive power (Paragraph 4.1.3)? Does this interpretation add to our understanding of the robustness of the Norwegian regulatory regime? From the perspective on Actor-Network Theory, one may study how the mother of the victim of the fatal accident at Oseberg East on Christmas Eve 2000 established herself as a significant actor in the controversies concerning the safety.

- Using the perspective "power in symbols and discourse", we may examine whether impersonal power, inherent in symbols and discourse, played a role in the disintegration and revival of tripartite collaboration. Did new kinds of discourse enter the arena, for instance in the aftermath of the fatal accident at Oseberg East on Christmas Eve 2000? This issue was explored by Forseth et al. (2010).

We also discuss implications concerning research approach and methodology.

SINTEF has published two empirical studies of the robustness of tripartite collaboration as a component of the regulatory regime in the Norwegian petroleum industry (Moen et al., 2009; Forseth et al., 2010) based on perspectives on power discussed in this report. A further study is in progress.

1 Introduction

1.1 Background

The project "Robust Regulation in the petroleum sector" aims to develop knowledge that can be used to design robust regulation for the complex and changing field of the petroleum sector. The project is sponsored by The Research Council of Norway and executed in collaboration among the University of Stavanger, the University of Oslo and SINTEF. One of the main objectives of the project is to understand and conceptualise the robustness of the Norwegian risk regulation regime within the petroleum sector.

Regulation of HSE involves, among other aspects, an effort to influence a broad range of decisions characterised by conflicting interests. For instance, the implementation of some HSE measures may add substantially to the cost of building a new offshore installation. There may also be conflicting interests and points of view within the regulatory body itself (Hood et al., 2001). We suggest that the handling of conflicting interests inevitably raises issues related to power, even when the actors themselves choose to play down this aspect of their interaction. Moreover, Norwegian HSE legislation deliberately intervenes in the distribution of power within the enterprises, e.g. by giving employees' safety representatives the authority to halt dangerous activities. This suggests that it is necessary to get a grip on issues related to power in order to understand and conceptualise the robustness of a regulatory regime. However, issues related to power have received little explicit attention in the safety science literature (Antonsen, 2009).

Different theories of power assign different meanings to the term "power" (Engelstad, 2005). We will therefore abstain from defining "power" at the outset of this report. Instead, we will illustrate relevant uses of the term by means of few examples. These are issues related to risk regulation in the Norwegian petroleum sector which we believe call for an answer in terms of distribution, mobilisation or use of power:

- The HSE regulations make extensive use of goal-oriented rules. The translation of goal-oriented rules into specific solutions often requires technical expertise. How does this influence the capacity of employee representatives to protect their interests in cases of dispute?

- There were heated disputes between trade unions and employees concerning the risk level in the petroleum sector during the late nineties (Moen et al., 2009). A turning point occurred in year 2000, after which the perceptions of the risk level converged and tri-partite cooperation was intensified. Can the change in year 2000 be explained in terms of changes in the distribution of power among the actors, or in terms of one of more actors using specific sources of power? Did the media significantly influence the outcome of the disputes? Can the changes be fruitfully understood as a transition from transitive power relations (i.e. one actor trying to exercise power over others) to intransitive power relations (actors trying to increase their collective power by acting in concert)?[1]

- On 1 January 2004, the Norwegian Petroleum Directorate was divided into the Petroleum Directorate and the Petroleum Safety Authority (Lindøe, 2008). Did this division influence the power base of the Norwegian authorities to stimulate or force the industry to work according to the authorities' ambitions for HSE in the petroleum industry (St.meld. 12, 2005-2006)?

---

[1] The concepts of transitive and intransitive power are discussed in Section 4.1.3 below, see also Goehler (2000).

- The objective of the EU Services Directive is "to achieve a genuine Internal Market in services by removing legal and administrative barriers to the development of service activities between Member States"[2]. Will this directive, if implemented by Norway, have an impact on the power of Norwegian authorities to implement their own regulatory policies in the petroleum industry?

- A number of smaller and more specialised operators and licensees are now present on the Norwegian continental shelf (Westby and Forseth, 2008). Could this threaten the power of the Petroleum Safety Authority to enforce the HSE rules and regulations, due to insufficient capacity to carry out the requisite inspections? If this is the case, could the authorities get around the problem by changing the regulatory strategies?

It is beyond the scope of this report to answer the above questions, but they have served as guidance to our effort to identify relevant theories of power.

1.2   Purpose, structure and scope of this report

The objective of this report is to explore how various conceptualisations of power can help us understand the robustness of the Norwegian risk regulation regime within the petroleum sector.

This task is performed according to the following steps:

In Chapters 2-5, we outline four different perspectives on power. The aim was to capture a reasonable range of relevant conceptualisations of power in social sciences, and to make the diversity of the conceptualisations salient by grouping the conceptualisations into distinct perspectives.

In Chapter 6, we present Stewart Clegg's model "Circuits of power". This model synthesises many aspects of the preceding perspectives and even provides ways to link these perspectives.

In Chapter 7, we explore how the perspectives outlined in the previous chapters can be used to help us understand specific issues related to the regulation of risk, for instance how the perspectives can be used to analyse the tensions between the Norwegian oil industry, the labour unions and the authorities concerning the state of safety in the petroleum sector around year 2000, and the ways in which a new consensus was reached. We also discuss implications concerning research approaches.

It is not an aim of this study to build a new theory of power or to build a new synthesis of theoretical contributions. Rather, we seek to identify ways to apply theories of power to issues related to the regulation of HSE. Moreover, we seek to present aspects of selected theories of power in a manner which enables the readers to apply these theories on HSE-related issues and problems of their own.

We believe that the regulation of HSE is best studied by applying a broad perspective. It is not enough to study the form and contents of regulations or the inspection and auditing routines of PSA in isolation. Even a narrow view of regulation has to include two parties, the regulator and the regulated. Moreover, it is necessary to include a broader context, including for instance the way the industry is organised, the patterns of unionisation and tripartite collaboration and the role of mass media in order to understand a regulatory regime and the preconditions for its robustness. A regulatory regime which effectively promotes HSE for permanent employees in operating companies is not necessarily effective for subcontractor employees working on temporary contracts.

---

[2] Citation from the homepage of the European Commission: http://ec.europa.eu/internal_market/services/services-dir/index_en.htm

The regulation of HSE involves handling conflicts of interest. We do not believe that it is possible to approach this area in a politically neutral manner. Researchers will inevitably bring in their own values and preconceptions. Their research will also be influenced by contextual factors such as who pays for the research and how the researchers and their institutions want to present themselves to their audiences. Complying with norms for good research practice may help researchers avoid some of the pitfalls related to research in controversial areas, but will not make the researchers or their research politically neutral. Moreover, even norms for good research are contested, and several controversies concerning methods in social sciences are linked to political viewpoints. Therefore, we believe that the best researchers can do when entering a controversial area is to be honest about their own positions and the context of their work (e.g., who pays), and to be open to criticism from persons who do not share their points of view.

This study is sponsored by the Norwegian Research Council through the programme "Health, safety and environment in the petroleum sector". The current strategy for this programme is a response to Stortingsmelding (White Paper) nr 12 (2005-2006), which states the ambition that the Norwegian petroleum industry shall be a world leader with regard to HSE. The white paper also emphasises the importance of a good dialogue and cooperation between labour unions, employers' associations and the authorities. The Norwegian work environment legislation emphasises employee participation in decisions related to the working environment. These three considerations – a high ambition level, tri-partite cooperation and employee participation – also serve as normative premises for the present study.

An important epistemological premise for the present study is that social phenomena are ambiguous in the sense that they are open to alternative interpretations. We may have informed discussions about the relative merits of alternative interpretations, and our arguments may sometimes be supported by scientific work, but no amount of scientific work will eliminate this basic ambiguity. On the other hand, we believe that our capacity to act may increase if we improve our ability to apply alternative interpretative frameworks, and thus develop our capacity to view social phenomena in new ways. A capacity to change interpretative framework may also help us pinpoint some of our own preconceptions, which might otherwise exert a strong influence on us because they seem too obvious to be questioned or even to be identified as preconceptions. It is our hope that the perspectives outlined in this report may provide such new interpretative frameworks.

An important limitation of this report is that we have not included "powerlessness" as a distinct perspective. We recognise that a conceptualisation of powerlessness may call for other concepts than a conceptualisation of power. It may thus be useful to complement this report with a more systematic discussion of powerlessness.[3]

1.3 Perspectives on power

For the purpose of this report, we have organised selected conceptions of power into four perspectives. We may think of the perspectives as different answers to the question: "where can we look for power or its manifestations?" We have tried to proceed from the most concrete manifestations of power to increasingly complex and abstract conceptions of power. The four perspectives overlap, as illustrated in Figure 1.

---

[3] A brief discussion of powerlessness based on an economic model of power can be found in Paragraph 3.1.3.

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

9 of 99
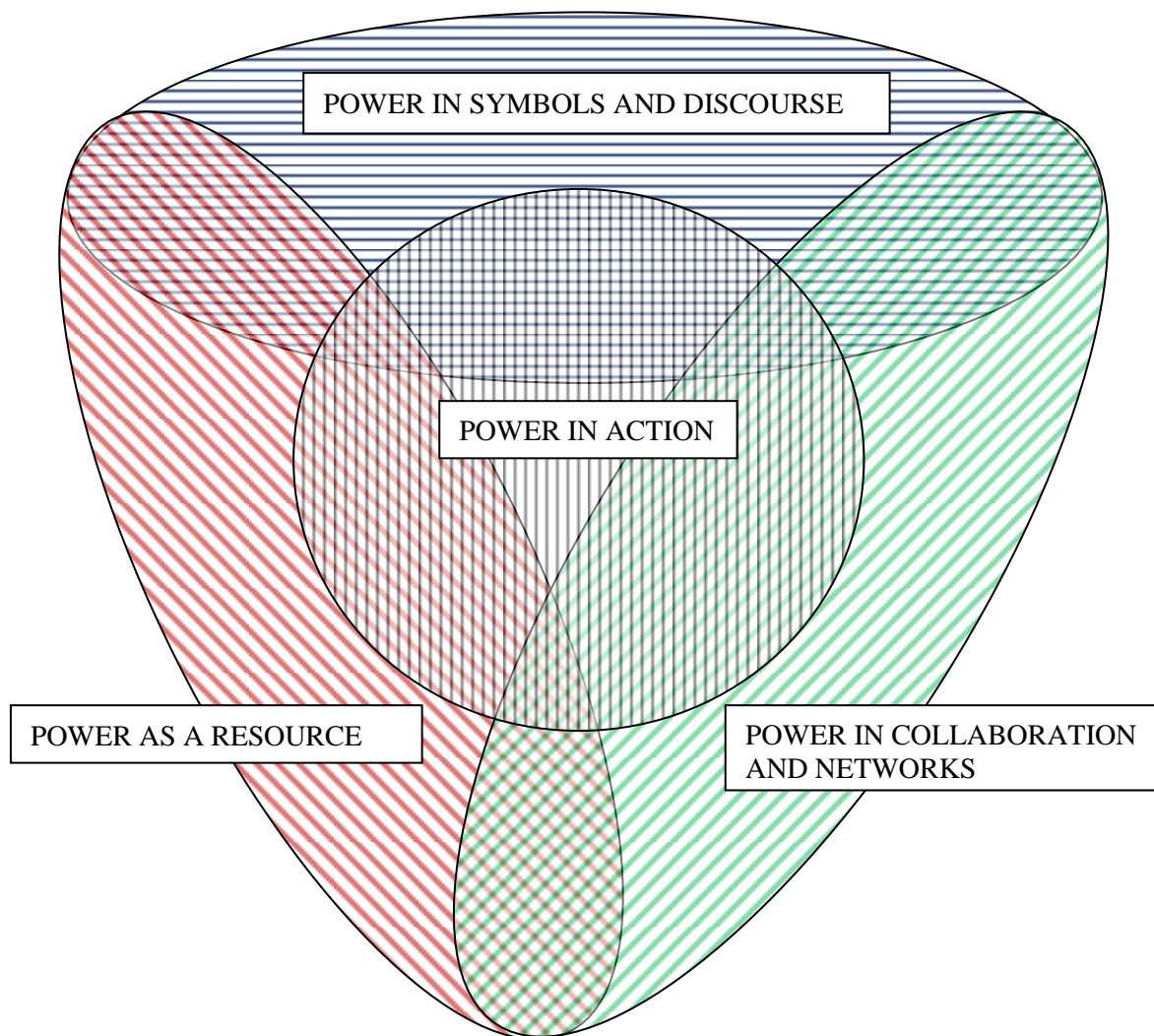
Figure 1. Four overlapping perspectives on power.

The perspectives are briefly outlined below.

6. *Power in action.* This perspective addresses the things actors do or may do to achieve their objectives against the preferences or interests of other actors. This is the most concrete perspective on power, because it looks at power as it is manifested in specific actions and strategies. This is also a highly dynamic perspective. Power is manifested in actions that take place at specific points in time, and timing may be essential for the actors' success in achieving their objectives.

7. *Power as a resource.* In this perspective, power is something actors *have*, and which they use to make other actors do things they otherwise would not do. The actors are well-defined – for instance individuals, groups or organisations or governments. This perspective is an important complement to

"power in action", because some actors may possess resources that enable them to achieve their objectives without manifest actions that display the use of power.

8. *Power in collaboration and networks.* This perspective extends the previous perspective by conceptualising how actors may achieve their objectives by collaborating and creating coalitions and alliances. As a consequence, power is no longer located "in" specific actors but distributed in networks of actors. A central topic in this chapter is discipline, which may involve extensive control of the details of behaviour, and even cognition and emotions, of many people.

9. *Power in symbols and discourse.* In this perspective, power is not primarily something specific actors have, and which they deliberately use to achieve their objectives. Rather, power resides in discourse, i.e. in our use of language and symbols. Within a given domain of discourse, some statements appear meaningful and relevant and perhaps obviously true, whereas others appear meaningless or irrelevant. Knowledge entails constraints, regulation and the disciplining of practices (Hall, 2001). Power may be hidden in things that are tacitly assumed rather than displayed in what is stated explicitly.

10. *A synthesising framework.* In his book "Frameworks of Power" Clegg (1989) proposes a framework for analysis of power with the purpose to help sketching plausible narratives. The framework is based on thorough discussions about different theories of power. It connects different theories and opens for the opportunity to take advantage of different perspectives. Even more important, the framework proposes how different perspectives may be interconnected.

The literature on power has accumulated over several centuries (for an overview see a recent handbook of power; Clegg and Haugaard, 2009). It is characterised by diversity – for instance, no single, precise definition of "power" is compatible with all perspectives in the literature (Engelstad, 2005). At the same time, it is also characterised by numerous interconnections. One author may take up ideas from previous authors and elaborate them for her own purposes, often in a new context. Due to this diversity and interconnectivity, it is very difficult to sort the theoretical contributions into neat categories. This also applies to the perspectives above. Several theories or conceptions of power fit into more than one perspective. For instance, Actor-Network Theory (ANT) is concerned with power in action – a classic contribution to the field is actually titled "Science in Action" (Latour, 1987). At the same time, ANT is definitely concerned with power in networks. ANT thus fits into both the first and the third perspective above. This may confuse the first-time reader of this report. However, these ambiguities also point to interconnections between the different perspectives. Attention to such links can help us prevent the concept of power from fragmenting into a multitude of unrelated meanings, and still allow us to remain receptive to a diversity of manifestations and interpretations of power.

2 Power in action

What does power look like? How can you recognise power when you see it in use? What do people do when they exert power? It is, paradoxically, possible to read several volumes about power without finding straightforward answers to these questions. The questions may even sound rather naïve and beside the point to many theorists in the field. They may argue that power is a capacity, a potentiality that exists, even if it is never actualised (Lukes, 2005:69). One may also argue that power is often manifested in the issues that are never raised, in the things that are never said, the thoughts that are never thought.

We recognise the latter views as legitimate and useful perspectives on power. However, they should not keep us from studying power in action, i.e. the things people or organisations do when they exert power and when they build up and maintain their power base. We also suggest that "power in action" is an appropriate starting point for an exploration of perspectives on power. It provides a concrete grounding for the more abstract conceptions of power. This perspective is also highly practical. If successful, theories about power in action should help people and organisations identify ways to attain their goals in the presence of opposition. Equally important, theories about power in action should help us recognise the power tactics we are subjected to ourselves.

2.1 Power in organisational decision-making and implementation

2.1.1 Managing with power

In the introduction to his book "Managing with Power" (1992) Jeffrey Pfeffer outlines the chronology of the discovery of transfusion-transmitted AIDS, and the subsequent delays in getting anything done with it. A few excerpts from that chronology should suffice to convey an idea of what happened (Pfeffer, 1992:4-6)[4]:

> In July 1981, epidemiological evidence led many members of the medical community to conclude that the so-called Gay Cancer was a contagious disease, spread by both sexual contact and through blood. …
> In December 1981, Don Francis, an epidemiologist at the Center for Disease Control (CDC), wanted to put blood banks on the alert. He argued that if the disease spread like hepatitis, it would be spread by blood transfusions. …
> In November 1982, Dr. Selma Dritz, assistant director of the Bureau of Communicable Disease Control at the San Francisco Department of Public Health, was concerned about protecting the integrity of the blood supply; she had documented, at least to her satisfaction, the first case of AIDS transmitted by blood transfusion.
> The reaction of the blood-bank industry was denial. …
> On January 4, 1983 (more than a year after it was first suspected that AIDS could be spread by blood transfusions), at a meeting of an ad hoc advisory committee for the U.S. Public health Service, Don Francis of the CDC was angry. "How many people have to die?" shouted Francis, his fist hitting the table again. …
> In March 1983, the hepatitis antibody screening sought by the CDC was rejected because of opposition from the blood banks, although donor screening was introduced to try to eliminate high-risk donors. …
> In January 1984, the blood industry was continuing to stonewall. The cost of AIDS screening would be high; moreover, the industry was afraid of what it would do to both the supply of donors and the demand for blood from nonprofit blood banks. … In early January, … blood bankers agreed to form a task force to study the issue. …
> By late 1984, even though there was no longer any real debate about whether AIDS could be spread by blood transfusions, widespread screening for hepatitis or other blood abnormalities still had not begun. …

This is power in action. An estimated 12,000 Americans were infected from transfusions largely administered while the blood bank industry successfully obstructed action to prevent spread of AIDS through

---

[4] In this account, Pfeffer makes several references to Shilts (1987).

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

13 of 99

blood transfusions (Shilts, 1987, referenced in Pfeffer, 1992). Pfeffer claims that "the early failure of the authorities to act occurred not so much because AIDS was a gay disease (although this was clearly a part of the story), but rather as a consequence of the lack of political will and expertise on the part of those fighting the traditional medical establishment" (1992:6). Conversely, he points out that the "blood bankers were sophisticated users of language, symbols, and all the techniques of interpersonal influence", and that "the blood-bank industry cultivated allies, was shrewd in its use of language to make the risks appear negligible, and mustered all its resources to stall and delay policies that might harm the industry" (1992:6). At the same time, Pfeffer also emphasises the positive aspect of power, the capacity to coordinate activities and achieve goals that are not attainable without such coordination. He also links power to the implementation of decisions, arguing that the way a decision is implemented is often more important than the decision itself, and that formal authority is a less effective means to get things done than it used to be. Pfeffer defines power as "the potential ability to influence behavior, to change the course of events, to overcome resistance, and to get people to do things that they would not otherwise do" (p. 30). However, the example above illustrates that power can also be used to obstruct and to prevent things from happening.

In his classical treatise on power, "The prince", Machiavelli (2003) advised sovereigns on how to use power to achieve their objectives and defend their position. Pfeffer's (1992) textbook has a similar purpose, but his audience is business school students aspiring to become corporate executives. Following the genre conventions for business school textbooks, he provides a recipe for managing with power (p. 29):

1. Decide on what your goals are, what you are trying to accomplish.
2. Diagnose patterns of dependence and interdependence; what individuals are influential and important in your achieving your goal?
3. What are their points of view likely to be? How will they feel about what you are trying to do?
4. What are their power bases? Which of them is more influential in the decision?
5. What are your bases of power and influence? What bases of influence can you develop to gain more control over the situation?
6. Which of the various strategies and tactics for exercising power seem most appropriate and are likely to be effective, given the situation you confront?
7. Based on the above, choose a course of action to get something done.

We may note that this recipe requires extensive analysis of the situation. Item 4 and 5 refers to "power bases", and thus implies a notion of power as a resource. That will be the topic of the next chapter. In this chapter, we shall concentrate on the strategies and tactics proposed by Pfeffer (1992). These are mainly based on phenomena described in social psychology, e.g. related to framing or interpersonal attraction.

2.1.2 Framing

Framing implies influencing the context in which a proposal is interpreted and assessed – what they are compared to, whether there is a committing history of action, and whether the associated benefits are perceived to be scarce:

By controlling agendas, actors may make their proposals benefit from contrast with what has come before. This *contrast effect* is familiar from sales situations, where an offer is made to seem inexpensive because it is presented after the customer has just been exposed to a much more expensive offer or has just invested a large sum of money.

Actors may exploit the principle of *psychological commitment*, which suggests that "we are bound to actions that 1) we choose voluntarily with little or no external pressure; 2) are visible and public, so we cannot deny being responsible for them; 3) are irrevocable, so we cannot change them easily; and 4) are explicit in their implications about our attitudes, and subsequent behavior" (Pfeffer, 1992:192). Things that are difficult to attain tend to be valued more highly, because we look to our past actions as a guide to our attitudes and

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

14 of 99

beliefs. Commitment is also supported by social norms that favour predictability and steadfastness, for instance the tendency to perceive leaders as weak if they change their minds in the face of opposition. Moreover, consistency is used to economise on information processing. Consistency and commitment are thus produced by both intrapsychic and interpersonal processes. A practical way to get something accomplished is thus to begin with any useful action, however small, which may produce some degree of commitment. Conversely, in order to change someone's behaviour, one may have to unbound them from past commitments. A direct attack at somebody who is committed to a standpoint will usually backfire. They will typically act according to their previous commitments, and this will strengthen their commitments. One way to get around commitments is to help the committed persons reinterpret their past, for instance to view an action that created commitment as formed by external pressure.

According to the *scarcity* principle, things or persons or benefits are perceived as more valuable and attractive if the potential recipient believes they are scarce or difficult to obtain. Pfeffer thus suggests that "what you advocate should always appear to be scarce" (1992: 203).

Regulatory agencies may be exploiting the contrast effect when they use a system of escalating sanctions in case of conflicts. An agency may deliberately start with the mildest form of sanction not only in order to avoid unnecessary antagonism and loss of confidence. If the first means of sanctioning does not work, the next one will appear more serious as an effect of the contrast to the initial sanction. Moreover, the stronger means of sanctioning may appear more serious when they are rarely used, because a contrast is created to the more common forms of sanctions.

2.1.3 Interpersonal influence

Power tactics can also exploit effects that occur when persons interact in dyads or small groups. Interpersonal influence tactics can be based on the principle of social proof, the use of ingratiation, and the role of emotions in interpersonal influence.

The *principle of social proof* refers to the tendency of people to ask for and be influenced by the opinions of others in situations that are characterised by uncertainty and ambiguity. We may come to agree with others because we crave for the certainty of a shared opinion (Pfeffer, 1992:208). This tendency may be viewed as a way to save cognitive effort as well as a means to build solidarity among those who share the consensus and a way to ensure acceptance in the group. Pfeffer suggests that it is common to use social proof as a strategy for making judgements even at the executive level of major organisations. A considerable momentum will build up once a social consensus starts to develop in one direction, because the perceived agreement tends to reinforce the convictions of each individual. It is often difficult to determine exactly when a group makes a decision, because consensus tends to build up gradually through such a process of mutual confirmation. Actors may exploit this effect by arranging group decisions in a way that ensures they have allies in the group during the early phase of a decision process.

The use of *ingratiation* implies that an actor tries to win somebody's favour and gain an advantage by pleasing him or her. The clue is simply to appear as a likeable person, and thus as somebody one would not want to refuse a favour. The means can be simple, such as flattery, emphasising social similarity or cultivating contact and cooperation. Tupperware parties take advantage of ingratiation as well as the principle of social proof and building of psychological commitment. It is difficult to refuse an invitation from a friend to a Tupperware party (ingratiation), it is difficult not to buy anything once you participate in the party (psychological commitment), and the notion that it is appropriate to buy something is reinforced when other participants buy Tupperware products (social proof). In a social psychological perspective, bribery and palm greasing may also be viewed as instances of ingratiation. Pfeffer also draws the implication that it is important to work through friends or mutual acquaintances to influence third parties, i.e. to build and use social networks.

Influence through emotions requires that we are able to control our emotions, as they are perceived by others. In practice, this assumption is maintained by a broad range of organisations in the service sector, which require their employees to smile spontaneously to their customers no matter how they feel. Emotions are used to attract or keep customers, as well as to increase the effectiveness of police interrogations (the "good cop/bad cop" strategy). Pfeffer (1992:224) emphasises that strategic display of emotions involves considerable skill and that the cost of controlling one's emotional display over sustained periods of time are considerable. He notes from his own experience that business executives often develop skills in displaying or not displaying feelings in a strategic fashion.

2.1.4 Timing

Timing is used both to promote and prevent specific decisions:

Being early or *moving first* entails benefits as well as disadvantages. Sometimes it is possible to create a *fait accompli*, i.e. to make a change that is difficult to undo, such as hiring a person or starting a project. One sets the terms for debate and the framework for subsequent action. One may take advantage of surprise and leave one's opponents unprepared. Pfeffer suggests that "when surprised, we are likely to react emotionally rather than strategically to the situation" (19992:230).

Delay is often an effective tactic to stop something. Delays may work for several reasons. The supporters for a proposal may tire of the effort, run out of resources or no longer be around. Media pressure for action may subside as the media turn their attention to other matters. Decisions may have deadlines associated with them, or the benefits associated with a proposal may decline over time (e.g. the introduction of a new product). A common way of delaying something is to call for further study or consideration.

The *waiting game*, a variety of the use of delay, may be used as a means to display power. Being in a position to cause others to wait is both a symbol of power and a tactic to increase one's power. By making others wait, one makes them confirm one's position of power. Wasting time waiting for others also creates a behavioural commitment and may have the psychological effect of enhancing the value of what one is waiting for (Pfeffer, 1992:236).

Deadlines favour the side that has momentum or the edge. They are also used to get things accomplished, by conveying a sense of urgency and importance. Deadlines are therefore often used as a countermeasure to the strategy of interminable delay. Deadlines are also used to deprive opponents of the time they need to mobilise arguments or allies to oppose a proposal.

Order of consideration may have an impact on the framing of each issue or proposal, as discussed above in conjunction with the effect of contrast. A proposal will appear more attractive if it occurs after one or more unattractive proposals. Decisions that are already taken may produce psychological commitment, and thus influence later decisions. Actors may also take advantage of interdependencies of decisions. If decision A is more or less an implication of decision B and vice versa, actors may start with the issue that is most likely to yield the result they want, thus increasing the likelihood of getting their way on both issues. The Norwegian authorities have repeatedly used this strategy to overcome resistance against oil production in vulnerable environments. The first decision is put the issue on the agenda. The second decision is to start geological investigations ("a little geology doesn't hurt anybody"). If the results of geological investigations are positive, the decision on permitting exploratory drilling can then be framed in terms of the potential benefits for the local population of exploring the resources that are likely to be found. Moreover, the initial decisions have already produced psychological commitment – why would anybody search for oil and gas if they did not intend to make use of it?

Actors may use early decisions to build social proof that may influence later decisions. An example of this was the ordering of the national referendums on membership in the European Union in 1994. The national referendums in Finland, Sweden and Norway were ordered so that the referendum most likely to yield a majority in favour of membership (Finland) was arranged first. The referendum in Norway was arranged after the Swedish referendum, in the expectation that a Swedish majority in favour of EU membership would have a strong impact on Norwegian voters. Norway would then stand out as the only outsider if the country did not join EU. This effect was labelled "svenskesuget" ("the Swedish suction") in the media. Interestingly, the expected effect did not occur. Norwegian EU opponents met this ordering tactic by an "immunisation" tactic. They made sure that "the Swedish suction" was debated so much in advance that people were prepared for the Swedish "yes", thus reducing its impact.

Propitious moments are those windows of opportunity that arise when an issue is on top of the agenda, public attention is on its peak, when a proposal can find a problem to which is perceived as an appropriate solution, or when the participation and attention of decision-makers is particularly favourable with regard to a given proposal (March and Olsen, 1976). Pfeffer suggests that attention is possibly the scarcest resource in organisations (1992:245). He suggests that persistence often pays off because the likelihood of hitting the right moment increases if one makes several attempts over a sustained period of time.

2.1.5 Politics of information and analysis

Facts and their interpretation are seldom as clear-cut as we like to think, and this ambiguity can be exploited as a source of power. Thus, Pfeffer (1992:247) argues that "our belief that there is a right answer to most situations and that this answer can be uncovered by analysis and illuminated with more information, means that those in control of the facts and the analysis can exercise substantial influence." Rational or seemingly rational processes of analysis can be used effectively to exert power both because the use of power can be made unobtrusive, and because information collection and analysis confer legitimacy to the ensuing decisions.

Pfeffer points out that *employing an outside expert*, such as a consulting firm, is often more effective than depending on in house analysis. Spending money on a third party analysis creates commitment, the reputation of the analyst lends credibility to the conclusions, and it is easier to give the analysis an appearance of objectivity and impartiality. However, Pfeffer comments (1992:252):

> The nice thing about using consultants is that they can usually be relied on to further the decision you have in mind. With one exception, I have never seen a consulting firm recommend the abolition of the job or the division that hired them – I think it is called "client relations". Most firms know who brought them in, and provide the answers they are expected to give. … Because they are so often used to legitimate choices, I have heard consultants referred to as "hired guns." And we all know where to stand with respect to a gun – behind it, not in front of it."

Pfeffer maintains that common sense and judgement are often more important than so-called facts and analysis in organisational life. It is often possible to find facts to support virtually any decision. Information and analysis cannot help us weigh the importance of alternative perspectives. Moreover, facts and analyses may be dangerous, because they may conceal the uncertainties and ambiguities of an issue, and thus be conducive to risky decision-making.

Analysis results may be tailored to desired conclusions through *selective use of information*, i.e. by strategically ignoring information that does not favour one's own view. Selective use of information may be incorporated into formal systems through the establishment of formal objectives, criteria or decision rules that favour desired decision outcomes. A quest for quantification or "hard data" may be used to favour certain information sources or perspectives at the expense of others under a guise of methodological rigour. Technical skills in the use and analysis of information can become a significant source of power if such skills are unevenly distributed among the actors.

|---|---|---|---|
| 50 41 20 | SINTEF A21367 | 1 | 17 of 99 |

The tactical use of information and analysis is all the more effective because it is often difficult to trace the effects of organisational or political decisions. It is usually possible to produce alternative explanations for what could be construed as the unfavourable outcome of a decision. This opens a new field for employment of power when decisions are evaluated in retrospect or successes and failures are accounted for. Moreover, organisations are, according to Pfeffer (1992:163) "notorious for avoiding evaluation and avoiding looking backward".

Many aspects of HSE lend themselves to politics of information and analysis. There is, for instance, no objective way in which we can "measure" the risk of a major accident – although we can have informed discussions and use risk analysis methods to combine experience-based judgements in a systematic and traceable manner. It is also difficult to assess the impact of organisational changes on risk levels. The impact of regulatory action on safety is, if anything, even more difficult to assess, because it works indirectly, through the difference it makes in the actions of the regulated organisations.

2.1.6 Changing organisational structure to consolidate power

A person's position in a formal organisation influences her access to information, her formal authority, her area of jurisdiction and her access to other powerful actors. This implies that organisational design and redesign can be used to develop and exercise influence. Pfeffer (1992:268f) maintains that organisational design is not only "the consequence of a process in which rational decisions are made about how to organise activities to ensure the efficient operation of the enterprise." Structures are also designed and used to produce and implement political power.

The slogan *divide and conquer* may refer to the common experience that breaking up independent units or reducing their power usually tends to increase the power of those in more centralised positions (Pfeffer, 1992:269). The effect is not always intended. However, actors in central positions often strive to keep subdivisions with power aspirations weak or under control. Conversely, actors outside the central positions of power may strive to create separate domains with defined responsibilities as a means to establish a competing power base.

Another structural tactic is to *expand one's domain*. We may think of organisational territory as the reach and span of activities controlled or influenced by an actor. Territorial expansion by means of structural reorganisations is thus an option for those who have gained control of a unit. One way to expand one's domain is to take on new activities and new responsibilities. Another way is to make sure one gets full value out of the domains that are already ostensibly under one's control. One may, for instance, use appointments strategically to place one's allies in key positions within the domain. One may also make aggressive use of formal powers.

Task forces and committees can be useful for co-opting others (Pfeffer, 1992: 274ff). Co-optation is based on the idea that a person appointed to a board, committee or task force will develop loyalty to the organisation or unit to which the group is attached and commitment to the ideas it proposes. Decisions taken by committees and task forces come to be seen as collective decisions. This may relieve a powerful executive from the personal liability associated with making a controversial or unpopular decision. An actor using task forces and committees as a power tool may prefer to appoint task force or committee members with little expertise or interest in the issues at hand in order to control the process.

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

18 of 99

2.1.7 Symbolic action

Pfeffer (1992:279) uses the term "symbolic management" about causing others to feel good about doing what we want them to do. Political language, settings, and ceremonies can be used to elicit powerful emotions in people. He claims that "these emotions interfere with or becloud rational analysis" (1992:279).

Pfeffer's account of symbolic action thus revolves around a dichotomy between rationality and emotion. He argues that power exercised by a mastery of facts and analysis may easily leave others "intimidated, awestruck at one's brilliance and ability". Overwhelming one's opponents is not likely to produce allies. Pfeffer also argues that strong norms against being influenced by emotions may actually make us deny our susceptibility to emotional appeals, and thus make us even more susceptible. He thus claims, based on his own experience, that "people with training in engineering and business are more readily seduced by emotional appeals than people trained in literature or drama …" (1992:281).

Political language involves calling things by names that are designed to manage the emotions of others. For instance, the Reagan administration passed several laws that increased the tax level, but it consistently avoided labelling these actions "tax increases". The laws were given palatable titles such as "Tax Equity and Fiscal Responsibility Act" or "Budget Reconciliation Act". This allowed Reagan to increase the tax level and at the same time keep an image as a fiscal conservative. Pfeffer (1992:284) maintains that "political language is frequently vital in the exercise of power in organizations of all types." Political language exploits our tendency to judge people by their goals and intentions, rather than by the outcomes of their actions. Political language has to be adapted to the setting. In organisational settings, proposals need to appear "clean", "tight" and "forward-looking" (p. 287).

Symbolic rewards, such as a new title, may be used to keep potential rebellions in the fold at a very low price.

Actors also use *ceremonies* to mobilise political support or quiet opposition. A ceremony or meeting may, for instance, be held to reassure some group in the organisation that it is important. Corporate training activities can be used for the same purpose. In this case, what counts is not only who participate, but also who are given prominent roles such as presenters or instructors. Even regular routine meetings often function as ceremonial occasions. This may explain why otherwise busy and efficient persons find the patience to sit through meetings they perceive as unproductive. Replacement of executives can be a ceremonial answer when a company is caught doing something illegal or improper. The message is, of course, that the company as a whole does not tolerate such behaviour. Pfeffer emphasises the importance of *how* ceremonies are carried out, and he sometimes recommends MBA students to study drama or literature.

Settings and physical space may serve to represent power and even be used as a tool for the exercise of power and influence. An obvious example is executive offices, which may be designed to signal exclusivity and hierarchical power, or to signal openness and a willingness to listen. At a smaller scale, the position at the head of the meeting table or behind an imposing desk can be used to increase one's power.

2.1.8 Critical discussion

Pfeffer's description of power tactics is interesting not only because he refers to a number of phenomena known from social psychology that may be exploited in power games. Many of the tactics described by Pfeffer will be found in a number of popular textbooks and courses directed at people who use power tactics in their daily work, such as managers, politicians and salesmen/saleswomen. This suggests that many of the tactics are in widespread use, that they are perceived to be effective, and that they may constitute a significant part of daily interaction within and between organisations. Pfeffer's description of power tactics also has implications for our understanding of decision-making. They support the idea that organisational

decision-making is characterised by bounded rationality, rather than the calculative rationality typically found in prescriptive models of decision-making.

Pfeffer does not discuss rhetoric as a power tactic in its own right. This makes good sense when one considers that several tactics may be used as rhetorical means to exert power, for instance framing, ingratiation, selective use of information, political language and ceremonies.

The range of strategies and tactics available to an actor is to some extent context-dependent. Moreover, the effectiveness of some tactics may depend on cultural factors. This may, for instance, apply to the strength of psychological commitment and the effectiveness of symbolic action. It also seems likely that the more you know about the strategies and tactics, the less are you likely to be influenced by them. Pointing out that a specific power strategy is being used may be the most effective way to make it ineffective, as illustrated by the example concerning referendums on membership in the European Union in Paragraph 2.1.4. It is also conceivable that some power tactics may backfire – people may realise that they are being manipulated and react adversely.

Pfeffer's discussion of symbolic action and political language is mainly restricted to the emotional effects of language. In the chapter on *Power in symbols and discourse* we will present a perspective on language and power which goes beyond the purely emotional aspects of language.

Two limitations of Pfeffer's array of power strategies and tactics should be kept in mind. Because it is oriented towards psychological and social psychological theory and research, it is not clear how well it captures strategies and tactics that are used in power struggles between organisations or institutions. Secondly, the use of formal authority and legal means has not been given a prominent place in his discussions. These may be more important in a regulatory setting than in the intraorganisational settings discussed by Pfeffer. We should be sensitive to the possibility that power struggles in a regulatory setting may involve a subtle interplay of juridical disputes and the use of informal (i.e. non-juridical) power tactics.

Apart from these limitations, we should keep in mind that power tactics and strategies discussed above represent just one perspective on power. This perspective is limited to episodes where well defined actors act to achieve specific objectives which require other people to act in specific ways. The other perspectives challenge these limitations. For instance, many researchers insist that power is a capacity, a potentiality which exists even if it is never displayed in the form of tactics applied in a specific episode. In Chapter 6 we shall present a synthesis of several perspectives proposed by Stewart Clegg. This framework opens the possibility that power in action may involve much more than the episodic use of specific tactics to achieve specific objectives.

Most of the power tactics are in principle observable, in the sense that they have to involve overt, potentially observable actions in order to be effective. A study of the tactics in use may thus be a suitable starting point for researchers who want to explore phenomena related to power. However, characterising an action as the use of a specific power strategy or tactic, involves an act of interpretation. Others, including the actor herself may contest our interpretations. Moreover, the interpretation of an action as the use of power may itself be a power tactic. The researcher can thus inadvertently take the role as a participant in a power struggle she claims to be observing. This kind of participating observation is not unscientific or immoral per se, but it calls for careful reflection about the role of the researcher.

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

20 of 99

3 Power as a resource

The most common way to think about power is probably to view it as a resource that some actors have, and which they can use to influence the actions of others. When taking this perspective, we usually think of well-defined actors such as individuals, organisations or governments. We also tend to think of these actors as goal-oriented. Moreover, we often assume that different actors can be compared with regard to their amount of power, at least within a certain domain.

We will start this chapter with a summary of Robert Dahl's (1957) discussion of the concept of power as a relation among actors. We will then turn to a model of power presented by Hernes (1978) as part of the first major research programme on power and democracy in Norway ("Maktutredningen"). We will then present Pfeffer and Salancik's classical work on the external control of organisations (Pfeffer and Salancik, 2003). This work takes as its starting points that all organisations depend on resources that are controlled by other organisations.

3.1 Power as capacity to influence the actions of others

3.1.1 Power as a relation between two actors

Robert Dahl (1957) elaborated the idea that power is a capacity to influence the actions of other people. His starting point is an intuitive idea of power: "*A* has power over *B* to the extent that he can get *B* to do something that *B* would not otherwise do" (p. 203). The actors, *A* and *B*, may be "individuals, groups, roles, offices, governments, nation-states or other human aggregates" (p. 203). He suggests that a comprehensive statement concerning a power relation would include references to

a) the power base of *A*;
b) the means actually used by *A* to exert power over *B* in a specific situation;
c) the amount or extent of *A*'s power over *B*;
d) the scope of *A*'s power over *B*.

Applied to the relationship between an HSE regulator and a regulated company, the *power base* may include, e.g., the laws and regulations, the range of available policy instruments and sanctions, and the relationships of the regulatory authority with other powerful actors. We may think of the base as the set of resources that *A* may draw upon if he decides to exert power over *B* in a specific situation. The *scope* refers to the responses of *B* that can be influenced by *A*. A company's planning of hazardous operations is usually within the scope of an HSE regulator, whereas its decisions on returns to investors usually are outside that scope.

Dahl suggests that the *amount* of power of *A* over *B* can be expressed in probabilistic terms, e.g. "The probability that the Senate will vote to increase taxes if the President makes a nationwide television appeal for a tax increase is $p_1 = 0.4$. The probability that Senate will vote to increase taxes if the President does not make an appeal is $p_2 = 0.1$" (p. 204). The amount of power can now be defined as the difference between two probabilities, i.e. $M = p_1 - p_2$. This presumes that there exists a time lag, however small, from the actions of *A* to the responses of *B*. It also presumes that there is some "connection" between *A* and the response of *B*. *Negative power* may be defined if it is possible to assign a direction to *B*'s response with regard to *A*'s influence attempt. If *B* consequently does the opposite of what *A* tells him to do, this may be defined as negative power.

Things get more complicated if we want to compare the power of different actors. One might want to take into account (1) differences in scope, (2) number of comparable respondents controlled, and (3) change in probabilities, but "there seems to be no intuitively satisfying way to do so" (p. 206). Even if two of these factors are identical, it may be difficult to agree on how to compare different scopes or what categories of respondents are comparable. Dahl defines A and B as formally *power comparable* if and only if the actors, the means, the respondents and the responses or scopes are comparable. Judgements on power comparability have to be based on considerations of the substance of the situation and the objectives of the research task, and not on general theoretical considerations.

Dahl concludes his article with a dialogue between a "conceptual theoretician" and an "operationalist". The "operationalist" argues that the concept of 'power' is not a single concept, because it is given many diverging operationalisations, depending on the data available. The "conceptual theoretician" replies that the formal concept of power helps us to compare the actual operational alternatives we employ, and to specify the defects of the operational definitions.

3.1.2 An economic model of power

We will now outline a model of power and powerlessness proposed by Hernes (1978).[5] This model was published as a part of the first major research programme on power and democracy in Norway ("Maktutredningen"), which was directed by Hernes. Hernes' model may thus be representative of a dominant conception of power in Norwegian research during the seventies and eighties.

The basic elements of Hernes' model are *actors* and *events* (Hernes, 1978:20). An actor may be, e.g., an individual, an organisation, an interest group or a national government. Hernes' model assumes that actors are goal-oriented. This implies that each actor deliberately chooses among alternatives and selects the option that he considers best in terms of his interests, given the knowledge that is available to him. Actors and events are linked in two ways. The outcomes of the events have different consequences for different actors. Actors therefore have different *interests* attached to the events. Secondly, actors have different degrees of *control* of the outcomes.

The *power* of an actor may be understood as the sum or totality of the interests that he controls. The power of an actor includes control of the interests of *other* actors, because this is a resource she can exchange for control of her own interests. Norwegian authorities are in control of the distribution of licenses for petroleum exploration on the Norwegian shelf. This is a source of power, provided that oil companies have a strong interest in acquiring new licenses. At the same time, Norwegian authorities have a strong interest in maintaining a high level of HSE in the Norwegian petroleum industry. This issue is largely under the control of oil companies. According to Hernes' conception of power, the Norwegian authorities may exchange control with the distribution of licenses with control of HSE. This implies that the power base of the Norwegian authorities is weakened if the oil industry looses interest in acquiring new licenses. This power base can in principle be strengthened if the Norwegian authorities succeed in bringing in new oil companies with a stronger interest in acquiring licenses.

The "machinery" of Hernes' model is thus the possibility that actors may exchange control with other actors in order to gain increased control of their own interests. Hernes treats influence as a commodity which may be exchanged in a market. He assigns values to control over events. This makes his work representative of efforts to conceive power in terms of economic concepts and principles[6], and thus to treat power as a resource.

---

[5] Hernes' work is strongly influenced by Coleman (1973).
[6] A systematic discussion of similarities between the power model and economic concepts is given in Hernes (1978:124-126).

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

22 of 99

It is beyond the scope of this report to present the detailed reasoning in Hernes' book. We will, however, cite a representative set of implications of the model concerning conditions that may increase or decrease the power of an actor (Hernes, 1978:86-95):

a. The power of an actor is reduced to the extent that he controls little of interest to others.
b. The power of an actor is reduced to the extent that other actors control issues of great interest to him.
c. The power of an actor is reduced to the extent that he has little control of issues to be decided about or the procedural aspects of the decision process.
d. The power of an actor is reduced to the extent that he has little control of which other actors will take part in the decision process.
e. The power of an actor can be reduced to the extent that he is prevented from taking part in the decision process.

Hernes illustrates the implications of his model by a "class analysis" ("klasseanalyse"; Hernes, 1978:97-100). He starts with the claim that the central variable for analysis of the relationships between social classes is the degree of mutual dependence between superiors and subordinates at the workplaces: Inequalities between classes will be large if subordinates are highly dependent on one organisation for the satisfaction of their needs. Conversely, a more egalitarian society will emerge if superiors are highly dependent on their subordinates' support and willingness to cooperate. Hernes thus claims that technological developments which increase the need for competent and conscientious workers will increase the power of employees. Employees may also increase their power by unionizing. A union may reduce their dependability on their wages, which are controlled by their superiors, by accumulating a strike fund. A free labour market with a surplus of jobs will force the superiors to compete for workforce and reduce the power of superiors over their employees. These factors will depend on legislative conditions and their enforcement concerning issues such as freedom of association, freedom of speech, the right to change job, and prohibition of blacklisting. Hernes suggests that considerations such as these may be used to build a scale for class differences, with feudal societies towards one extreme and current Scandinavian societies towards the opposite end.

The implications of Hernes' model that are listed above may not seem to go very far beyond common sense when we read them one by one. Taken together, they may provide a starting point for a systematic analysis of the bargaining power of an actor. The model may also be extended to account for the impact of incomplete information and the value of additional information in a bargaining situation, or to account for the power impact of dependence on technologies or resources controlled by others.

Hernes argues that the efficiency of a collectivity ("kollektiv") in promoting their interests decreases to the extent that they have mutually conflicting interests. Barth et al. (2003:131f) argue along similar lines when they suggest that "the Scandinavian model" may be vulnerable to a process of self-destruction through fragmentation. According to Barth et al., the Scandinavian model is characterised by the strong position of LO (Landsorganisasjonen - the Norwegian Federation of Trade Unions), which is dominated by the interests of organised workers in private industry exposed to international competition. Because LO organises groups with somewhat divergent interests, some of these groups may find that they can promote their interests more effectively by forming new unions which represent a smaller group with more homogeneous interests. This has, in particular, led highly educated groups to form new unions. Barth et al. suggest that this could lead to a change in the mechanisms for collective wage bargaining and a change in the relevant power constellations.

In the Norwegian petroleum sector, employees in the oil companies are organised in two major competing unions: IndustriEnergi, which is affiliated with LO, and SAFE, which is affiliated with YS (Yrkesorganisasjonenes Sentralforbund, a rival federation). It is not clear how this constellation affects their power base with regard to HSE issues.

3.1.3 Powerlessness

Hernes (1978) also uses the model outlined in the previous paragraph to account for powerlessness ("avmakt"). In his account, powerlessness is not always the same thing as lack of power. Powerlessness occurs when actors are unable to use the control they have to take care of their interests.

Hernes (1978:137) uses the term "*false consciousness*" to refer to situations where an actor has an inaccurate understanding of how they are influenced by the actions of others, or when an actor gives expressions to interests that differ from her "objective interests". The problem may be that the effects of actions are complex and poorly understood. Powerful actors may see it in their interest to hide the effects of their actions from view of the public. One way to do this is to individualise the causation of a problem. High level management in a company may, for instance, claim that individual behaviour is the dominant cause of accidents in order to avoid costly technological improvements. Mass media may contribute to the formation and maintenance of false consciousness by diverting public attention from certain issues. Public documents may hide controversial issues under thick layers of bureaucratic discourse and nice intentions. Committees are often under pressure to deliver unanimous reports, and thus to suppress minority views.

Powerlessness can also occur in situations where the actors have an accurate understanding of their interests and how these interests are affected by the actions of others (Hernes, 1978:144-20). A *misrepresentation of interests* ("interesseforvridning") occurs if certain interests are underrepresented or not articulated due to a representative bias in arenas for decision-making. A misrepresentation of interests may be manifested not only by the ways interests are represented, but also by the issues that are not put on the agenda, i.e. by non-decisions, and by the circumstances that are never questioned. Institutional rules and practices may lead to a filtering of the interests that reach the attention of decision-makers. For instance, claims that can be substantiated with quantified information may have a stronger impact in many settings than claims that can only be documented in a qualitative manner. Markets are more sensitive to the needs of actors with a lot of money than they are to the needs of actors with little money. Moreover, markets are rarely sensitive to demand for options, e.g. the option to take the bus in case your car breaks down, or the option to buy your food in a local store the day you are no longer able to drive a long way to a large low-price shopping centre. Even the court system can be subject to representative bias, since actors with abundant money and legal expertise and a lot of time are in a better position to defend their interests than actors without such resources.

A third source of powerlessness is *limited knowledge about the consequences* associated with decision options (Hernes, 1978:152-164). Actors may have incorrect or insufficient knowledge about cause-effect-relationships relevant to their interests. This may even apply to actors that are otherwise resourceful, because the effects of actions in political and organisational settings are often difficult to predict. The expected positive effects may fail to materialise, or unwanted and unanticipated side effects may occur.

Powerlessness may arise from unwanted *summation or interaction effects* that occur if each actor acts according to her perceived interests (Hernes, 1978:164-169). Even weak incentives may add to a huge effect if individual choices at one point in time change the conditions for choices at a later point in time. For instance, a weak preference among several persons for driving one's own car instead of taking the bus may cause buses to run less frequently, fares to rise etc., and thus cause even more people to abandon the bus. The arms race illustrates a variant of this phenomenon which may be labelled "systemic constraints" ("systemtvang"). Each party invests in arms to increase their safety, leading others to do the same, thus making everybody more unsafe and starting a new turn in a spiralling process. In this case, powerlessness occurs because one single actor is unable to change the contingencies for action on his own account. A way out of systemic coercion is collective action, where each actor accepts constraints on her own actions in order to achieve a better result for everybody. Car drivers may, for instance, accept constraints on driving in the rush-hours to reduce traffic congestions. This discussion points to the need for institutions that have the power to resolve situations where uncoordinated individual actions lead to powerlessness, and thus suggests

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

24 of 99

a way to legitimise the power of social institutions. We will return to this issue in the chapter on power in collaboration and networks.

3.1.4 Critical discussion

Hernes' model seems to be representative for a dominant tradition in Norwegian research and discourse on power. There may be several reasons for this. The model can be formalised to a considerable degree. It "speaks the language" of social economists, and may thus borrow authority from an influential discipline. It may be particularly important that the model points toward operational interpretations to a family of questions which seem politically important, such as "who have most power", "who are the powerless", "have democratic institutions lost power during the last ten years" etc. The theory also proposes diagnosis and treatment for some sources of powerlessness. At the same time, most people will probably perceive much of the reasoning associated with this model as compatible with common sense.

The last point may also be considered a limitation of the model. It puts a lot of common sense into a fairly consistent system, but it fails to go much beyond common sense. Hernes' (1978) book is not likely to surprise or provoke the readers. Its conception of power is limited. Hernes hardly refers to power in symbols and discourse, which is a major topic in current discourse on power.

Another problem is that Hernes defines "power" in terms of "control". To most of us, these terms are very close in meaning. This threatens to make his definition circular. It may seem that this problem pervades much of the model. The model does not explain how actors gain control of events and issues in the first place; it just discusses how they can trade control in one area with control in another area. One may ask whether Hernes has provided a theory of exchange of control rather than a theory of power.

Because the model adapts economic reasoning to the exchange of control, it adopts a view of actors sometimes referred to as "economic man", i.e. a rational, perfectly informed and self-interested creature with a stable and explicit set of goals who consistently acts so as to maximise the attainment of those goals. Hernes does discuss the implications of some possible deviations from these assumptions in conjunction with powerlessness. However, one may still argue that the core of the theory presumes a kind of actors that are somewhat different from those that have been observed in empirical studies in psychology, sociology and social anthropology.[7]

Hernes uses the term "false consciousness" to capture situations where situations where an actor has an inaccurate understanding of how they are influenced by the actions of others, or when an actor gives expressions to interests that differ from her "objective interests". This concept makes good sense from a common sense point of view. However, it seems to imply that somebody is in a position to determine the "objective interests" of the actors that do not understand what is in their interest. This implication may be unpalatable to many from a political or ethical point of view, due to its paternalistic flavour. It may also be problematic for those who claim that interests are socially constructed, and therefore subject to competing interpretations.

3.2 Resource dependence and the external control of organisations

In the previous chapter, we presented an array of power strategies and tactics that can be used by actors in an intraorganisational setting. In this section, we shall introduce Pfeffer and Salancik's (2003) analysis of power and power tactics in an interorganisational setting, i.e. in dealings between organisations.

---

[7] A discussion of "economic man" can be found at http://en.wikipedia.org/wiki/Homo_economicus.

3.2.1 Resource dependence

The basic premise of Pfeffer and Salancik's (2003; orig. ed. 1978) classic work on the external control of organisations is that no organisation is in complete control of the conditions of its own existence. Organisations have to interact with their environment to acquire the resources necessary for their survival. According to the logic of the previous section, actors in control of those resources are in a position to exert social control of the organisation.

We did not find a formal definition of "resources" in the book, but it is clear that the authors use the concept in a broad sense, covering all kinds of inputs an organisation needs from its environment. They thus consider students a necessary resource for a university, and customers as a necessary resource for a business. For an oil company, new licences for exploration would clearly be an example of a critical resource. This meaning of "resource" should not be confused with the meaning of the word in the title of this chapter ("Power as a resource").

Pfeffer and Salancik distinguish between organisational effectiveness and efficiency (2003:11). Effectiveness is an organisation's ability to create acceptable outcomes and actions. Effectiveness is thus "an *external* standard of how well the organization is meeting the demands of the various groups and organizations that are concerned with its activities" (2003:11). In contrast, organisational efficiency is an internal standard of performance, typically measured by the ratio of resources utilised to output produced. Efficiency is not a guarantee for organisational survival if the organisation fails to produce the outcomes that are demanded by powerful actors outside the organisation.

Another key concept is *constraints*. According to Pfeffer and Salancik (2003:14), "constraint is present whenever responses to a situation are not random". They mainly use the term in connection with individual behaviour, pointing out that constraints can be manipulated to promote certain behaviours. Pfeffer and Salancik do assert that "organizational actions are constrained" (2003:19), but it is not clear whether "organizational actions" refers to individual actions in an organisational setting or to actions attributed to the organisation as a collective.

Pfeffer and Salancik view the organisation as "a coalition of groups and interests, each attempting to obtain something from the collectivity by interacting with others, and each with its own preferences and objectives" (2003:36). They thus view organisations as "quasimarkets, in which influence and control are negotiated and allocated according to which organisational participants are most critical to the organisations's continued survival and success". (2003:36). The role of management can thus be viewed as management of the organisational coalition, including resolution of the various conflicts among interests. The boundary of an organisation can be defined in terms of "its influence over activities compared to the influence of other social actors over the same activities of the same participants" (2003:37). Organisational effectiveness can only be defined with respect to the assessment of a particular group (e.g. owners, creditors, customers or employees), since different groups will have different demands to the organisation, and thus different criteria of effectiveness.

Interdependence exists in social systems and social interactions "whenever one actor does not entirely control the conditions necessary for the achievement of an action or for obtaining the outcome desired from that action" (Pfeffer and Salancik, 2003:40). According to this definition, a seller is interdependent with a buyer because the outcome of an attempt to sell depends on the contribution of both. *Outcome interdependence* exists when the outcomes achieved by A are interdependent with the outcomes achieved by B. *Behaviour dependence* refers to situations where the activities themselves depend on the actions of another actor. With regard to outcome interdependence, two actors are in a *competitive relationship* if the outcome achieved by A can only be higher if the outcome achieved by B becomes lower. The relationship can be characterised as *symbiotic* if the output of one is input to the other, so that it is possible for both to be

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

26 of 99

better off or worse off simultaneously. The relationships between two actors can contain both competitive and symbiotic interdependence simultaneously.

3.2.2 Organisational response to external demands

Organisations have to be responsive to external demands in order to survive. However, because demands may conflict, organisations cannot survive by responding completely to every environmental demand. One may then ask how organisations decide when to comply with, and when to attempt to avoid, demands from external actors. Pfeffer and Salancik propose that the following conditions affect the extent to which an organisation will comply with control attempts from a social actor (2003:44):

1. The focal organization[8] is aware of the demands.
2. The focal organization obtains some resources from the social actor making the demands.
3. The resource is a critical or important part of the focal organization's operation.
4. The social actor controls the allocation, access, or use of the resource; alternative sources for the resource are not available to the focal organization.
5. The focal organization does not control the allocation, access, or use of other resources critical to the social actor's operation and survival.
6. The actions or outputs of the focal organization are visible and can be assessed by the social actor to judge whether the actions comply with its demands.
7. The focal organization's satisfaction of the social actor's requests are [sic] not in conflict with the satisfaction of demands from other components of the environment with which it is interdependent.
8. The focal organization does not control the determination, formulation, or expression of the social actor's demands.
9. The focal organization is capable of developing actions or outcomes that will satisfy the external demands.
10. The organization desires to survive.

Pfeffer and Salancik recognise that it is not necessary for all conditions to be present for influence to be observed, but they do assert that the external control becomes more likely the more of the conditions are met. These conditions for social control of organisational choice could in principle be applied to the attempts of regulatory authorities to control organisational action within their domain.

What can organisations do to cope with external demands? First of all, they need to know their environment, to detect and interpret the demands posed by the environment. This is not a trivial task. Organisations may misread interdependences and demands. Pfeffer and Salancik (2003:88f) emphasise that organisations respond to an enacted environment, i.e. to what they perceive and believe about the world. They claim that the enactment process is largely determined by the existing organisational and information structures of the organisations. In the context of HSE regulations, considerable resources and efforts are needed just to be aware of and understand the demands made by the regulatory authorities on an operator on the Norwegian continental shelf.

Another challenge is to handle powerful external organisations that make conflicting demands. Compliance with the demands of one powerful external group may generate additional demands for various actions from that group, and it may restrict the organisation's ability to adapt to demands made by other groups in the future. Organisations use various techniques to cope with this dilemma (Pfeffer and Salancik, 2003, Ch. 5). *Secrecy or restriction of information* may be used to prevent those making demands from knowing what others are receiving, or even from finding out how well their own requests have been satisfied. As an alternative, an organisation may *explicitly play one group off against another*. The organisation may also *attend to demands sequentially*, submitting to the demands of one external group at a time. An organisation may *limit the access of various interest groups to the communication channels necessary to express a*

---

[8] 'The focal organisation' refers to the organisation that is subjected to control attempts.

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

27 of 99

demand, and thus avoid the necessity of explicitly refusing the demands of a strong interest group. Actors may also manage demands by *controlling the formation of demands or the definition of satisfaction*. This strategy is commonly observed in professional-client-relationships, where norms of good practice are often defined by the professions themselves. Current trends in risk regulation, such as the use of functional requirements, acceptance criteria defined by operating companies, and references to industry standards, may open new possibilities for organisations to control the formation of regulatory demands or the definition of satisfaction of regulatory requirements.

Pfeffer and Salancik (2003) extensively discuss the use of mergers, interorganisational cooperation through joint ventures, co-optation by means of interlocking boards of directors, and associations and cartels as means to handle interdependencies with suppliers and competitors. They also present several quantitative studies to substantiate their hypotheses. The use of mergers, joint ventures and cartels to handle interdependence is outside the scope of this report. However, it may be of interest to note that business corporations, according to Pfeffer and Salancik (2003:167), can be expected to use co-optation "(1) with very large organisations, which could be costly to acquire; (2) with financial institutions, where total absorption is frequently forbidden by law; (3) with political bodies important to the organisation, where merger is not feasible, and (4) with special interest groups that are temporarily politically potent."

Pfeffer and Salancik claim that the main function of the board is to provide linkage with the environment. However, they do recognise that the board also provides administrative expertise to the organisation. According to this argument, co-optation could be a means for organisations to influence regulatory regimes through political channels. The inclusion of politicians in the board of a company could serve as a means for the company to influence politics, rather than vice versa.

It may be of interest to note that the Norwegian state owns 66 % of the shares in Statoil, the biggest player on the Norwegian shelf.[9] One may think of this public majority ownership as an opportunity for the Norwegian state to influence the dispositions of the company. However, the converse might be equally true. The public majority ownership may provide Statoil with an extensive network into political institutions and organisations that enables the company management to exert a particularly strong influence on Norwegian politics with regard to the petroleum sector.

3.2.3 Regulation and lobbying as a means for organisations to modify their environments

An organisation may also use the larger social power of the state to benefit its operating environment (Pfeffer and Salancik, 2003, Ch. 8). Pfeffer and Salancik argue that organisations are not only constrained by their environments (p. 222). Political outcomes often reflect the actions taken by organisations to modify their environments to suit their own interests. Organisations may attempt to establish favourable environments through *regulation*.

Pfeffer and Salancik claim that regulation typically favours, or at least does not harm, the industry being regulated. For instance, they argue that occupational licensing of, e.g., dentists, lawyers and physicians serve to create a state-sanctioned monopoly, which leads to an increase in incomes of the professionals. They also claim that "regulation does not, in general, operate to benefit consumers or general public" (p. 210; see also Stigler, 1971). However, one of their examples concern weight-limits on trucks in the US. In this case, railroad companies lobbied to impose low weight-limits on trucks to limit the ability of trucks to compete with railways over long distances. Strict weight-limits were thus not to the benefit of the companies directly involved (truck-owners).

---

[9] As of 31 December 2008, according to Director's Report 2008.

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

28 of 99

In the Norwegian context, the NORSOK initiative may be viewed as a successful attempt of the petroleum industry to influence HSE regulation in an effort to reduce their costs. As part of a cost reduction programme, the industry developed standards relating to HSE which were later referred to by the regulatory authorities as possible means to comply with regulatory requirements.[10]

Pfeffer and Salancik point out two limitations concerning the exercise of political influence by large organisations. First, large, diversified organisations may not have a unified structure of interests. Second, organisations may find it difficult to exercise influence in open arenas if they appear too powerful.

3.2.4 Executive succession

Pfeffer and Salancik (2003, Ch. 9) suggest that there are links between the environment of an organisation, selection and removal of executives, and organisational actions with regard to the environment. They propose that

1. The environmental context, with its contingencies, uncertainties, and interdependencies, influences the distribution of power and control within the organization.
2. The distribution of power and control within the organization affects the tenure and selection of major organizational administrators.
3. Organizational policies and structures are results of decisions affected by the distribution of power and control.
4. Administrators who control organizational activities affect those activities and resulting structures (p. 228).

This mechanism is illustrated in **Figure 2**.

This mechanism suggests that powerful external actors may have an impact on the power distribution among departments within an organisation, and on the selection and removal of executives. This influence is indirect. External actors will usually not nominate executives, but they create a situation where certain parts of the organisation gain power because they have the key to securing critical resources. The distribution of power within the organisation may then have an impact on who are selected as executives, e.g. whether executives will have a background as lawyers, economists or engineers. Similarly, if the need for interorganisational coordination among competitors is pressing, executives may be more likely to be recruited from within the same industry. In principle, the model suggests that a powerful regulatory authority might have an indirect impact on the relative strength of departments and disciplines in a regulated company, or on their selection of executives. Whether the petroleum safety authorities in Norway or other countries are sufficiently powerful to exert this kind of power, is, of course, another issue.

---

[10] It was an explicit objective of the NORSOK programme to maintain or improve the HSE levels in spite of cost reductions. It is outside the scope of this report to judge whether or not that objective was achieved. Our point is to show that the Norwegian petroleum industry did take an active role in influencing its own regulatory environment.

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

29 of 99
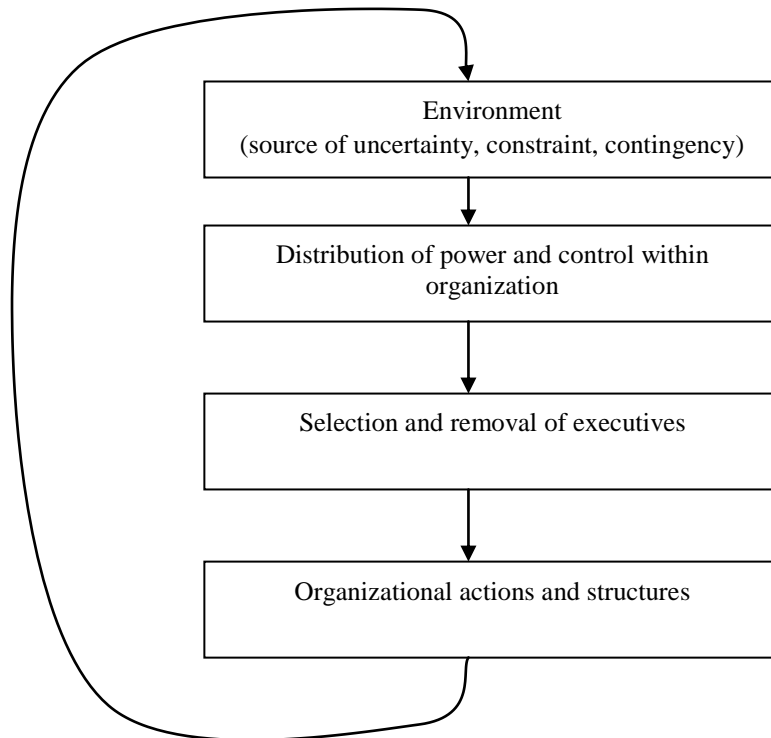
Figure 2. Mechanism by which organisational environments may affect organisations. Adapted from Pfeffer and Salancik, 2003, p. 229.

We will conclude this summary by citing a list of conditions that facilitate a social actor's[11] control of an organisation (Pfeffer and Salancik, 2003:260):

1) The possession of some resource by the social actor
2) The importance of the resource to the focal organization; its criticality for the organization's activities and survival
3) The inability of the focal organization to obtain the resource elsewhere
4) The visibility of the behaviour or activity being controlled
5) The social actor's discretion in the allocation, access, and use of the critical resource
6) The focal organization's discretion and capability to take the desired action
7) The focal organization's lack of control over resources critical to the social actor
8) The ability of the social actor to make its preferences known to the focal organization

These conditions might be used to analyse the possibility of regulatory authorities to exert influence on companies in the petroleum sector. They may thus be useful elements of an analysis of the robustness of a regulatory regime.

---

[11] It is our interpretation that 'social actors' may refer to a broad range of entities, such as organisations, regulatory agencies, interest groups, and even individuals who possess a sufficient power base.

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

30 of 99

3.2.5 Critical discussion

Pfeffer and Salancik's book was theoretically important because it elaborated the notion of organisations as open systems. Whereas many authors have embraced the notion of organisations as open systems on an abstract level, their analyses rarely go much beyond general characteristics of an undifferentiated environment as "turbulent" or "competitive". Pfeffer and Salancik discuss specific strategies to handle competing and often incompatible demands on an organisation. They do this within a framework which recognises sense-making processes (the social construction of the environment) as well as power bases and power tactics. They substantiate their theorising by several quantitative studies, mainly within a correlational paradigm.

Pfeffer and Salancik's work is not a general theory of power. Rather, it is specifically directed at situations where an external actor attempts to exert influence on an organisation. This makes their work pertinent to power issues related to the interaction between regulatory authorities and companies in the petroleum industry. Issues related power at the interorganisational level may become more important as many organisations become increasingly fragmented due to outsourcing.

Pfeffer and Salancik's work encompasses at least two perspectives on power. In discussing the strategies and tactics used by organisations to handle demands from external actors, they take the perspective of power in action. By discussing the likelihood that an organisation will yield to influence attempts and by listing conditions that facilitate a social actor's control of an organisation, they take the perspective of power as a resource. Pfeffer and Salancik also hint at the importance of power in symbols and discourse when they insist that an organisation's response to external pressures depend on its social construction of the environment. However, they do not develop this aspect empirically to the same extent as the aspects related to tactics and resources.

Pfeffer and Salancik's conception of the boundary of an organisation (see Paragraph 3.2.1 above) may be useful in many contexts when dealing with industries characterised by extensive outsourcing, such as the petroleum industry.

It is now more than thirty years since the first issue of Pfeffer and Salancik's book appeared. This does not necessarily make their theoretical argument obsolete. However, the empirical work presented in the book represents a certain time and place. It should not be taken for granted that the external actors' attempts to control organisations and the organisations' responses will remain the same at other times and places. One may, for instance, ask whether outsourcing functions to rather small and powerless firms is increasingly used as a means for organisations to tighten the control of the outsourced functions. We would also expect companies to adjust their lobbying strategies as national authorities lose power to supranational bodies such as the European Union. It would also appear that lobbying activities have become increasingly professionalised, to the extent that lobbying and influence on public opinion has become an industry in its own right.

We should also be sensitive to national differences in political climate and in power relations between regulators and the regulated. It is an empirical (and partly normative) question whether the claim that "regulation does not, in general, operate to benefit consumers or the general public" (Pfeffer and Salancik, 2003:210) is equally valid in countries other than the United States, and whether it applies to the HSE regulation of the Norwegian petroleum industry.

4 Power in collaboration and networks

In the previous chapters, we have concentrated on situations where one actor, often an individual, attempts to influence the actions of another actor. However, actors often achieve their objectives by collaborating and creating coalitions and alliances. To conceptualise this, we need to introduce additional theoretical perspectives.

First of all, the concept of power may take on different significance when we use it to analyse collaboration rather than a conflict of interests. In Section 4.1 we will present three ways to conceptualise this difference.

Section 4.2 is concerned with the ubiquitous phenomenon of discipline. We may think of discipline as the systematic application of various techniques in order to direct and coordinate the behaviour of a number of people. We are all subjected to discipline, many of us hate it, but it is difficult to conceive of a workplace without any form of discipline, and it is also difficult to think of safety management without presupposing one or more forms of discipline. After a brief excursion to the modern prison, we shall discuss some of the forms of discipline that have been employed in working life. We have also included a brief section on principal-agent-theory, which is related to discipline as well as to power as a resource (Section 4.3).

When power is created or augmented through collaboration, we may need to think of power as distributed in networks of actors, rather than as a resource located "in" a specific actor. Actor-network theory, which will be presented in Section 4.4, is an example of how this can be done. Actor-network theory is not a theory in the strict sense, but rather a way to view actors in socio-technical systems in terms of networks that may comprise humans as well as material objects.

4.1 The ugly and the pretty faces of power

Most of us have an ambivalent relationship to power. On the one hand, we tend to think of power in terms of domination, submission and constraint. Power is something that restrains us, something that forces us to do things we would rather not do or keeps us from doing the things we do not want to do. Power is also something that can be deployed to conserve unequal distributions of benefits. On the other hand, we also think of power as a necessary means to get things done, to achieve necessary coordination, or to protect us against anarchy. In this section will present various conceptualisations of such ambivalence. This discussion also includes the legitimacy of power.

4.1.1 "Power to" and "power over"

A common way to conceptualise the ugly and pretty faces of power uses the terms "power to" and "power over" (e.g., Clegg et al., 2006, Ch. 7; Goehler, 2009). "Power to" expresses the idea that power is facilitative, that it represents a capacity to do things that would otherwise be impossible. "Power over" emphasises the repressive aspect of power, i.e. the idea that power may restrict the scope of action for those that are subjected to it.

"Power over" is relational, i.e. it refers to a relationship between two actors (Goehler, 2000; Engelstad, 2005). This is well captured by Robert Dahl's initial definition, which we cited in the previous chapter: "*A* has power over *B* to the extent that he can get *B* to do something that *B* would not otherwise do" (Dahl, 1957:203). This definition clearly implies an asymmetric relation between two actors.

"Power to" refers only to a single person or group and its capacity for action, and does not (primarily) refer to a social relationship, according to Pitkin (1972)[12]. A well known conceptualisation of "power to" is in Parsons' definition of "power":

> Power then is generalised capacity to secure the performance of binding obligations by units in a system of collective organization when the obligations are legitimized with reference to their bearing on collective goals and where in the case of recalcitrance there is a presumption of enforcement by negative situational sanctions – whatever the actual agency of that enforcement (Parsons, 1967, p. 308; quoted in Lukes, 2005, p. 31)

This definition enabled Parsons to reconcile the notion of "power" with the stress of functionalist social theory on social order and consensus, and with the tendency of functionalism to play down contradiction and conflict.[13] Parsons thinks of power as a circulatory medium, analogous to money (Clegg et al., 2006: 193ff). Thus both money and power depend on popular confidence in their currency; this it what provides them with legitimacy. There are, however, fundamental limitations to this power/money analogy. Power requires and is specific to a particular organizational context; whereas money can buy anything anywhere its value and legitimacy are recognised. Another difference is that anybody can use money to buy things, whereas power is reserved for those in a hierarchical position endowed with authority. A problematic aspect of Parsons' conception of power is that it presumes that authority and legitimacy derive in a "natural" manner from shared system goals. It tends to play down hierarchy and division, and ensuing conflicts of interest. Power is treated as legitimate by definition. It would appear that such a conception of power has limited utility for exploring social processes characterised by conflicts and opposing interests. We believe that HSE regulation is such an area.

4.1.2 Power versus legitimate authority

Hindess (1996) discusses two conceptions of power that he claims have dominated Western political thought in the modern period. One is the idea of power as a simple quantitative phenomenon. Power in this sense, is nothing more than a kind of generalised capacity to act. The second understanding is that power involves not only a capacity, but also a right to act, with both capacity and right being seen to rest on the consent of those over whom the power is exercised. As regulation at the level of authorities is closely related to legitimacy to exercise power, we will elaborate the second understanding of power as a legitimate capacity a bit further.

According to Clegg et al. (2006:102), Max Weber defined *power* ("Macht") in various but related ways in his writings. His most concise definition is that power is "the possibility of imposing one's will upon the behaviour of other persons", especially where this will is resisted by those over whom it is exercised. He also defined a narrower term *domination* ("Herrschaft") as "the probability that a command with a given specific content will be obeyed by a given group of persons" (Clegg et al., 2006:102).[14]

Weber (1971:91-104) pointed out that the likelihood that an order would be obeyed could rest on a variety of motives. A person may obey based on a rational consideration of his or her interests, based on habit, or based on a purely personal inclination to obey. However, he maintains, a relationship of domination that depends on such preconditions would not be very stable. A long term relationship of domination is therefore usually

---

[12] This interpretation of Pitkin is based on Goehler (2000:42).

[13] The discussion of Parsons' theories in this report is based secondary literature, in particular Clegg et al. (2006) and Hindess (1996).

[14] The translation of the German word "Herrschaft" to English is problematic, as the term seems to capture aspects of both "authority" and "rule" and "domination". Translating "Herrschaft" with "authority" may in some cases be misleading, as it may play down Weber's orientation towards conflict and dominance (Clegg et al., 2006). We will translate the general term "Herrschaft" with domination, and reserve the term "authority" for the narrower concept of legitimate authority.

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

34 of 99

based on legitimacy among those who rule as well as those who obey. Weber claimed that there were only *three distinct bases for legitimate authority*:

1. *Legal authority*, i.e. domination founded on law. Weber considered bureaucracy the purest form of legal authority. In this case a person is not obeyed for reasons related to his person, but because a *legal provision* regulates who is to be obeyed, under what conditions, and to what extent.
2. *Traditional authority* is founded on a belief that the relationships of domination that exist from ancient times are sacred, i.e. not to be challenged or disrespected.
3. *Charismatic authority* is based on an emotional commitment to the person of a ruler and his charisma – which may range from magical powers or heroic deeds to eloquence and persuasiveness.

Weber's theorising on dominance is analytic rather than normative. He tries to analyse how stable relationships of dominance are established and maintained. He views legitimacy as a means to ensure the stability and robustness of a relationship of dominance. He is fascinated by the bureaucracy as an organisational form, but his point is not to defend specific forms or patterns of dominance.

We cited Parsons' (1967) definition of power in Section 4.1.1 above. This definition implies that power is a capacity that operates primarily on the basis of its legitimacy, and therefore by means that presume the consent of those over whom it is exercised (Hindess, 1996). Hence capacity and legitimacy are intimately related as a function of consent. This makes the relationship between the ruler and the ruled become value-laden; the power of the ruler is dependent on the evaluation of the ruled that the power is legitimate.

To exercise power it is not enough to have the right to do it. It is also necessary to have the capacity to do so. Hindess (1996) argues that the subjects who through their consent provide somebody with the right to govern, must also provide these with the capacity to do so. In our case, this implies that the regulated or the society must provide the regulator with the necessary resources or means to regulate. This also implies that it is analytically useful to distinguish between power and legitimacy. Parsons' definition of "power" is problematic in this regard. It is difficult to untangle the analytic and normative positions implicit in this definition. Moreover, while implying that power is always legitimate, Parsons still allows for coercive measures to remain as a threat in the background.

4.1.3 Transitive and intransitive power

Goehler (2000) takes the distinction between "power to" and "power over" one step further. He uses the term "transitive power" in the sense of "power over", i.e., similar to the conceptualisations of "power" by Weber and Dahl. In contrast, he coins the term "intransitive power" based on Hannah Arendt's (1958) notion of power as "speaking and acting in concert" (cited from Goehler, 2000: 41). The terms "transitive" and "intransitive" are used in analogy to the grammatical distinction between transitive verbs, which refer to actions being done on somebody or something, and intransitive verbs, which refer back to the subject. "To murder", for instance, is a transitive verb, whereas "to die" is an intransitive verb. According to Goehler, power is transitive when it refers to others, whereas it is intransitive when it refers back to itself.

Arendt reserves the term "power" for the human capacity for acting in common with others. The concept that comes closest to "power over" in her writings is "violence". To Arendt, power is a precondition for political processes and institutions: "All political institutions are manifestations and materialisations of power; they petrify and decay as soon as the living power of people ceases to uphold them" (Arendt, 1970:42; cited from Goehler, 2000:42). Her conceptualisation of power is thus highly normative, in contrast to Weber's or Dahl's conceptualisations. It even goes beyond common perceptions of "power to". Arendt ignores the empirical perspective of effectiveness and considers power a precondition for human beings to acquire their quality as human individuals (Goehler, 2000:42). Her conception of power refers to a community of individuals, not a single individual or an abstract actor. Arendt's conception of power is thus relational according to Goehler

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

35 of 99

(2000:43), but it a involves a a relationship between persons that develops in the form of communication and joint action, and is not primarily directed towards people outside. This is very different from the asymmetric relationship involved in "power over", which implies that, "through the will of actor A, the options of actor B become restricted and brought into line with the preferences of actor A" (Goehler, 2000:43).

Goehler points out that transitive power is not possible without counter-power – otherwise it would be reduced to pure force or violence. An actor A who wants to exercise power over B is well advised to take the B's counter-power into consideration. Moreover, the separation and balancing of different and often complementary forms of transitive power is a prominent aspect of Western liberal democracies. For instance, elected officials exercise power on behalf of the electorate, whereas the electorate may exercise control by voting officials out of office. Transitive power may also work indirectly, by way of behavioural expectations, when the addressees of power anticipate possible acts of power and act accordingly (p. 44). Common to all forms of transitive power is that they involve zero-sum games. An actor can only gain power if one or more other actors lose power.

Intransitive power is, in contrast, not a zero-sum game. It is self-referential, in the sense of "powerfulness" or "self-empowerment" (Goehler, 2000:45). The exercise of intransitive power involves an intensification of common action, and thus an increase of transitive power. This conception of power has commonalities with Parsons' conception of power as a circulating medium through which obligations are exchanged in a political system. However, according to Goehler (2000:46), Arendt understands power as an end in itself, rather than a means to attain external ends. Following Aristotle, she claims that humans are essentially communitarian beings. It is only within a community taking the form of political praxis that humans can realise their telos, i.e. their inner nature or ultimate purpose as human beings.

This leads to questions concerning how intransitive power can function in modern fragmented societies, what mechanisms it develops, and how it comes about. Goehler suggests that some answers may be found in Foucault's analyses of disciplinary power and pastoral power, as well as in his view of power as inherent in discourses.[15] Foucault himself emphasised asymmetries in power, but he also explicitly recognised the productive aspect of power. Goehler also suggests that Bourdieu's social theory may elucidate the sociological grounding of intransitive power (p. 47). Bourdieu claims that the dominant symbolic order in a society is an important aspect of the social stratification of a society. He views the dominant social order as an outcome of struggles in which actors attempt to raise the social value or level of distinction of their particular lifestyles. This struggle involves the use of transitive power. However, Goehler suggests that once a symbolic order becomes institutionalised, it comes to represent a legitimate world view and structure the perception of different social classes. At this point, the dominant symbolic order helps to open a political space for action, and thus becomes a precondition for intransitive power.

Goehler emphasises that intransitive power is structured. For instance, in a modern democratic territorial state it requires a form of organisation which is capable of including all participants without their having to be always physically present.

More formally, Goehler defines intransitive power as follows: "intransitive power constitutes a community as an effective unit in the form of a common space of action which is symbolically present" (2000:48). A *common space of action* implies that the actors act on the basis of common value conceptions and principles of order. For a community to be of lasting duration, the intransitive power must be fixed beyond changing situational contexts. This requires a process of institutionalisation. The expression "is symbolically present" in the definition of "intransitive power" implies that political institutionalisation is maintained through the authoritative symbols of the community, which make common values and principles of order visible (p. 49). The authoritative symbols provide citizens with orientations which are just as affective as cognitive. They enable citizens to form ties with the community in a 'softer' and longer-lasting form than material sanctions.

---

[15] We will discuss Foucault's contributions in later sections in this chapter and in the following chapter.

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

36 of 99

Goehler points out that intransitive power produces both an increase and a decrease in the actors' options (Goehler, 2000:49-50). It helps overcoming the limits of the zero-sum game of power, but at the same time sets clear limitations upon the exercise of transitive power. Goehler recognises that transitive power may play a considerable role in the historical emergence of a common space of action:

> The concrete form in which a common space of action is actualized and maintained, as well as the specific value conceptions and principles of order that become established in a community, are not simply matters of consensus and conviction, but first and foremost the result of social struggles (that is, of transitive relationships of power). Nevertheless, as long as a community is able to maintain its existence, such conflicts will, again and again, lead to intransitive power (Goehler, 2000:50).

This description of the mutual interplay between transitive and intransitive power fits nicely to the results of a study of the disintegration and revival of tripartite collaboration of HSE in the Norwegian petroleum industry around year 2000 (Moen et al., 2009). Moen et al. found that the parties were able to build new trust even as they continued to fight for their interests. Moen et al. also found that the authorities used a variety of transitive power tactics as means to reinforce a common space of action.

Table 1. Main characteristics of transitive and intransitive power. Adapted from Goehler (2000:50).

Transitive power	**Intransitive power**
Other-reference	Self-reference
Relationship of wills	Symbolic relationships
Brings something about	Represents something
Regulation	Integration
Realization	(Self-)empowerment
Exercises power	Generates power
Interlocking spaces of action	Common space of action
Instrumental	End in itself

The main characteristics of transitive and intransitive power are summarised in **Table 1**.

Goehler uses these concepts to analyse the preconditions for dominance or authority (2000:51f). He accepts Weber's assertion that dominance ("Herrschaft") in the absence of coercion can only be maintained over time if this dominance is accepted as legitimate among the subordinated (Paragraph 4.1.2 above). Goehler claims that intransitive power provides the actual empirical foundations for a stable society. He also states that intransitive power is indispensable for enabling a polity[16] to acquire and maintain legitimacy.

Goehler states that transitive and intransitive power correspond to the two basic functions of politics: regulation and integration (p. 52). By *regulation*, he understands all forms of goal-directed controls over actors' options in a political unit. According to Goehler, regulation works negatively through commands and prohibitions, or positively through incentives. This corresponds to the model of transitive power: Regulator

---

[16] Webster's *New Twentieth Century* Dictionary provides the following definition of "polity"
  1. the form, constitution, system or fundamental principles of government of any political body or other organizations; the recognized principles on which any institution is based. ….
  2. any body of persons having an organized system of government; a state or body politic.
  3. policy; art; management; expediency [Obs.]

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

37 of 99

A attempts to make the regulated actor B do something B would not otherwise do, either by restricting B's options or by making certain options appear desirable. The concept of *integration* points to the question as to what holds a society or community together. He distinguishes between technical integration, which concerns the exercise of transitive power, and normative integration, which "can be understood as the process and results of citizens' permanently renewed orientations towards the basic values and principles of a political order (Goehler, 2000:52-53). Normative integration brings about the requisite identification and collective identity. Following Rudolf Smend, Goehler emphasises the need for societies to enable citizens to share in an "experience of community", i.e. to orient their actions towards a reservoir of shared values. For those orientations to work in generating a we-consciousness, they must be visible, ever present, and capable of being continually experienced by citizens. This requires symbolic expressions, such as flags and anthems, political constitutions and visible actions of political leaders and officials in political institutions. Goehler thus maintains that intransitive power always has an expressive side (p. 55).

Referring to this dichotomy, one may ask whether it is enough for an HSE regulatory body to regulate in the sense of exerting transitive power over the regulated. One may hypothesise that "the Norwegian model", with its emphasis on consultation and consensus, requires a regulatory body to work on both regulation and integration. One may further ask whether there are significant tensions between these two tasks. Is it possible to be an effective HSE regulator (in the narrow sense of "regulation") without compromising the task of integration or vice versa?

Goehler relates symbolically represented values to the legitimacy of a community (2000:55):

> When the symbols resonate with citizens, when they are able to activate the participation of citizens, we can make the normative assumptions that these citizens consider the community to be theirs. When the symbols do not resonate, or have a negative resonance, the polity will face a legitimation crisis.

4.1.4 Critical discussion

In this section, we have discussed three dichotomies which to some extent capture the "pretty" and the "ugly" face of power:

1. "Power to" versus "power over"
2. Legitimate versus illegitimate (or non-legitimate) power
3. Transitive versus intransitive power.

Power may be facilitating, productive, legitimate and an end in itself – or it may be illegitimate, involve domination and/or be used against the interests of the subordinate or powerless. The main contribution of the three dichotomies is to give us concepts to analyse this dual or ambivalent nature of power.

This section of the report was difficult to write. It was difficult to get a firm grip on the three dichotomies, and the reader will probably share some of this frustration. One reason for this may be that the three dichotomies in various ways try to tackle the difficult task of bridging the normative and the descriptive[17] (or analytic). They seem to do this in somewhat different ways. Weber's discussion of legitimate power takes a descriptive stand. He does not claim that legitimate authority is morally superior to other forms of power, only that it tends to ensure a stable and robust relationship of dominance. Parsons seems to include normative considerations in his definition of power by referring to "obligations [that] are legitimised with reference to their bearing on collective goals" (1967:308; quoted in Lukes, 2005:31). The concept of

---

[17] In this connection, we use "descriptive" as an antonym to "normative". The term does not imply an absence of analysis or theorising.

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

38 of 99

intransitive power appears to put normative aspects in the foreground by claiming that intransitive power is an end in itself (**Table 1** above).

Indirectly, these dichotomies point to a number of possible tensions and dilemmas. Many of us expect regulatory authorities to act effectively against companies that do not conform with HSE regulations, but some of us also want the authorities to achieve normative integration with the regulated companies. The Norwegian work environment act restricts the management prerogative in HSE issues by requiring worker participation and giving safety representatives the authority halt dangerous work. At the same time, we expect management to carry the full responsibility for conformance with HSE regulations and for preventing harm through accidents and poor HSE conditions. How compatible are these requirements? If they are not fully compatible, is that a serious problem, or is it just an example of the kind of tensions all organisations have to adapt to?

Parsons seems to imply that all power is legitimate by definition. Similarly, Arendt proposes a conception of power which excludes "power over" or transitive power. These conceptualisations raise the issue of whether instances of power or its use can be neatly divided into two categories. Is it possible to have "power to" without "power over", intransitive power without transitive power, coordination without dominance? Clegg et al. (2006:191) maintain that power as such is neither "over" nor "to": "Power will always exist in a complex contingent tension between a capacity to extend the freedom of some to achieve something or other and an ability to restrict the freedom of others in doing something or other". Power is "over" or "to" depending on the specific situation and the position of the actor in question. To take this point one step further, one may claim that a distinguishing feature of power is its double nature: Power is always both constraining and facilitating – but it may be constraining and facilitating in different degrees for different actors. This will be illustrated in the next section, which is concerned with the varieties of discipline.

Further discussion of the relationships between "power to" and "power over" and the possibility of combining these two concepts to an integrated notion of power can be found in Goehler (2009).

4.2 The varieties of discipline

4.2.1 Discipline and surveillance

In the previous section we discussed the ambivalent nature of power – power as facilitating and productive, but also as restricting and repressive. This ambivalence clearly applies to discipline. Foucault (2008) described discipline as a power exercised over one or more individuals in order to provide them with particular skills and attributes, to develop their capacity for self-control, to promote their ability to act in concert, to render them amenable to instruction, or to mould their characters in other ways (Hindess, 1996:113). Discipline thus tends to be productive as well as repressive. It constrains those over whom it is exercised, but at the same time enhances and makes use of their capacities.

Foucault (2008) described how, in seventeenth century Europe, disciplinary techniques came to be seen as a generalised means of controlling and making use of human behaviour. Disciplinary techniques allowed the management of a population in its depths and details. They could be applied to education and training, military organisations, and the regulation of hospitals, prisons and other institutions of confinement. Discipline was seen as a technology, both in the sense that individuals and human aggregates are seen as a source of energy to be harnessed and put to use, but also in the sense that discipline should be based on a continual refinement of its own techniques. Foucault used the modern prison to illustrate the principles of discipline. However, he insisted that discipline (or "the prison-like") is a ubiquitous feature of modern societies; it is not restricted to schools, prisons and military camps.

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

39 of 99

Several features of discipline are demonstrated by the *panopticon* (Foucault, 2008). From a physical point of view, the panopticon was a prison with cell blocks situated around a central area or tower. Each cell was backlit with natural light so that the guards in the central room could observe the prisoners in the cells at any time, whereas the guards were invisible to the prisoners. The prisoners did not know whether or not they were observed at any particular time. All they knew was that they were under the risk of being watched at any time.

The panopticon was not just a building or a surveillance system. It was an institution with a system of records and rules, comprising disciplinary power (Clegg et al., 2006:45). The routines and details of everyday working life was regulated through training and practices that sought to constrain human actions in accordance with established limits of behaviour and standards to be achieved. The panopticon was thus a machinery for behavioural engineering.

The significance of the panopticon can only be understood on the background of its historic setting (Clegg et al, 2006:42-45). As common land was privatised in Britain from the sixteenth century onwards, an increasing population of formally free people found it increasingly difficult to scrap a living from communally accessible land. As a consequence, vagabondage became *the* social problem from the seventeenth century onwards. The Poor Laws were devised as an instrument to handle this problem. An important disciplinary intent of those laws was to reform as many persons as possible, so that they could be put into useful work. Therefore, the poor were required to accept the discipline of the workhouse to receive poor relief.

The utilitarian philosopher Jeremy Bentham proposed the panopticon as an optimal design for a poorhouse or prison (Clegg et al., 2006:43). Utilitarian philosophers argued that the goodness of moral and legal action should be judged by the overall utility or benefit it produced. The application of this standard would minimise human misery and maximise human happiness. To achieve this under the social circumstances at the time of Bentham (a few decades before and after 1800), he claimed that it was necessary to enclose certain classes of people in a controlled space where they could be subjected to techniques of training and character-formation. His goal was to produce honest labourers, individuals who would think as liberal subjects, capable of calculating their best interests and acting on them. He reasoned that some classes of poor people preferred to live at the expense of others, rather than live off the fruit of their own labour. These poor *and* feckless people needed to be corrected and rehabilitated. The means was to expose vagabonds to the institutionalised moral and productive correction of the poorhouse. The panopticon was designed as an instrument to achieve these goals in a cost-effective manner. Because the inmates did not know if they were being observed, they would behave as if they were observed continuously for fear of being corrected and disciplined. Bentham thus promoted the panopticon as a particularly cost-effective instrument to convert vagabonds into liberal subjects adapted to a society based on the principles of utilitarianism.

4.2.2 Refinements of discipline on the factory floor

Clegg et al. (2006:40) remind us that management has traditionally been defined in terms of relations of handling[18], supervision and control. It is not enough for the manager to learn to manage; the subordinates must learn to be managed as well. We may note in passing that Bentham adopted the design principles for the panopticon from his brother's factory in Russia. We should therefore think of the panopticon as a workplace design rather than just a house for locking up people.

According to Clegg et al. (2006:45-46), F. W. Taylor's work on *scientific management* (Taylor, 1911) "took utilitarianism from a program for dealing with the marginal and abnormal, the other, and transposed it into a program for dealing with the everyday and the normal, the worker. ... Whereas Bentham was concerned with bringing idle hands to work, Taylor's utilitarian calculus was oriented to the problem of making hands

---

[18] The term 'handle' is here used as in one who handles horses.

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

40 of 99

already at work even more productive, for the greatest good of national efficiency and for the better reward of both hands and the businesses that employed them." Scientific management required taking power and knowledge out the hands of the workers and placing them in the hands of management (Clegg et al., 2006:46). People needed to be persuaded that efficiency was desirable as an end in itself and that all legitimate means should be oriented towards it:

> [Maximum] prosperity for each employee means not only higher wages than are usually received by men of his class, but of more importance still, it also means the development of each man to his state of maximum efficiency, so that he may be able to do, generally speaking, the highest grade of work for which his natural abilities fit him, and it further means giving him, when possible, this class of work to do. (Taylor, 1911:1).

The best known aspect of Taylor's work is his time and motion studies. He observed and analysed work performance in detail, in order to redesign it to achieve higher efficiency. An important premise was a radical division of labour between the mental labour of oversight and the manual labour of the production worker. Each individual employee competed against all the others to maximise the pieces they could make and thus the piece-rate that they could earn (Clegg at al., 2006:46). Work was observed, described and analysed in minute detail. The time studies served to identify the fastest production rate among the workers, to understand how it was possible, to establish it as a standard for all employees, and to establish an appropriate production rate to use as a basis for incentive payment. This approach required tasks to be repetitious, with minimal task variability.

According to Clegg et al. (2006:49), "Taylor took the battle against lazy, imperfect, and other malfunctioning hands into the workshop. What was required was reform that would mean that the value of a thing or an action would be determined by its utility." At the same time, Taylor thought that scientific management enhanced the power of workers by making them into more efficient machines with an enhanced capacity to earn income. However, the value of the individual worker's task-related knowledge and experience was drastically reduced, since anyone could be trained to undertake the task using Taylorist methods.

Henry Ford's introduction of assembly line production advanced some aspects of scientific management, whereas other aspects were changed (Clegg et al., 2006:55-60). The elemental decomposition of job remained. However, the job pace was maintained through the speed of the assembly line, and not through piece-rate payment.

Within a few decades, taylorism with its discipline and emphasis on efficiency permeated into the world outside the workplace. Modern warehouses, for instance, are designed to maximise efficiency, and they discipline the customers by introducing self-service. Kanigel (1997:7) observed that "Taylor's thinking ... so permeates the soil in modern life we no longer realise it's there".

4.2.3 Disciplining hearts and minds

It is also part of the history of the assembly line that Ford established a Sociological Department to ensure that only deserving workers received the high wages that Ford's factories were paying.[19] The Sociological Department visited the employee's homes and maintained extensive records on each employee. Workers who failed to live up to the standards of Ford Motor Company outside the workplace would first receive a warning, and they could subsequently be dismissed. The efforts to discipline the workers were thus not restricted to their behaviour at the workplace, but extended to their moral life on their leisure time.

---

[19] The Sociological Department was established in 1914. In 1921 it was turned into the Service Department, described by Clegg et al. (2006:59-60) as "a private army of thugs and gangsters to terrorize workers and prevent unionization. Ford's service department would grow to be the largest police force in the world at that time. Its major work was spying such that no one who worked for Ford was safe from spies ... "

The work of the Sociological Department extended the control of workers into their homes and their leisure time, and thus reflected the idea that it was not enough to control the movements of bodies at work. However, direct control of work performance through routines and through the physical and temporal constraints of the assembly line was still viewed as the obvious way to maximise productivity. Taylor was also aware that informal groups on the factory floor could work against the productivity objectives of management. His answer was to suppress unwanted impact of informal group processes by taking direct control of individual behaviour.

A more radical departure from the direct control of individual bodies was advocated by the Human Relations School (Clegg et al., 2006, Chapter 3). Its proponents argued that informal work group relations should be brought to sustain the formal systems. This implies that the formal systems should mesh with, rather than suppress the informal system. Special attention should be paid to motivation of the individual employee. Among the several advocates of the Human Relations School, we will cite Mayo's analysis of the well-known Hawthorne experiments:[20]

> The improvement in production, they believe, is not very directly related to the rest pauses and other innovations. It reflects rather a freer and more pleasant working environment, a supervisor who is not regarded as a 'boss', a 'higher morale'. In this situation the production of the group insensibly lifts, even though the girls are not aware that they are working faster. Many times over, the history sheets and other records show that in the opinion of the group all supervision has been removed. On occasion indeed they artlessly tell the observer, who is in fact of supervisory rank, very revealing tales of their experiences with previous 'bosses'. Their opinion is, of course, mistaken: in a sense they are getting closer supervision than ever before, the change is in the quality of the supervision. (Mayo, 1975:75, cited by Clegg et al., 2006:80).

This analysis makes clear that the objective of the Human Relations School is not to abandon management control, but rather to create patterns of spontaneous obedience by aligning informal group processes with management objectives. As a consequence, an important task of managers became to harness informal groups and get them working for the organisations, to realign misaligned values in the organisation, or in other words: to build a culture of commitment. To achieve this, managers needed to develop sensitivity to group processes, communication skills and even clinical and counselling skills. The latter were needed to help employees to get rid of useless emotional complications, to associate more easily with fellow workers and employees, and to develop in the worker a desire and capacity to work better with management (Mayo, 1985, referenced by Clegg et al., 2006:85).

Mary Parker Follett (1918 and 1924; referenced in Clegg et al., 2006) was more explicit about power than most authors writing in the Human Relations tradition. Based on experience from community work, she argued that power in organisations should be democratised to be brought in accord with American ideals of democracy. She distinguished between 'power with' (coactive power) and 'power over' (coercive power). Democracy should be participatory, because the experience of being participative was empowering and educative. An important part of her argument was that participation built the legitimacy of coactively constituted power (Clegg et al., 2006:75).

---

[20] The initial objective of the Hawthorne experiment was to demonstrate that higher illumination levels increased productivity in assembly operations (Clegg et al., 2006:76-80). Six out of several hundred women that worked in the relay assembly room at the Hawthorne plant of Western Electric were moved to a separate test room. Their production rates were monitored under different illumination levels. The results were confusing. The women working in the test room responded with increasing production rates when the illumination level was increased. However, they also increased their production rate when the illumination level was subsequently reduced. The Human Relations School explained these apparently contradictory findings by suggesting that the employees in the experimental group experienced a different style of supervision than the workers outside the experimental group. This interpretation is elaborated in the quotation from Mayo (1975).

Many of the ideas proposed by Follett are captured in the notion "social capital", which has been defined as "the sum of actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit" (Nahapiet and Ghoshal, 1998:243, cited by Clegg et al., 2006:87). According to Clegg et al., social capital is commonly conceptualised in terms of three dimensions:

1. The structural dimension, i.e. overall patterns of connection, e.g. presence or absence of network ties, density, connectivity, hierarchy.
2. The relational dimension, i.e. assets created and leveraged through relationships, such as trust, trustworthiness, norms, sanctions, obligations, expectations, identity and identification.
3. The cognitive dimension refers to resources that provide shared representations, interpretation, and systems of meaning among parties.

The social capital concept depicts the employee as a "knowledge worker" who can potentially go to another employee, and therefore must be kept loyal by avoidance of coercion and by use of soft power (Clegg et al., 2006). It has been proposed that trust needs to be "managed" as a means of control, for instance by actively manipulating the goodwill of the employee by increasing her identification with the organisation. The emergence of the "knowledge worker" has also given impetus to "knowledge management", which Clegg et al. (2006:87-88) regard as the newest clone of scientific management, as it seeks to draw from the tacit knowledge of individuals and the social capital of the group to construct new and improved routines. In this sense, knowledge management extends scientific management from the body to the brain, and employs a combination of coactive and coercive power.

4.2.4 Safety and discipline at the workplace

In the preceding paragraphs we have outlined two competing approaches to discipline in the workplace. The first one, represented by scientific management, was directed at the control of the individual body according to a system of division of work, standardisation of task performance according detailed routines prescribed by management and piece-rate payment. The second one, represented by the Human Relations School, employed soft power and aimed to influence informal group processes and individual motivation. Both approaches have appeared in different variants. Henry Ford's assembly line production kept many features of scientific management, but replaced piece-rate payment by pacing of the work through the speed of the assembly line. Follett put more emphasis on democratisation than main stream proponents of the Human Relations School, and advocated sharing of power between management and employers. To what extent can we trace an impact from these two main traditions in the field of safety at the workplace?

One way to organise different approaches to safety at the workplace is to pit approaches directed at modifying individual behaviour against systems oriented approaches that involve adaptation of the technology and the organisation to the capacities and needs of the worker (Ryggvik, 2008a). The approaches directed at individual behaviour have adopted some features of scientific management, whereas the systems oriented approaches have adopted some ideas from the Human Relations School.

The Behaviour Based Safety (BBS) programmes adopted by various oil companies during the last two decades exemplify safety work directed at modifying individual behaviour (Engen and Lindøe, 2008; Ryggvik, 2008a). These approaches are often promoted by a claim that an overwhelming majority of accidents are caused by human error at the sharp end of the organisation, and that major accidents and minor accidents have similar patterns of causation (Ryggvik, 2008a). According to this argument, the most effective means to reduce the risk of minor as well as major accidents is to reduce unsafe individual behaviour. One of the messages from this tradition is that it is more effective to influence behaviour directly through feedback than to influence it indirectly, by changing attitudes (Engen and Lindøe, 2008). The approach typically involves the identification of critical behaviour, the definition of behavioural norms,

observation and feedback. There are thus parallels to scientific management in the goal of prescribing and controlling individual behaviour, in the definition of behavioural norms, and the use of observation and feedback, and also in the way the approach is presented as scientific, empirical and quantitative. However, some BBS programmes include employee participation in the identification of critical behaviour and the definition of behavioural norms.

This tradition found a "scientific" rationale in a popular and biased version of Heinrich's iceberg theory (Heinrich, 1931; see also Ryggvik, 2008a). During the eighties, several safety scientists (e.g. Komaki, Sulzer Azarof) advocated behaviour influence programs based on social learning theory and conducted intervention studies based on feedback on specific target behaviours. Intervention studies based on behaviour modification techniques were also carried out in the Nordic countries, especially Finland, as part of the Nordic collaboration project "Effektivering av olycksfallsbekämpning" (e.g., Hovden et al., 1986; Institute of Occupational Health, 1987).

In contrast, the systems-oriented (sociotechnical or MTO[21]) approaches insist that causal analysis of accidents should go beyond human error and capture conditions that were conducive to human errors or conditions that made the system vulnerable to human errors. Systems should be designed in a way that minimises the likelihood of serious human errors, and that gives operators the opportunity to recover from errors. Technical and physical barriers should be introduced to minimise the likelihood of serious consequences of un-recovered errors. If possible, the use of dangerous energies should be limited in the first place, as accidents occur when vulnerable objects (including humans) are exposed to dangerous energies that are out of control. Proponents of systems-oriented approaches tend to emphasise the need for user-participation in systems development – not always for the sake of participation or democracy per se, but rather in order to identify the best solutions and to promote user acceptance of the final system. These approaches appear to have been influenced both by the scientific management tradition (through their roots in ergonomics or human engineering) and by the human relations school (with regard to their emphasis on user participation and their insistence that technical systems should be adapted to the needs and capacities of the worker and not vice versa). The system-oriented approaches do attempt to influence human behaviour, but the preferred means to achieve this is to provide a technology which facilitates correct performance and constrains the user in order to reduce the likelihood of erroneous actions.

The "Safety first" movement may, in its initial form, be viewed as a predecessor to the BBS approach. The "Safety first" movement was launched by US Steel in 1906 and was the first large scale private initiative on industrial safety (Swuste et al., 2008, 2010). A "Safety first" poster from 1913 included the following poem:

> The Road to Happiness
> Across the stream of ignorance, over the bridge of education, avoiding the path of carelessness and the byway of indifference, leads The Road to happiness.
> If you know this road, and have been travelling it, appoint yourself a guide – to show your less fortunate brother The Road to Happiness this coming year. (Cited from Swuste et al., 2008:5).

This text identified ignorant, careless and indifferent workers as the problem at a time when working condition in the steel industry were severely criticised in the mass media. We may also note that this early poster tried to mobilise the fellow workers to correct and inform ignorant, careless and indifferent workers. One of the companies that embraced the "Safety first" movement in an early phase was the gun powder manufacturer DuPont. DuPont was later to become a prominent advocate of BBS.

The "Safety first" movement also gave birth to a poster industry, which is still alive. A broad range of means and methods were used to promote safety within the companies, such as suggestion boxes, safety contests, safety boards and bulletins with examples of accidents, safety scores at the entrance gates of factories, and

---

[21] MTO – Man – Technology – Organisation.

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

44 of 99

safety committees. The "Safety first" movement also gradually embraced technical measures as a necessary means to build safety at the workplace. It thus progressively approached a systems oriented approach to safety at the workplace (Swuste et al., 2008; Ryggvik, 2008a).

Ryggvik (2008a) showed that practical safety work in Norway was influenced by confrontations and dialogue between behavioural and systems-oriented approaches. The safety organisation *Vern og Velferd* used the "Safety first"-movement as a model when it was established in 1936, but it criticised narrow behavioural approaches to safety. A long term sociotechnically oriented R&D-programme commonly labelled "Samarbeidsprosjektet" comprised theorising and practical experiments with decentralised work organisations and management (e.g. Thorsrud and Emery, 1969). Samarbeidsprosjektet was clearly influenced by the Human Relations School, as it emphasised quality of work and active participation of worker groups in decision making. A significant part of this work was directed at the Norwegian offshore sector and sponsored by the research programme "Sikkerhet på sokkelen" ("Safety Offshore"; Quale, 1985). This research tradition had a strong impact on the Norwegian Work environment act from 1977. This act significantly restricted the management prerogative in certain areas of HSE decision-making and mandated employee participation in a broad range of decisions with an impact on health and safety. The Work environment law also confirmed and strengthened the emphasis on collective, as opposed to individual rights in Norwegian working life (Ryggvik, 2008a, b; Engen and Lindøe, 2008). Both the Work environment act and the safety regulations for the Norwegian petroleum sector emphasise a systems-oriented approach to safety based on robust technologies.

In the first years after 2000, several petroleum companies launched major BBS programmes. This was in some cases a response to a regulatory requirement concerning promotion of a good HSE culture. The BBS programmes may be seen as a return to "taylorist", behaviour-oriented approaches to safety (Ryggvik, 2008a; Engen and Lindøe, 2008). However, according to Engen and Lindøe, the major companies adapted the BBS programs to the Norwegian setting, and they supplemented the BBS approach with more systems oriented approaches to safety.

To summarise, we can trace impacts of both the scientific management school and the Human Relations School in safety work in Norwegian companies. These approaches are usually pragmatically adapted to "the Norwegian model", with its emphasis on collective rights and three-party collaboration. However, the recent wave of BBS programmes has been controversial, both with regard to its effects on safety and with regard to its compatibility with "the Norwegian model".

4.2.5 Critical discussion

An account of a topic such as discipline and management can never be "objective" or "neutral". The account above is characterised by its emphasis on the forms of power proposed or employed. This also applies to the account of Clegg et al. (2006), which we used extensively as a secondary source when this section was written. Some readers who are familiar with the management literature, may find this account somewhat alien or unfamiliar, since many authors in management tradition do not discuss power explicitly, although their main purpose may be to teach managers how to control their employees in the most efficient manner. Clegg et al. (2010:91) also point out that their (i.e. Clegg et al.'s) interpretation of historic management texts requires a conceptual apparatus that was not available to the authors of these texts.

The pervasiveness of the varieties of discipline also implies that we tend to take many of its accompanying premises for given. As Clegg et al. (2006:60-61) remark:

> Taylor's way of framing scientific management normalized hierarchy and the functioning of rules and inscribed power as a less central concept, something not implicated in hierarchy or rules in use. In fact, its 'science' legitimated the normalcy of these to such an extent that power came to be seen only as a category of irrationality because to resist science, by definition, was to oppose reason.

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

45 of 99

Scientific management not only involved the detailed control of the actions of workers in the factories. It also had a pervasive influence on how we think about management, what we take as given, and what propositions are deemed to be meaningless or irrational. This is a prominent example of power in discourse, which is the topic of a later chapter in this report.

To what extent have regulatory practices been influenced by the disciplinary approaches outlined in this section? The literature that we have studied is not explicit about this issue. There are obvious analogies. Regulatory authorities stipulate rules, observe compliance, and distribute sanctions. There has been a concern about making this process more efficient – for instance by delegating responsibility for inspection tasks to the regulated companies (internal control) and requiring the companies to document their HSE work in a way which facilitates regulatory control. It is tempting to think of internal control as an attempt to build a "regulatory panopticon", which enables the regulator to survey HSE management of the companies without being present with inspectors at all times. What seems less clear is to what extent these analogies reflect a common origin, i.e. to what extent modern regulatory practices have been influenced by the practices of discipline outlined above. There are also limits to these analogies. The "classical" approaches to discipline (prisons, Taylorism) primarily targeted individuals, whereas regulation of HSE to an increasing degree targets formal organisations. There is also a significant difference in the scope for surveillance. Employers are usually able to monitor their employees more or less continuously in a number of ways. In contrast, regulatory authorities usually have to monitor the regulated companies on an intermittent basis.

It seems clear, however, that the current regulatory regime presupposes some kind of discipline in the regulated companies. This is perhaps most visible in accident investigations carried out by the PSA. These investigations frequently point out deviations from HSE regulations or internal procedures. It is hardly conceivable that the companies can minimise the occurrence of such deviations without employing some combination of soft and hard power. In accordance with this, the Work environment act imposes several obligations on employees, including an obligation to participate in systematic HSE work and in the implementation of measures to improve HSE. It appears that texts related to HSE regulation, similarly to the management literature and the safety science literature, rarely speak explicitly about power. There often seems to be a preference for terminology adopted from cybernetics, such as "deviation" and "control". One may speculate whether this failure to speak explicitly about power contributed to the confusion in the industry about the intent of the paragraph on culture in the framework regulations ("rammeforskriften") and to the unexpected response from many companies (BBS programmes).

We have mentioned that the safety science literature has little to say about power. An exception to this is Perrow's Normal Accident theory (Perrow, 1984). Perrow points out that certain technological systems are characterised by tight coupling, i.e. the absence of "natural buffers". He argues that a system with tight couplings can only be effectively controlled by a highly centralised organisation. A conflict between activities can quickly develop into a disaster. Activities therefore have to be strictly coordinated to avoid conflicts, and disturbances have to be met with a rapid and coordinated response. Perrow suggests that some systems may require a degree of coordination and thus a level of discipline which we may not be willing to accept in a civilised society.

4.3 Principal-agent theory

Principal-agent theory is a formal approach to specifying how a principal (e.g. an oil company) hiring an agent (e.g. a drilling contractor) can design effective incentives under conditions of incomplete information about the agent's behaviour (Eisenhardt, 1989). It is assumed that the principal and agent engaging in cooperative behaviour have different goals and/or different attitudes toward risk. The idea is to devise a contract that changes the rules of the game so that the self-interested, rational choices of the agent coincide with what the principal desires. A central concern is *moral hazard*, i.e. the possibility that the agent may act in ways that are not observable to the principal and that conflict with what the principal desires. The

principal may, for instance, invest in information systems to monitor the behaviour of the agent, or turn to outcome-based contracts to align the interests of the agent with those of the principal.

Eisenhardt (1989:61-63) used the following propositions to convey the logics of principal-agent theory:

1. Information systems are positively related to behavior-based contracts and negatively related to outcome-based contracts.
2. Outcome uncertainty is positively related to behavior-based contracts and negatively related to outcome-based contracts.
3. The risk aversion of the agent is positively related to behavior-based contracts and negatively related to outcome-based contracts.
4. The risk aversion of the principal is negatively related to behavior-based contracts and positively related to outcome-based contracts.
5. The goal conflict between principal and agent is negatively related to behavior-based contracts and positively related to outcome-based contracts.
6. Task programmability is positively related to behavior-based contracts and negatively related to outcome-based contracts.
7. Outcome measurability is negatively related to behavior-based contracts and positively related to outcome-based contracts.
8. The length of the agency relationship is positively related to behavior-based contracts and negatively related to outcome-based contracts.

According to Eisenhardt, principal-agent theory indicates which contract is most efficient under varying levels of the variables included in the propositions. The first proposition suggests that the principal has two options when the agent's behaviour is not observable. The principal may either invest in information systems to make the behaviour of the agent observable, or turn to an outcome-based contract to align the interests of the principal and the agent. The second proposition suggests that outcome-based contracts are less efficient if there is a high degree of outcome uncertainty, i.e. if outcomes are only partly a function of agent behaviour. The third proposition suggests that it becomes more attractive to pass risk to the agent by using an outcome-based contract if the agent is less risk averse. It also becomes more attractive to use an outcome-based contract if the principal is more risk averse, since the outcome-based contract passes risk to the agent (proposition 4). Proposition 5 suggests that, under the assumption of a risk-averse agent, a behaviour-based contract becomes more attractive if there is a little or no goal conflict between the principal and the agent. According to proposition 6, behaviour-based contracts become more attractive if appropriate agent behaviour can be specified in advance. Proposition 7 suggests that outcome-based contracts become less attractive if the outcome is difficult to measure. In all the propositions, the attractiveness of contract forms is judged with reference to the interests of the principal.

Eisenhardt (1989) also outlined a closely related but less formalised research tradition, *positivist agency theory*. This research mainly deals with the principal-agent relationships between owners and managers of large, public corporations. Eisenhardt also reviewed seven empirical studies within the positivist tradition and five empirical studies within the principal-agent-tradition. She concluded that there was support for the principal-agent hypotheses linking contract form with (a) information systems, (b) outcome uncertainty, (c) outcome measurability, (d) time, and (e) task programmability (Eisenhardt, 1989:70). Support here implies that the principals tended to behave in accordance with the prescriptions of principal-agent theory.

Osmundsen et al. (2006, 2008) used principal-agent theory to analyse the incentives facing contractors and subcontractors in the Norwegian petroleum industry. Osmundsen et al. identified several possible challenges related to incentives in contracts between operators and contractors in the petroleum industry. Reduced or zero rate during downtime may cause stress or shortcuts at the sharp end and deference of repair and maintenance work. Rewards attached to incident frequencies may promote under-reporting of unwanted events. Activities that produce easily measurable results may get disproportionately great attention at the expense of important activities that are more difficult to monitor.

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

47 of 99

Analyses of major accidents, such as the explosions at the Esso gas plant at Longford (1998) and at the BP Texas City Refinery (2005), indicate that reward structures based on lost-time incidents may divert attention from process safety to personal safety, and thus contribute to the occurrence of major accidents (Hopkins, 2000, 2006, 2011). This suggests that organisations should identify and remove or mitigate unwanted effects of current incentive systems.

The idea that "what you measure is what you get" pervades management theory and practice (e.g. Kaplan and Norton, 1992) to the extent that it may suppress alternative views on what stimulates good performance. One may ask whether the assumption that agent behaviour is opportunistic and driven by narrow self-interest may turn into a self-fulfilling prophesy when principals behave in accordance with this assumption. Such concerns may be less pressing if principal-agent theory is used to identify and remove undesirable effects of incentive structures rather than to use incentives as a source of power.

Another limitation of principal-agent theory is that it does not explicate the social processes that link certain incentive schemes and information schemes with effects on agent behaviour. This may not be a big issue when we consider contracts between individuals. However, when it comes to contracts between organisations, such as operators and contractors in the petroleum industry, principal-agent theory seems to "black-box" the specifics of how different persons and groups in the principal and agent organisations adapt to the incentives. Forseth et al. (2011) found that drilling contractors on the Norwegian shelf did not inform drilling crews about the details of rate structures because they did not want to cause stress and shortcuts in situations where the operations had to stop and the rate was reduced to zero. This example suggests that some of the predictions that can be made using principal-agent theory may turn out to be partly self-falsifying if the actors involved decide that they do not want these predictions to come true.

It is not obvious where principal-agent theory fits in with the categorisation of theories of power used in this report. The analytic focus is the contract between the principal and the agent, but the theory takes into account the preferences of both parties (e.g. their risk appetite) as well as circumstances such as the observability of agent behaviour or the uncertainty of the outcome of the agent's efforts. The focus on observation and information systems as well as the use of incentives (i.e. penalties and rewards) resembles the disciplinary approaches reviewed in the previous section. However, principal-agent theory does not seem to comprise an ambition to change the agent beyond the immediate effects of the contract, whereas the classic approaches to discipline tend to incorporate an ambition to "improve" or "mould" the persons that are subject to discipline. The idea of changing the rules of the game so that the self-interested, rational choices of the agent coincide with what the principal desires is another reason for discussing principal-agent theory in the context of power in collaboration and networks. Principal-agent theory may also be viewed as an extension of the economic model of power discussed in Section 3.1.2, since it prescribes how a principal can use his control of resources that are of interest to the agent as a source of power.

4.4 Actor-network theory

4.4.1 Networks of heterogeneous materials

Actor-network theory (ANT) is not a theory in a strict sense, i.e. a consistent body of statements from which one may derive testable hypotheses and then validate the theory through empirical research. One may rather think of ANT as a perspective on the mechanics of power and organisation (Law 1992). When taking this perspective, one looks for networks or webs of heterogeneous materials. Society, organisations, agents and machines are all viewed as effects generated in *patterned networks of diverse materials*. The nodes in the network may be anything material, such as people, machines, animals, documents, talk, money, or computer terminals. To order such diverse materials into a patterned network requires resistance to be overcome. The social is not viewed as just a set of relationships between humans. Material objects participate in the social.

The task of the researcher is to characterise those networks of heterogeneous materials, and to explore how they come to be patterned to generate effects like organisations, knowledge or power.

Early studies in this tradition examined the production of scientific knowledge, asking "where does knowledge come from?" (e.g. Latour, 1987). Their answer was that scientific knowledge is "the end product of a lot of hard work in which heterogeneous bits and pieces – test tubes, reagents, organisms, skilled hands, scanning electron microscopes, radiation monitors, other scientists, articles, computer terminals, and all the rest – that would like to make off on their own are juxtaposed into a patterned network which overcomes their resistance" (Law, 1992:2). This account is radically different from the accounts given by most textbooks on scientific methods. Moreover, hardcore ANT proponents like to put the term "knowledge" in inverted commas because it always takes material forms, such as talks, conference presentations, papers or books (Law, 1992:2).

Another analytic principle of ANT is to treat humans and objects on equal terms. ANT rejects any a priory claim that either humans or objects determine the patterning of networks, and thus the patterning of the social. Social relations may shape machines or vice versa in particular cases, but this is an empirical question which has to be examined in each particular case. Managers may have politics, but so may computers and buildings [22]. They are all capable of offering resistance. A manager may try to impose certain patterns of communication on an organisation, but so may also a building – for instance by separating people by distances or physical barriers, or by bringing them together at the coffee machine. The building may offer resistance if the manager tries to impose or encourage new patterns of communication in her organisation.

Law (1992:4) claims that "people are who they are because they are a patterned network of heterogeneous materials. If you took away my computer, my colleagues, my office, my books, my desk, my telephone I wouldn't be a sociologist writing papers, delivering lectures, and producing 'knowledge'". In the ANT perspective, an actor – be it a sociologist or his computer or a piece of paper – is also a network. This is the origin of the term "Actor-Network".

In everyday life, networks tend to be concealed from view. We think of our bodies and television sets and banks as single blocks as long as they act as single blocks. We take the effects they produce for granted. We change perspective only when networks stop acting as a single block. We begin to think of our body as a complex network of processes if we get ill. A financial crisis may cause us to think of our bank as a complex network of financial transactions. We realise that the bank's capacity to provide us with loans depends on this network, and that this network may break down. At another time, a breakdown in a data transmission may remind us that the bank is also an information transmission network.

Such simplifying effects are sometimes referred to as *punctualisations*. Punctualisations tend to occur when networks patterns are widely performed and can be taken for granted. Punctualisations allow us to count on networks as resources, i.e. as network packages which we can count on. The alternative to punctualisations is to deal with an endless complexity of networks. But punctualisations are always precarious, because networks may break down. We should therefore think of punctualisations as processes or effects. This implies that we should think of organisations and power as verbs, as something that happens, rather than as nouns, as something complete, autonomous or final.

---

[22] The following definition of "politics", which was captured from *Encarta Dictionary: English (North America),* may help readers make sense of this claim: "**politics (3): power relationships in a specific field**: the interrelationships between the people, groups, or organizations in a particular area of life especially insofar as they involve power and influence or conflict."

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

49 of 99

4.4.2 Translation

The process that generates ordering effects is called *translation*. Translation implies transformation and the possibility that one thing (for example an actor) may stand for another (for instance a network). The networks that make up a punctualised actor are "borrowed, bent, displaced, distorted, rebuilt, reshaped, stolen, profited from and/or misrepresented" to generate effects such as agency, organisations or power (Law, 1992:6). A central task to ANT is the analysis of ordering struggle, of local processes of patterning, social orchestration and resistance that generate ordering effects such as devices, power and organisations:

> This, then, is the core of the actor-network approach: a concern with how actors and organisations mobilise, juxtapose and hold together the bits and pieces out of which they are composed; how they are sometimes able to prevent those bits and pieces from following their own inclinations and making off; and how they manage, as a result, to conceal for a time the process of translation itself and so turn a network from a heterogeneous set of bits and pieces each with its own inclinations, into something that passes as a punctualised actor. (Law, 1992:6).

ANT does not provide any a priory account of how translation can be achieved. This is left as an empirical question. According to Law (1992:6), "the empirical conclusion is that translation is contingent, local and variable", but some general findings emerge:

- Some materials are more durable than others and so maintain their relational patterns for longer. It is thus a good ordering strategy to embody a set of relations in *durable materials*. We may, for instance, embody a deal in a written contract. However, according to ANT, even durability is an interactional effect. Durable materials may produce other effects if they are located in new networks of relations.

- Some translations, such as letters of credit, military orders or cannon balls *combine duration and mobility*. This makes them useful for surveillance and control, i.e. for acting at a distance to create ordering through space. Latour uses the term *immutable mobiles* to label this class of materials and processes.

- Translation is more effective if it anticipates the responses or reactions of the materials to be translated. A *capacity to foresee outcomes* thus helps us create more robust networks.

Latour (1991:127) elaborates the last point by stating that "a program's capability to counter an anti-program obviously depends on how well an actor's conception of others corresponds to their conceptions of themselves or of the said actor. If this convergence is weak, the actor will populate his world with other beings; but these beings will behave in an unpredictable fashion, attaching or detaching themselves to the program from version to version. If, on the other hand, this convergence is strong, the actor can begin to make predictions – or, in any case, to guarantee the consistent behaviour of the beings constituting the world."

4.4.3 An informal ANT account of power and responsibility

At this point, it should be clear that ANT insists that power is a verb rather than a noun, a process rather than a fixed entity. In order to account for power, we should look for actors striving to align heterogeneous materials into patterned networks. Empirical findings suggest that we should look for durability and mobility in the materials used to build networks, and for a capacity to foresee outcomes. Thus, Law (1992:8) suggests a number of questions that we may ask concerning powerful actors:

> What are the kinds of heterogeneous bits and pieces created or mobilised and juxtaposed to generate organisational effects? How are they juxtaposed? How are resistances overcome? How it is (if at all) that the material durability and transportability necessary to the organisational patterning of social relations is achieved? What are the strategies

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

50 of 99

being performed throughout the networks of the social as a part of this? How far do they spread? How widely are they performed? How do they interact? How it is (if at all) that organisational calculation is attempted? How (if at all) are the results of that calculation translated into action? How is it (if at all) that the heterogeneous bits and pieces that make up organisation generate an asymmetrical relationship between periphery and centre? How is it, in other words, that a centre may come to speak for, and profit from, the efforts of what has been turned into a periphery? How is it that a manager manages?

In a short, informal paper, Law (1996) illustrates how we may think about power in an ANT perspective. He constructs an example based on real cases, a major scientific laboratory and its powerful manager. In a thought experiment, Law starts with the manager situated in his office, surrounded by things and people such as a conference table, easy chairs, personal computer, telephones, secretaries, airline tickets, invitations to speak, etc. He then asks "What happens if we take away these things and people, these heterogeneous materials, one by one?" When the computer has gone, the manager will loose his ability to calculate, and thus will not be able to manage the finances of the laboratory. He will also loose his capacity to write, and to remember as his word-processor and electronic diary and archives disappear. With his phone and fax goes the ability to act effectively over distance. When this game is completed, the once powerful manager is a naked ape.

This thought experiment illustrates the idea that power is an effect of networks of heterogeneous materials. In this sense, power always resides elsewhere; it is distributed through the arrangements of the organisation. The powerful manager is made by his organisational relations. The juxtaposed networks create *representations in one place*, and thus make the manager into a *centre of calculation* (Law, 2001) where everything can be seen. The networks also make the manager into a *centre of translation*, they produce effects in the periphery so that things happen when he gives orders. There is a circular flow of immutable mobiles out from the centre (in the form of commands and demands) and back to the centre (in the form of representations). Law (2001) suggests that the centre (the manager) 'profits' (metaphorically as well as literally) *because it secures a return*.

However, the relations of the organisation also work to restrict the manager's ability to choose. They may produce bad news which force the manager to act, for instance that a project is seriously delayed or that the economic results are way below the budgets. Moreover, the multiple networks produce a manager built of different logics, who is an administrator and scientist and an accountant and a politician. When faced with a difficult problem, the manager can be a kind of debating society, giving voice to all those logics. He can bear different kinds of responsibilities simultaneously. At this point, Law inserts a moral imperative (1996:6):

> We can wait for long enough to make a space. Make a space for the other logics to talk. The other logics which live within us. The other logics of the organisation. …
> A heavy burden. Uncomfortable. Painful even, as the different logics, the different voices, argue and debate. Inconsistency. Non-coherence. **That** is the character of responsibility. The responsibility of the manager. The responsibility of the organisation. That it should, as a matter of ethics, of principle, seek to speak in many voices. In many non-coherent voices. And not in one.

We shall return to the topic of different voices carrying different logics in the chapter on "Power in symbols and discourse".

4.4.4 Obduracy and asymmetries of power

The ANT account, as summarised above, emphasises the precariousness of networks, and hence the provisional nature of organisations and power. Can ANT also account for long-lasting asymmetries of

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

51 of 99

power? Law (2001) proposes an account in terms of *obduracy*[23], i.e. the capacity of certain kinds of distributions to sustain themselves when everything is in flow.

Law suggests that obduracy of distributions is linked to the *delegation of strategy into durable materials* (2001:3-4). As an example he points to the management accounting system in a large organisation. This system is preoccupied with control, forward planning, productivity, delivery, trouble-shooting, target-setting, personal and organisational achievement, and meeting longer term goals. The delegation of these activities into a range of durable, non-human materials such as computers, office procedures and forms helps to secure obduracy and continuity. This example suggests that obduracy of a distribution, such as a power asymmetry, may be supported by the delegation of strategy into materials that happen to last.

According to Law, obduracy of distributions is also supported by *multiplicity*. This implies that if one mode of ordering, one way of patterning networks, runs into the sands, then another comes to rescue. When planning a new research laboratory, a research organisation may integrate that laboratory into a multiplicity of strategies, for instance a research strategy which requires a type of equipment and facilities to follow a new direction of research, a commercial strategy which ensures that the services of the laboratory can be sold to industrial clients, and an HSE strategy, which requires certain safeguards and interlocks to be in place before the new equipment can be used. The point is that a single strategy would not be sufficient to achieve obduracy. Multiplicity involves acceptance of a certain degree of inconsistency, impurity or ambiguity. For instance, an organisation which is faced with legal requirements to put its archives in order may decide to make sure that records are kept in order in the future, but decide not to spend a lot of money on sorting out the existing archive.

Money has interesting properties in this context. Money is durable (as long as you do not spend them), and has a multiplicity of uses. Money is liquid in the sense that it can be converted relatively easy into wide range of actions. These properties allow money to serve as a storehouse of power in many organisations.

Asymmetries in distributions are also sustained by the way in which different strategies within such a multiplicity or pluralisms *resonate* with one another. In the example from the research organisation, the manager, the vocational scientists and the administration *all work within the logic of return* outlined in the previous section. They are centres of calculation as well as centres of translation. This general approach *disarticulates* that which does not comply with the logic of return. For instance, voices concerned with class, gender and ethnicity may not find a place among stories resonating with the logic of return.

Another aspect of power is *discretion* in the use of capacity for action (Law, 1991). A functionary may have considerable capacity for action, but he has little discretion in when to use this capacity. He may be said to function as a mere relay in system of control. In contrast, a policymaker may choose more freely whether or not to use her capacity for action in a given situation. Law suggests that we should think of this as a continuum rather than a simple dichotomy. Actors often exploit multiplicity (inconsistency, ambiguity, "discursive pluralism") to expand their latitude for discretion, i.e. their discretionary power.

4.4.5 Critical discussion

ANT invites us to consider power from two perspectives. The first perspective is concerned with actors in the process of generating patterned networks. We may study their efforts to mobilise and align the bits and pieces of their networks and ask why they fail or succeed, how they overcome resistances, and how they sometimes manage to establish network that are relatively robust and durable. This is power in action. The

---

[23] In *Webster's New Twentieth Century Dictionary of the English Language*, "obduracy" is defined as "the quality or state of being obdurate", whereas "obdurate" is defined as "1. not easily moved to pity or sympathy; hardhearted. 2. hardened and unrepenting; impenitent. 3. not giving in readily; stubborn; obstinate; inflexible."

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

52 of 99

other perspective is to take an actor which we have reasons to consider powerful as a starting point, and try to discern the networks of heterogeneous materials that enable that actors' exertion of power. A crucial research question is then "*how is it that relations are stabilised for long enough to generate the effects and so the conditions of power*" (Law, 1991:172).

The most important contribution of ANT is probably that it provides a way to integrate heterogeneous materials in our analysis of social phenomena. Computers systems and networks, architecture, money and documents are no longer taken for granted or hidden in the background. We are invited to analyse those diverse materials as actants in their own right, with crucial properties such as durability, ambiguity, and a capacity to resist translation. The need for this perspective may become increasingly pressing as new ICT solutions are introduced and begin to push their own agendas on organisations and groups.

Another important contribution of ANT is its insistence that we should think of social phenomena such as power as a precarious product of patterned networks. The persistence of such phenomena thus calls for an explanation in terms of the properties of the materials included in the relevant networks and the ways they interact.

A third contribution of ANT is its focus on ambiguity and multiplicity of meaning and function. This emphasis stems from the concept of "translation", the idea that a punctualised actor can be borrowed, distorted, reshaped, profited from or misrepresented to fit into a network. We have noted that Law (1991, 1996) has pointed to openness to multiplicity of meaning both as a moral imperative and as a potential source of power.

The most important limitation of ANT is probably that it is *not* a theory in the strict sense. ANT lacks a formal machinery for deriving specific predictions or practical implications. Moreover, power is not recognised as a useful explanatory construct. The "theory" as such does not help us to give specific advice to an actor looking for ways to achieve a given objective. Neither does it help us assess the power of an actor or compare the power of different actors. This limitation is partly compensated by attempts to generalise empirical results, as discussed in the previous paragraphs.

Saying that there is no fundamental difference between humans and object can be provocative. However, this is an analytical stance, not an ethical position (Law, 1992:4). ANT does not claim that we should treat people in our lives as machines. The point is that we may be able to detect patterns that would otherwise get unnoticed by treating humans and objects in the same way in our analyses.

A related issue arises because ANT insists that actors, including humans, are always networks. In principle, this leads to an infinite regression: In order to analyse a network, we would in principle have to look at the materials in that networks as networks in their own right, requiring a new level of analysis, and so on. In practice, researchers have to terminate their analysis at a suitable point, and take the actors for granted. However, researchers have to dispense with many established constructs in sociology and political science to remain loyal to the imperatives of ANT research (Latour, 2005). Another consequence of this stance is that ANT research can be difficult to communicate. Researchers may find themselves hyphenating nearly all nouns in their accounts because they want to keep the reader aware that they are punctualisations. At some point, this may create problems, because human communication apparently depends on punctualisations.

5 Power in symbols and discourse

An analytical shift in perspectives when it comes to power can be identified especially after the 1970s. From an actor-oriented analysis, the emphasis is directed to social institutions and domains. To put it bluntly, the sovereign (i.e. the head of state, the ruler) is "decapitated", but also the individual actor in general (Neumann, 2001:168). The core question becomes how specific interests are transformed into normative standards through discursive practices, i.e. through the ways in which we speak and write about things. When power in this way is conceived as constituted through language, symbols and discourse, the debate is moving from the political field towards a general cultural field.

There are several writers who contributed to this shift. A central premise is that social phenomena are socially constructed and that they are always in the making. Our ways of talking do not neutrally reflect the world, identities and social relations but play an active role in creating and changing them (Jørgensen and Phillips 1999). Furthermore, there are constant fights regarding definitions of society and identity. The mission for the discourse analyst is to follow these struggles and explore how a particular viewpoint gains hegemony, become taken for granted or naturalised (Jørgensen and Phillips 1999). To elaborate on and delineate between different traditions within the field of discourse analysis (e.g. discourse theory, critical discourse analysis, discourse psychology etc.) is beyond the scope of this chapter (see e.g. Wetherell, Taylor and Yates 2001 for an overview over major figures in discourse research, and Phillips and Di Domenico for an introduction to discourse analysis in organisational research). Suffice it to mention that critical research in this field investigates and analyses power relations in society and the possibilities of social change. Here we are going to present some highlights from a prominent protagonists who has been very influential within this school of thought and contributed with theoretical frameworks: the French sociologist Michel Foucault. In the following we are going to summarise his contribution related to the discourse as a construct. Then we proceed with a brief introduction to Fairclough's critical discourse analysis, because he has elaborated on how to perform a critical discourse analysis in an empirical context and developed a set of "research tools".

We shall, however, start this chapter with a theory which may be said to bridge the perspectives "power as a resource" and "power in symbols and discourse". Stein Bråten's concept "model monopoly" refers to a domain of discourse that is delimited in such a way that only one actor has access to a rich repertoire of relevant concepts and ideas, whereas the other actors are lacking such symbolic resources. His way to think about model power entails two interesting paradoxes.

5.1 Model power and its paradoxes

5.1.1 Model strength and model monopoly

Reasoning within a system-theoretical framework, Stein Bråten (2000:105) points out that we need models to utilise information and withstand influence. Models allow us to filter, order and make sense of information. Information is only useful to the extent that we have appropriate models which enable us to process and utilise it. A good model of another actor enables us to predict through mental simulation how the other actor will respond to possible actions from our part. We may view this as a source of power. Being able to predict the responses of another actor enables us to select the course of action which has the highest probability of producing the desired result. A good model is also capable of being further improved each time the actual outcome of an action diverges from the expected (simulated) outcome.

A *model monopoly* occurs when the domain or universe of discourse is delimited in such a way that only one actor has access to a rich repertoire of relevant concepts and ideas, whereas the other actors are lacking such symbolic resources. We may refer to the former actor as model-strong and the latter as model-weak. As an

example, we may think of a group of risk analysts discussing the technicalities of a complex risk analysis of a plant based on new technology with a group of lay persons. The risk analysts are likely to be model-strong and the lay persons are likely to remain model-weak as long as the discussion is restricted to the technical aspects of the risk analysis. This will be the case even if the lay persons have more extensive knowledge than the risk analysts about the system that has been analysed.

5.1.2 The paradoxes of model monopoly and attempts to share model power

Being the weak part in a situation characterised by model monopoly obviously leads to powerlessness. One may even have extensive knowledge about the issues at stake, but still be unable to utilise this knowledge effectively in a dispute. Paradoxically, the opposite position, being the model-strong actor in a situation characterised by model monopoly, is not necessarily very attractive either. The model-strong actor may win the battle but loose the war due to the constraints inherent in his own model. Discourse has to be restricted to a single, dominating model for model monopoly to occur. Model monopoly implies that the model-strong actor has a monopoly on the model, but it also implies that the model has a monopoly on the model-strong actor. The actor is restricted to a single, closed perspective which excludes alternative interpretations of the situation. This may allow her to act quickly and vigorously. However, this apparent efficiency may come at the cost of a limited capacity to argue with oneself and a restricted action repertoire. Bråten (2000:144) suggests that this applies not only to individuals, but to groups and organisations as well.

This aspect of the theory of model power may be used to supplement the information perspective on organisational accidents (Turner, 1978; Turner and Pidgeon, 1997; see also Rosness et al., 2005:37ff or Rosness et al., 2010:69ff). In this perspective, an accident is viewed as the outcome of a breakdown in the flow and interpretation of information that is linked to physical events. Westrum (1993) noted that organisations are very different in their ability to react to problems. He coined the term "requisite imagination" to characterise organisations with a highly developed capacity to make use of information, observations or ideas wherever they come from. Requisite imagination also implies a capacity to interpret data in different ways, by applying more than one perspective. This interpretive capacity is exactly what is lost in a situation characterised by model monopoly, even for a model-strong actor.[24]

Many model-strong actors have a genuine desire to share their power. How can they do this? Apparently, the obvious thing to do is to educate the model-weak actors. Surely, giving the model-weak actors access to at least some aspects of the model will reduce the power difference between model-strong and model-weak actors?

Here is the second paradox of Bråten's theory. According to Bråten (1983:25; 2000:105), attempts to share model power are likely to preserve or increase the power difference. There are at least two reasons for this. First, the model has usually been developed to reflect the perspectives and interests of the model-strong actor. The model-weak actor is thus led to adopt the perspective of the model-strong actor, and this perspective is tacitly accepted as the only valid perspective on the issue at stake. The second argument is based on systems theory (cybernetics) and is more subtle. As stated at the beginning of this section, our capacity to control other people is to a great extent based on our ability to mentally simulate their responses to our actions. Such a capacity allows us to select an action which is likely to elicit the response we desire. By sharing parts of his model, a model-strong actor increases his control of the capacity of the model-weak actor to simulate other actors' reactions. Thus the power difference is increased. In Bråten's own words:

---

[24] A more subtle link between the concepts of "model monopoly" and "requisite imagination" is that both are inspired by Ashby's notion of "requisite variety" (Ashby, 1981:106). The expression "requisite imagination" is a paraphrase of Ashby's notion of "requisite variety". In its most compressed form, the law of requisite variety states that "only variety can destroy variety" (Ashby, 1981: 106). For an organisation to gain control over system it must be able to take as many distinct actions as the observed system can exhibit.

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

56 of 99

Ironically, the ultimate in control is reached if Beta' [i.e. the model-weak actor after an attempt to "educate" him] "succeeds" in adopting a model developed by Alpha at some previous stage. This gives Alpha the power of simulating even the simulations carried out by Beta'. Thus, while the intentions may be to decrease the gap in model capacity a steadily increasing gap may be actualized. (Bråten, 2000:108).[25]

The implications of the second paradox are far-reaching. It may apply to the critical action researcher who claims to promote democracy but ignores the impact of her own models and her potential for building a model monopoly. It may also apply to attempts to give lay people a voice in decisions on risk acceptance to if these attempts require the lay persons to accept expert models of the domain.

5.1.3   Resolving a model monopoly

There is a way around the second paradox of model monopoly. The key is to resolve the model monopoly by cancelling one or more of the conditions that promote it (Bråten, 1983:26; 2000:21). This can be done in several ways:

1. *Re-define the domain* (universe of discourse). A model monopoly is characterised by a strict delimitation of what issues, facts and arguments are considered relevant. Expanding these boundaries opens the domain for alternative problem definitions, facts and arguments.

2. *Introduce complementary or competing perspectives which offer alternative or transcending terms*. A model monopoly restricts discussion to a single "right" perspective and terms defined from of this perspective. A restricted terminology restricts the discussion. Insisting that all arguments comply with highly abstract and technical definitions can be an effective means to exclude model-weak actors. Moreover, terminologies are not neutral. For instance, the terminology used in many areas of business economics reflects the interests of the owners rather than those of the employees.[26]

3. *Develop pertinent knowledge on the model-weak actors' own premises*. Knowledge is not, in general, neutral to group interests. Knowledge is usually developed for a purpose, and thus reflects the interests and perspectives of actors that develop knowledge and/or those that sponsor knowledge development.

4. *Evoke rival knowledge sources, or take a meta- or boundary position, crossing the boundaries of the domain.* Other knowledge sources may bring in alternative models and perspectives. Taking a meta-position may involve pointing out that the discourse is restricted to a single model or perspective, and ask whether alternative perspectives could be equally relevant. Taking a boundary position involves standing with one foot in each of two different models or perspectives.

5. *Be aware of your own tendency towards consistency and conformity with a monolithic perspective that silences the question horizon.* Even model-strong actors can be victims of model monopoly, as discussed above. Some of our most cherished academic virtues, such as precise definitions, consistency and exclusion of irrelevant facts and arguments may at times promote a model monopoly. It can be difficult to detect one's own conformity with a monolithic perspective. The most important symptom is perhaps the apparent absence of tensions and the apparent ease with which contradictory evidence can be defined as irrelevant or reinterpreted to be in harmony with our model. Such apparent absence of tensions is not a very strong signal. The most effective way to

---

[25] The symbol Beta' refers to the same actor as Beta, but after an interchange has taken place. The distinction is used because the properties of Beta have been changed as a consequence of the interchange.

[26] As an example, wages are usually categorised as "costs", whereas dividends to the shareholders are categorised as "results". From an employee point of view, the opposite categorisation would be more valid.

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

57 of 99

break out is perhaps to seek challenges and resistance from persons that are likely to apply alternative models and perspectives.

Let us return to the example where a group of risk analysts discusses the technicalities of a risk analysis of a plant based on new technology with a group of lay persons. How could the model monopoly be resolved? Here are some suggestions:

- *Redefine the domain of discourse by stating the issues at stake differently.* Instead of discussing "what is the probability that event X will occur" one may, e.g., discuss "do we have enough experience with this technology to have trust in the risk estimates?"

- *Introduce a complementary perspective which offers alternative or transcending terms.* Such a perspective could be Charles Perrow's Normal Accident theory (Perrow, 1984; see also Rosness et al., 2004:23ff or Rosness et al., 2010:47ff). According to this perspective, systems characterised by tight couplings and high interactive complexity are very difficult to control, and they are likely to produce complex accidents which are very difficult to capture in a risk analysis.

- *Develop knowledge on the model-weak actors' own premises.* Such knowledge may, e.g., include a check of the records of important actors such as the companies that develop the new technology and operate the production plant, or an assessment of the efficacy of the regulating regime.

Bråten (1983:26) points out that whereas available data tend to confirm the theory, the model-power theory has a wonderful self-falsifying character. Actors that are made aware of the theory usually find ways to resolve model monopoly, and thus step out of a game which the model-weak actor is doomed to loose.

Resolving a model monopoly often requires a time-out from the confrontation with the model-strong actor (Bråten 1983:26). It takes time to identify alternative perspectives or knowledge sources, and perhaps even develop new knowledge. It may even take some time and reflection to realise that one is captured in a situation with model monopoly. This implies that the timing of decision processes may have an impact on the chance of detecting and resolving a model monopoly.[27]

Bråten's theory of model monopoly has implications for the use of information and communication technology to support decision-making. For instance, one of the ambitions of several Integrated Operations concepts is to speed up decision-making by means of new information technology. This ambition could be problematic for types of decisions where a model monopoly may threaten decision quality. On the other hand, Integrated Operations concepts also bring about opportunities to involve a broader range of experts in decision-making, and thus a potential for introducing alternative perspectives on the issue at hand.

5.1.4 Critical discussion

The theory of model monopoly is a genuine theory in the sense that it allows the derivation of non-trivial predictions. The second paradox, which concerns the consequences of attempts to share model power, has implications for a variety of efforts to promote participation and democracy. This is also the case with Braathen's suggested strategies for resolving a model monopoly.

The theory of model monopoly is not a general and comprehensive theory of power. Power may come from other sources than a model monopoly.

---

[27] Timing of decision processes is discussed in the chapter on "power in action", Section 2.1.4.

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

58 of 99

Is it conceivable that the theory of model monopoly could itself gain monopoly in certain settings? We leave this issue to the reader.

5.2 Power in discourse

5.2.1 Foucault's analyses of power and discourse

Power as a concept is inherent in the writing of Foucault, but his theory of power is multifaceted. In the first phase of his writing power is treated implicitly. In the next phase, consisting of "genealogical" works such as *Discipline and Punish* (1979) and *Power/Knowledge* (1980), he brings out power centre stage. According to his thesis, power is embedded in all social relations and *not restricted to specific actors or institutions* such as the king, the state, the church or the education system. Following this argument, the quest for power takes on new dimensions and calls for another way of thinking. By classifying modern history into different systems of thought, Foucault demonstrates how the victory of the modern entails the creation of new power relations. Human beings (or "man" in Foucault's own words) come to play another role, not as classifier of the universe, but as reflections of local systems of thought.

Foucault wanted to investigate how we come to understand the world as we do (Haugaard 2002). Very often the order of things appears as normal and unproblematic. For instance, to include an example from the petroleum industry, we take it for granted that (a) big national oil and gas company (previously, several companies) play a major role on the Norwegian shelf. If the governmental bodies had played their cards differently in the 1970s, international majors could have been in charge of the development today. As this example illustrates, it is vital to explore tacit and taken-for-granted conditions which enable us to order things in the way that we do. Foucault's "trick" was to open his writing with a surprising statement or story in order to puzzle and sensitise the readers to their interpretative horizon. In this way, the reader is led to discover how it could be possible to have entirely different ways of ordering or ranking within a totality. Through sorting, ordering and ranking, some items, objects etc. are presented as more important and valuable. Often, however, we have internalised this without questioning it. An example from a field of study that has been greatly influenced by Foucault, illustrates this: Gender research has contributed with new insights on the gendering of many processes in society. Work related to masculinity is usually ranked higher than work that has a feminine connotation. This ranking is often taken for granted and seen as something natural, and it manifests in rewards systems and differences in status.

The term *discourse* is pivotal in understanding the arguments of Foucault. In French language the word discourse has several meanings (Le Petit Robert 1978):

1. Conversation or dialogue (ancient)
2. Speech made in front of an audience
3. Literary text with didactic purpose treating a subject or a method
4. Verbal expression of thoughts
5. Philosophical argument

Consequently discourse can be interpreted in several ways both in common language and in science. Discourse has become a fashionable term in academia and appears in many scientific texts and debates. In the Foucauldian sense, discourse is a way of speaking and understanding the world. "Discourses are practices that systematically form the objects of which they speak" (Foucault 1972: 49). A discourse is thus a particular way of speaking and interpreting the world (or parts of the world) (Jørgensen & Phillips 1999). Phenomena are given meaning through the way we speak and write about them. As a consequence, discourse is also the technical term for the tacit knowledge which informs particular ways of making sense of the world (Haugaard 2000: 185). A central element in discourse theory is that a social phenomenon is never done or total – there are constant struggles going on and they have social consequences.

Instead of focusing on what people say, Foucault is concerned about *discourse as practice* by starting with pre-existing unities in order to and break them up or 'deconstructing' them (Ritzer 1997: 39). Moreover, he looks for those unities in the population of discursive events, i.e. events that contribute to or cause discourse. A critical event or an accident can be a trigger for the unfolding of different discourses and regularities within a discourse, especially if it gets a lot of coverage in the media (for an example see Forseth and Rosness 2009). Foucault disengages discursive events (as objects) from the people (subjects) who might engage in them. Ritzer (1997: 39) recapitulates Foucault's five-step process for the analysis of a field of discursive events:

1. Grasp the statement in the exact specificity of its occurrence
2. Determine its conditions of existence
3. Fix at least its limits
4. Establish its correlate with other statements that may be connected with it
5. Show what other forms of statement it excludes

Foucault tries to get at the regularities that exist within discourse. He then traces those regularities to several kinds of relationships – relations between statements, between groups of statements, and the relations between *statements and technical, economic, social and political events*. Discourse never consists of one statement, one text, one action or one source. The same discourse, characteristics of the way of thinking, will appear across a range of texts, and as forms of conduct, at a number of different institutional sites within society (Hall 2004). Foucault uses the term *discursive formations* where a system of dispersion exists among statements and where there is regularity among elements such as objects, types of statement, concepts or thematic choices. Power works through regimes of knowledge that produce new discourses that shape the mentality and practices of the individuals. There is a permanent dispute between different discourses in order to define the categories and phenomena in the world. When a particular discourse gains hegemony it means that a particular world-view or point of view prevails.

There are significant links between Foucault's analyses of discipline and his analyses of discourses. Disciplinary power is a core element in the writing of Foucault and he is particularly concerned with how the "ruled" come to take and internalise the view of the ruler. In his work on disciplinary power he relies on a specific symbol – Bentham's Panopticon – an architectural figure with cells and a tower in the centre (see Section 4.2.1). The activity in the cells can be observed constantly form the tower without the inmates knowing when they are observed (Foucault 1977, 2001). In Foucauldian sense the Panopticon is a power machine that produces truth about the subject as an object of knowledge (Haugard 2002), and this is illustrated with prisoners placed in a building consisting of prison cells that are subject to continual visibility. When the prisoners are aware of being subject to continual judgment, they come to subject themselves to the judgment of others by accepting their viewpoint. The open-plan workplace or call-centre work can be interpreted as examples of the Panoptic principle in action at the workplace. Another example which is related to regulatory regimes is when the Norwegian Food Safety Authority pays an unanticipated and unannounced visit to a restaurant to check on the quality of the food and the conditions for storing and serving food.

There are also similarities between Actor-Network theory and Foucault's analysis of power and discourse. Both approaches are concerned how order is imposed on ambiguous elements and how this ordering process and the possibility of alternative orders may become invisible.

5.2.2 Critical discourse analysis

Critical Discourse Analysis is an interdisciplinary approach that focuses on the ways social and political domination are reproduced by text and talk. Thus, there is a close connection between text and the social

context where the text stems from. A central point in Norman Fairclough's critical discourse analysis is that discourse is a form of social practice that both reproduces and changes knowledge, identities and social relations, including power relations. Simultaneously discourse is shaped by other social practices and structures (Fairclough 1992, Jørgensen & Phillips 1999). This perspective is particularly interesting because of its focus on social change, but also its complex methodological repertoire for performing discourse analysis in an empirical field. Although Foucault provides illuminating examples, his writing is on a highly theoretical and abstract level, while Fairclough wants to "operationalise" parts of Foucault's framework and employ it in empirical analysis. Fairclough sets out to elaborate on "a social theory of discourse" (cited in Clegg et al., 2006: 302) where he connects linguistic approaches to the broader social context that was the heart of the matter for Foucault.

Language is an important means for constituting individuals and the social world. Critical discourse analysis as formulated by Fairclough (1995) advocates a text-oriented analysis, seeking to join together three different strands of analysis: *A) Text, B) Discursive practice and C) Social practice*. The starting point is a close reading and analysis of a specific text. Discursive practice concerns how the writer/storyteller draws on existing discourses and genres for producing a text, and how the receiver relies on existing discourses when interpreting the text. Fairclough's system is extensive but suffice to say that at this level the analyst is concerned with how the discursive context influences the way the text is formulated and the way the text is consumed. The next level, social practice, is important in this particular framework. The aim is to examine how statements and propositions function to reproduce or challenge existing power relations and ideological systems of beliefs. In the spirit of Foucault, an important task for the analyst is to reveal "facts" and "truths" that are taken for granted or naturalised, and under which conditions such revelations take place.

In empirical studies, a critical discourse analysis has to be three-dimensional because every communicative statement involves three dimensions (Fairclough 1992): 1) The form of the text; that is, how it is structured and organised. 2) How the context has influenced the way the text was produced and consumed. 3) The examination of how propositions function to maintain, or disrupt, ideological systems, beliefs and norms. By this, what is taken-for-granted truths and under what circumstances are brought centre stage and challenged.

In his analyses, Fairclough (1995) draws on a rich set of analytic tools. It is beyond the scope of this section to give a comprehensive review of all his tools. Here we would like to point to two important grammatical elements: *transitivity* and *modality*. Transitivity concerns how processes and events are connected, or not connected, to subjects and objects. By using passive tense, for instance, the actor is absent and an event is presented as a natural phenomenon. Modality has to do with the way actors connect with their statements. Modality can be expressed by intonation, and humour and satire can contribute to distance. The use of 'hedges' is a way of moderating one's message through words such as 'a little' 'somewhat'. Presenting interpretations as facts is another aspect of modality. To uncover how language conveys power, it is also important to study *images and metaphors* that are used to strengthen the arguments. In our discourse analysis of the controversy regarding the risk level on the Norwegian Continental Shelf just before the millennium, we have argued that the mother of the victim in a fatal accident offshore on Christmas Eve, 2000, introduced a new discourse at a time where the key stakeholders were arguing about how to interpret the statistics (Forseth and Rosness 2010). One of the main characteristics of the new moral/judicial discourse was that it was based on her experience as a mother of the victim and the lived experiences of the workers, stories about under-reporting of events and statements about negative effects of time pressure, lack of coordination, rather than quantification. Moreover, her language was clear and emotional and in her talks she accused those in power - "the offshore clergy" – of being "vague in talk", having "the pursuit of profit as a supreme sovereign" and "committing work environment crime". The new discourse seemed to have an impact on the key stakeholders (employers, unions and authorities) and became a driving force for joint action and implementations of measures.

Critical discourse analysis has come to play a major role in discursive studies of organisations (for more details see Clegg et al., 2006). We believe that this perspective can contribute with interesting knowledge on

regulatory regimes and the relationships between regulators and regulated. Using discourse as a lens it is possible to discover aspects that are taken for granted or naturalised. Moreover, it can help us uncover changing discourses on regulation and safety and underlying power relations. In the next section we will present some findings from a discourse analysis of the American petroleum industry.

5.2.3 Discourse analysis of the American petroleum industry - An example

In the book *Oil & Ideology – The Cultural Creation of the American Petroleum Industry* (Olien & Olien 2000), the authors conduct a case study of the public discourse of this sector. The authors analyse how ideology, both its formation and development, served as contingencies or environmental conditions that influenced the development in the period between 1859 and 1945. The book examines how contingencies or environmental conditions facing the petroleum industry were socially constructed through ideological discourse, and how the public discourse was reflected in policy making and regulation of the petroleum industry. A wealth of data sources were used to reconstruct the public discourses in this period: academic literature, popular science literature, public papers, hearings, trade unions articles, editorials from newspapers and journals, comic strips. Based on this rich data set the authors identified key actors and stakeholders, and the arguments that were used to support their arguments. In the book five different discourses or "channels of discourse" were identified. Another important aim for the authors was to track the manifestation of the various discourses and their impact in oil policy. The five different discourses are listed below:

1. *The operational* is the language of the field or the trade where the actors talk about the work they do – this is a representation of the oil industry from within. The actors develop their own internal language where expressions such as "drill bits, fishing jobs, tool pushing, blowouts" are self-evident.
2. *The technological* is a meeting point between science and technology where one is concerned about topics of theoretical, speculative and practical issues such as the pressures of reservoirs.
3. *The economic* is a very broad discourse where it is possible to identify layers of discourses or subgroups.
4. *The political* deals with the importance of the petroleum industry for the political economy. Economists, journalists and consumers are important actors within this discourse.
5. *The normative/moral* discourse is underlying or interwoven with the others and deals with cultural definitions of what is right or wrong, good practice or harmful practice.

These discourses have different points of departure and emphasise different aspects in relation to oil production. The operational discourse is the less academic one because operations and practice are the core elements. The technological discourse is also related to concrete operations, but can also be normative in character – what is possible for the industry, but also what it should do (e.g. increased extraction of petrol or not). In this way the technological discourse can be in conflict with the operational discourse. The different channels of discourse are also often combined, e.g. the economic/operational discourse with discussions about drilling costs or the market for crude oil. Elements from the normative/moral discourse is comprehensive and can also be camouflaged, e.g. in the discussion on oil consumption, because some goals are more socially acceptable than others. In the analysis the authors illustrate the content and the development within the different channels of discourse over time. They underscore that it was not unusual that the different discourses contained competing or conflicting ideas. The result of these disputes between different interests and interpretations of reality constituted the cultural construction of the American petroleum industry during this époque. It is documented how both positive and negative features of the industry were put forward and drawn on in the construction of the discourses:

> *There were different ways of talking about oil - from its newness, its growth, its concentration of economic power to its waste of natural resources and abuse of economic power. The negative ideas, a staple in discourse, had a powerful influence on the impulse to regulate the industry (p. xv).*

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

62 of 99

This quote is interesting because it underscores that the cultural construction of the petroleum industry, how the industry was referred to and described, had an impact on how the industry was regulated by the authorities – not at least the extent to which regulatory interventions were not carried out. Besides, the book shows how the cultural construction of oil activities often resulted in poor political solutions.

The growth in the petroleum industry was in many ways a symbol of what happened in the rest of the American society in the period between 1900 -1945. Trough their analyses the authors underscore how certain dimensions and concepts were used to describe the petroleum industry, and how these constructs were repeated and very seldom under critical scrutiny. The industry was described as "monopolistic, overpowerful, speculative and risky, conspirational, wasteful, disorderly, out to gouge customers or corrupt authorities, and, in general, a threat against public welfare". (p. 25). These characterisations are normative and it varied to what extent they had a firm root in the operational reality. Moreover, the oil pioneers from the middle of the 20ᵗʰ century were conceived of as a new sort of front pioneers working with "frontiers under earth". Some of the oil tycoons were characterised in gendered language and symbols that were carriers of central moral elements in the American culture.

...references to character traits such as cunning, deviousness, and secretiveness were often tied to effeminacy, as were behaviour traits such as wastefulness, living in luxury, and wanton behaviour. By contrast, strength, straightforwardness, honest ambition, and self-reliance are usually tied to masculinity. (p. xv).

This quote illustrates how language is not a neutral carrier of meaning, but saturated with symbolic messages. Language is thus a way of talking forward a discourse and articulate one's argument in a negative or positive way.

The book concludes that the petroleum industry was conceived in terms of what was said and spoken about it. Very few actors were in a position to reflect and critically evaluate to what extent this cultural identity corresponded with how the petroleum industry operated. Another point was that in instances where the discourse could not be translated into effective policy, there was always the possibility of remedying this by introducing more discourse. Those who were involved in the public discourse advanced both ideological position and personal interests at the same time. They tried to control or dominate the public discourse in order to reach a hegemonic status for their views. Olien and Olien conclude that the discourse on oil seldom was a question of oil per se, but also included topics such as public welfare (p. 251). Another important factor is that power was an important and underlying part of the discourses. The socially constructed account of the petroleum industry reflected what elements from the different discourses that achieved hegemonic status. It is concluded that the different interests and the views that came to dominate the public discourse often resulted in poor policy making.

Even if this book provides a discourse analysis of American petroleum industry until 1945, its framework and analysis is relevant for discussion about regulation and contingencies or environmental conditions ("rammebetingelser") in the Norwegian petroleum industry. A key point is that environmental conditions are co-created by humans, material and immaterial forces and not given or predetermined. The way in which environmental conditions are interpreted has an impact on regulatory practice. With the increase in small players on the Norwegian Continental Shelf, the PSA has to reconsider its strategies that have developed over the years as they have interacted with a limited number of majors. Some of the new global players are more familiar with an industrial model of antagonism between the parties and not the Norwegian model of industrial relation of cooperation and negotiation. The Norwegian regulatory regime with emphasis on transparency and negotiation between authorities and companies will also be new to some of the new actors.

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

63 of 99

5.2.4 Critical discussion

One of the major contributions of the perspective "Power in symbols and discourse" is the destabilisation of the concept of power and its ability to challenge the scope for how we understand and interpret power relations. This perspective provides a new lens for teasing out power and identifying power relations and power games. Power is now conceptualised as a phenomenon that is "everywhere" and not only restricted to individual actors or institutions. Power takes on new and fascinating dimensions, but becomes more problematic to grasp intellectually and capture empirically.

Discourse is a complex construct and we have tried to illustrate some of its strengths. Discourse analysis provides a lens or a tool to analyse how meaning is socially constructed. Besides, it unveils how specific worldviews influence on how people think and act and the social consequences. Because discourse analysis is based on a rather complex framework, the analyst might have to concentrate on some parts of this framework when conducting an analysis. There are different ways of conducting a discourse analysis (Jørgensen and Phillips, 1999) and we have not elaborated on the differences between different subcategories, but briefly mentioned critical discourse analysis. An important demarcation between Fairclough and other scholars of critical discourse analysis is his focus on *social and cultural change* where the others are more concerned with *social reproduction*.

As with any new paradigm, discourse and discourse analysis have been subject to criticism. We will first summarise the critique of Fairclough and his sophisticated model of the relationship between critical discourse analysis and social change. This summary is based on Jørgensen and Phillips (1999: 1001-103) and their review. The most problematic part of critical discourse analysis is the boundary between discourse analysis and social practice. It is unclear what kind of sociological and cultural theory one should rely on as Fairclough himself draws on a range of scholars such as Foucault, Althusser, Habermas and Giddens. Second, how should one treat the dialectic between the discursive and the non-discursive? Precisely how does the non-discursive influence the discursive and vice versa? Often social practices serve as a backdrop for discursive practices in empirical analysis. Third, processes of group formation, subject and agency are only weakly conceptualised theoretically. This is a critique that also applies to discourse analysis in general. A study on power relations in the Norwegian petroleum industry would be inadequate if it did not include the Petroleum Safety Authority Norway or the Norwegian Petroleum Directorate. Finally, in critical discourse analysis there is often a lack of analysis of how the texts are consumed. Most discourse analyses consist of careful analysis of texts and miss out on the production and consumption of these texts.

Clegg et al. (2006) addresses some of the major criticisms on Foucault's diverse contributions on power and discourse. The critique can be summarised into a set of categories as listed below:

- Essentialism
- Negativity
- Eurocentrism
- Singular focus
- Structuralist
- Power as "catch all category"
- Big schemes and design

In the context of Feminist theory Foucault has been criticised of presenting a highly generalised account of power without acknowledging underlying specific structures of domination such as patriarchy. Structures of domination, however, are not power but the result of historical struggles of power. Dominant power practices will come to dominate a given era and can be traced in objects, rituals and truths. Although Foucault underscores that power is also a positive and creative force, most of his analyses demonstrate power as a disciplinary and oppressive force. It is only in his later works that the notions of power are linked to pleasure and positive aspects. Foucault has also been criticised for presenting a eurocentric view on power. Indeed, as

Clegg points of, this critique can be taken even further as his writing was essentially Francophone and thus did not engage with text from German and Angloamerican scholars. Another critique concerns his too singular focus on surveillance and subjects who suffered continuous confinement. A related critique came from another influential French sociologist, Pierre Bourdieu, who criticised Foucault for being too concerned with "constraints exercised upon the body from the outside" (Wacquant, 1993:35 cited in Clegg et al. 2006). Foucault is good at describing the external disciplining of the body, but less sophisticated in his discussion of "the 'subtler' forms of domination which come to operate through belief and pre-reflexive agreement of the body and mind with the world – whose paradigmatic manifestation is masculine domination" (Wacquant 1993:5, cited in Clegg et al. 2006). Bourdieu himself was intrigued by the *symbolic manifestations of power relations*, and how the dominant symbolic order manifests itself through distinctions and discriminations.

Foucault has also been criticised for disregarding agency and highlighting structures. In a way, he is more interested in structures because he focuses on who is able to exercise power rather than who has power. In his work, however, neither "subjects nor structures are seen as determining or determined" (Clegg et al. 2006:254). Another critique regards the content of the concept of power as being general, diffuse and being reduced to an empty category. Finally Foucault has been accused of writing about big schemes and grand designs rather than practice. In doing so he does not grasp the ways that actors, or inmates for that sake, react to domination. As a result he also misses out on resistance strategies even though he claimed that where there is power, there is resistance.

Becoming familiar with discourse analysis allows one to join in a range of debates, discussion and dialogues which are increasingly pervasive within the intellectual community. Discovering new sets of tools for studying the social world helps one see our lives and our circumstances differently. Advocates of discourse analysis, however, are crystal clear about one premise: This is not a perspective that can simply be added on, separated from its theoretical and methodological basis (Jørgensen & Phillips 1999). The complete package includes

1. Philosophical premises of ontological and epistemological character
2. Theoretical models
3. Methodological guidelines for how to approach a research field
4. Specific techniques for analysing language

This implies that discourse analysis is much more than simply another technique for empirical analysis.

6 Circuits of power – a synthesis

In the previous chapters we presented complementary perspectives on power. This chapter summarises a possible synthesis of several perspectives. In his book "Frameworks of Power" Clegg (1989) proposes a framework for analysis of power with the purpose to help sketching plausible narratives. The framework builds on thorough discussions about different theories of power. It connects different theories and opens for the opportunity to take advantage of different perspectives.

The framework of Clegg extends our understanding of the different perspectives on power and represents a useful analytic tool with links to the different perspectives. The different levels of the framework and the perspectives we have presented are rather dynamic and interlinked entities and the perspectives cannot be mapped directly to the framework. However, we find it useful to indicate where in the framework we see the strongest links to each perspective. Below, we provide a more thorough presentation of the framework of Clegg and show where we find the strongest links to the perspectives.

Clegg's account of power is rather complex, because he integrates several conceptualisations of power that are themselves quite complex. He uses a rich language where many terms and expressions may be unfamiliar. We have refrained from trying to simplify or popularise his account for fear of distorting his ideas. Many readers may therefore find parts of this chapter rather abstract and complex. It may be of some help to be aware that Clegg tends to conceptualise power in terms of processes rather than entities ("things"). For instance, we should, at least in many places, think of "organisation" as a process, and not as a company. It may also be helpful to keep the logic of Actor-Network theory in mind when studying Clegg's frameworks of power.[28]

6.1 Clegg's conception of power

Clegg argues that there are at least three family groupings of theories clustered around loci of agency, dispositional and facilitative concepts of power. The agency concept of power refers to a type of power that is causal. The dispositional concept of power equates power to a set of capacities. The facilitative concept regards power in terms of its ability to achieve goals. The intention of the framework is to bring the three theoretical groupings of power into a set of ordered relationships with each other.

The outset for Clegg is that power is best approached through a view of more or less complex organised agents engaged in more or less complex organised games. He thinks of power as a phenomenon that can be grasped only relationally (Clegg, 1989: 207). Clegg argues that processes of power are central to organisation and organisation is central to processes of power. Hence, he finds that a theory of power must also be a theory of organisation; an understanding of either 'organisation' or 'power' entails a reciprocal conceptualisation of both terms. On this background, Clegg conceptualises power in terms of *processes which may pass through distinct circuits of power and resistance*. Accordingly both 'obedience' and 'resistance' are included in the frameworks of power. His concept of 'circuits of power' derives from Foucault's conception of disciplinary power and consists of processes for stitching-up particular configurations of state, economy and civil society (Foucault, 1977). He finds that the circuits are always carried by organisation of agencies. The agencies can have different forms and their organisation is itself opened up for scrutiny in power terms.

---

[28] We introduced Actor-Network Theory in Section 4.4.

6.2 Presentation of the framework

Clegg argues that power can be understood analytically as processes moving through three distinct *circuits of power and resistance* positioned at different levels. At the highest level are the *circuits of agency*. The two others are the *circuits of social integration and system integration*. The two latter circuits are seen in the context of their relationship to the agency circuit of power. They are conceptualised as the pathways through which fields of force are fixed and stabilised on *obligatory passage points*, also called *nodal points*.

The links that we have indicated between the framework and our perspectives are illustrated in Figure 3 (Derived from Clegg, 1989, Figure 8.1, page 214) and explained and discussed more thoroughly below.

Focus	Level of Circuit	Type of Power	Circuits of power	Links to our perspectives

Circuits of power diagram:

Episodic Power Relations — Agency — Causal

Social Relations → Agencies → Standing conditions (Means, Resources, Control) → Outcomes

control/contest

reproduce/transform

Rules of Practice — Social Integration — Dispo-sitional

Obligatory Passage Points — *fix/re-fix* — Rules fixing relations of meaning and membership

facilitate/restrict

Exogenous environmental contingencies

Domi-nation — System Integration — Facilitative

empower/disempower — Innovation in techniques of discipline and production

Links to our perspectives:
- Power in Action
- Power as a resource
- Power in symbols and discourse
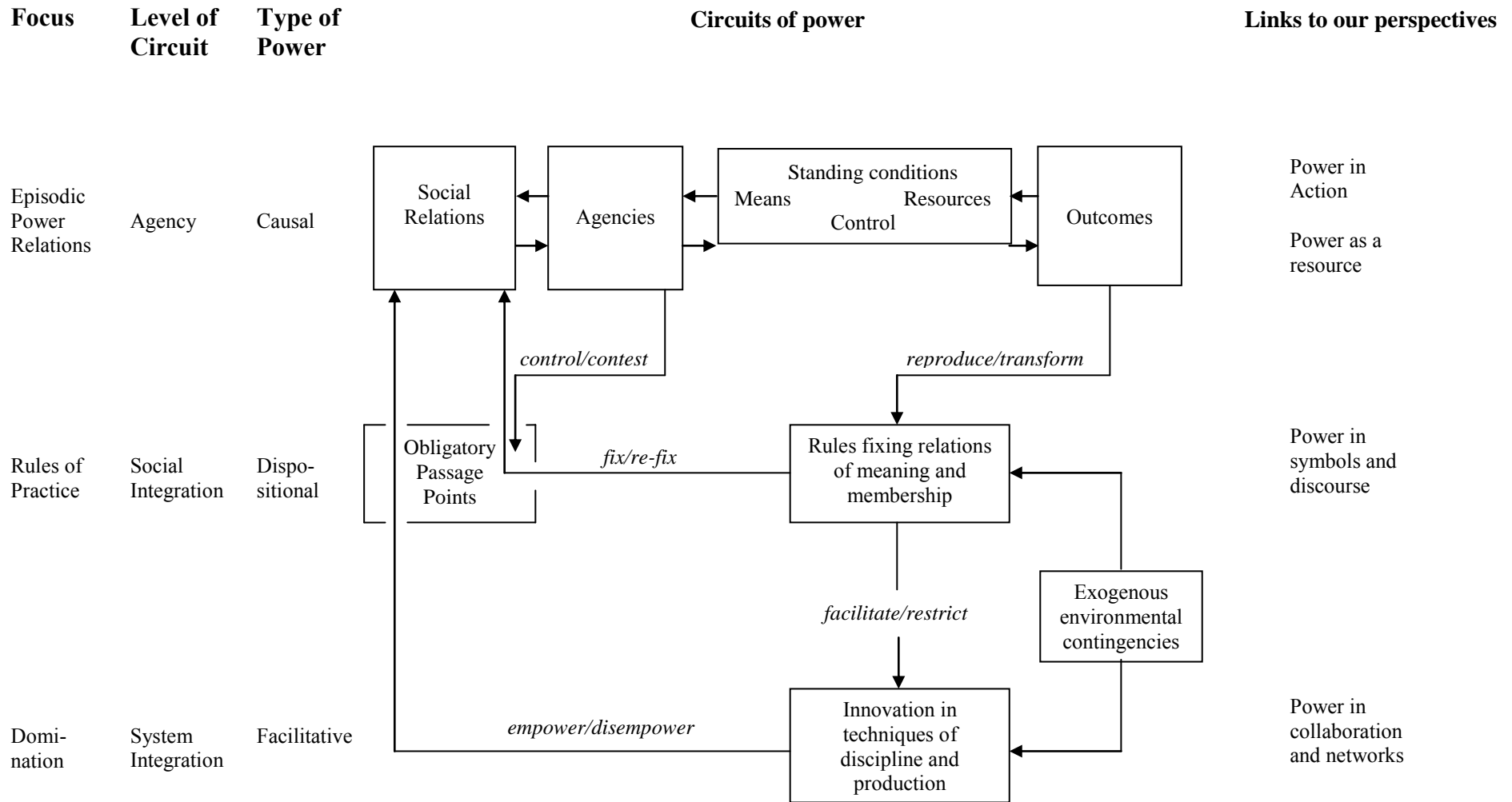- Power in collaboration and networks

Figure 3. Associations between Clegg's analytical framework of power and our perspectives on power. (Adapted from Clegg, 1989, Figure 8.1, page 214).

6.3 Circuits of agency

Clegg stretches the concept of 'agency' to cover a number of different forms. Agency is something which is achieved and it is achieved by virtue of organisation, whether of a human being's dispositional capacities or of a collective nature, in the sense usually referred to as 'organisations'. Agency may often refer to collective forms of decision-making. It may be vested in non-human entities as diverse as machines, germs, animals and natural disasters. These may be agencies under the appropriate conditions, as proposed by Actor-Network Theorists (see Section 4.4 above). Clegg is particularly concerned about organisational agency. He considers organisations as loci of decision and action.

Within circuits of 'agency', the type of power exerted is causal and the focus is directed at episodic power relations. This corresponds to the perspective of Power in action, where actors achieve their objectives against the preferences of other actors and where power is manifested in actions that takes place at specific points of time. Power which proceeds at the circuits of agency level is the most apparent, evident and economical circuit of power, it is 'power over'. We may think of this as the world of Dahl and Hernes (see Section 3.1 above). In this sense circuits of agency are also linked to the perspective of Power as a resource, i.e. something that an agency has or possesses.

Episodic power is seen to derive from the capacities of agents grounded in resource control. The constitutive relations[29] which prevail between agents can be seen to determine the nature of resources. Power, when viewed episodically, may move through circuits in which rules, relations and resources that are constitutive of power are translated, fixed and reproduced/transformed. Episodic power may be conceived as occurring within a reasonably well delimited framework in which there are systematic relationships between agencies and events. Systematicy derives from agents' differential control over and interest in events and each other. The reference is only to the representations of interests which agencies make (Clegg, 1989:212).

The two defining elements of any power system are agencies and events of interest to these agencies. A principle of action may be specified whereby agencies act so as to gain control of those events in which they have interests. The way in which actors gain control of those events that interest them is to give up control over those events over which they have little or no interests (Coleman, 1977:184). They engage in exchange such that each agency has control over events that interest that agency, subject to the resources with which that agent began: that is, the control over events held as a resource capacity at the outset. We outlined this conception of power in Paragraph 3.1.2.

Existing social relations constitute the identities of agencies, whether individuals or some collective loci of decision-making and action (Clegg, 1989:215). Agencies' causal power will be realised through the organisation of *standing conditions*. These require that agencies involved in so called 'arenas of struggle' are capable of utilising means in order to control resources which have consequential outcomes for their scope of action. Standing conditions may enable or restrict the causal powers of a specific agency in a specific episode.

---

[29] The word constitutive is used with different meaning in different fields:
http://en.wikipedia.org/wiki/Constitutive: The term "constitutive" might refer to:
- In physics, a constitutive equation is a relation between two physical quantities
- In cell biology, a constitutively active protein is a protein whose activity is constant and active
- In ecology, a constitutive defense is one which is always active, as opposed to an inducible defense.
- Constitutive theory of statehood
- In genetics, constitutive refers to a gene product made all the time. I.e. in the absence of the activator or the repressor, RNA polymerase transcribes the gene constitutively.

Clue translates constitutive into Norwegian like this: adj. (jus) konstituerende, oppbyggende, konstruktiv. adj. konstitutiv, vesentlig, fastsettende

Episodic power will invariably be accompanied by resistance (Clegg, 1989:215), which is indicated in Figure 3 by pairs of arrows connecting the boxes in the model of episodic power relations. Those pointing to the right indicate social relations constituting agencies, agencies utilising standing conditions, and standing conditions utilised by agencies causing outcomes. The arrows pointing to the left-hand side indicate resistance.

One example to illustrate circuits of 'agency' type of power can be the power relations between the employer and the employee. The employer controls money that the employee may be dependent on and that give them power over the employees to make them work. The employee or workers' union might control work force or knowledge that the employer might be dependent on. This might give them power to resist exploitation by the employer. The agents, money and work force or knowledge might depend on standing conditions and constitutive relations such as currency, agreements, contracts and laws and regulations. Choices of technology might define standing conditions such as relevance of and dependency on skills and knowledge.

In Paragraph 3.1.2 we suggested that the Norwegian authorities may use their control of the distribution of licenses for petroleum exploration as a power resource in their dealings with the oil companies. In this context we may think of oil prices and the likelihood of finding oil or gas in the blocks that have not yet been distributed as standing conditions.

6.4   Circuits of social integration and circuits of system integration

The two other circuits of power are the circuits of social integration and the circuits of system integration that Clegg has derived from David Lockwood (1964). Through circuits of social and system integration stable relations of episodic power are reproduced. This account may help us understand how Power in collaboration and networks and Power in symbols and discourse may form or influence the settings in which Power in action and Power as a resource are unfolded.

6.4.1   Relationship to episodic power; fixing and stabilizing on obligatory passage/nodal points

The circuits of social and system integration are conceptualised as the pathways through which fields of force are fixed and stabilised on 'obligatory passage points' in the circuits of power (Clegg, 1989:224). Clegg uses the term fixing to convey the idea of a representation being developed and realised in a fixed form, as in a photograph. The term 'obligatory passage points' is used interchangeably with the term 'nodal points'. The two latter concepts are meant to refer to the construction of a conduit[30] through which traffic must necessarily pass. Power consists in part in the achievement of this positionality.

What the actual conduits will be cannot be specified in advance, but they will be contingent on what flows trough the circuits. They constitute the field of force in which episodic agency conceptions of power are articulated. Fixing these fields of force is achieved through enrolling other agencies such that they have to traffic through the enrolling agencies' obligatory passage points. Hence, power involves not only securing outcomes, which is achieved in the episodic circuit of power, but also securing or reproducing the 'substantively rational' conditions within which the strategies espoused in the circuits of episodic power make contextual good sense. (Clegg refers to Biggart and Hamilton, 1987 and 1984; Hamilton and Biggart, 1985 and 1984; Hamilton, 1986 for complementary discussions of 'substantive rationality').

---

[30] According to *Encarta Dictionary: English (North America)*, the term "conduit" may refer to (1) a channel for liquid, (2) a protective cover for cable and (3) a conveyor of information.

As mentioned, Clegg considers organisation as essential to the achievement of effective agency. The reason is that he finds organisation to be the stabilizing and fixing factor in circuits of power. His concern is how the field of force in which power is arranged has been fixed, coupled and constituted in such a way that certain nodal points of practice are privileged, even under changing conditions. Nodal points can be seen as points of connection between agencies that function as channels through which traffic between them occurs.

The fixing, coupling and constitution may happen intentionally or unintentionally. The issue at stake is to identify the strategies and practices whereby, for instance, agents are recruited to views of their interests which align with the discursive field of force that the enrolling agency is able to construct. Clegg pays special attention to strategic agency. This means that agencies interested in maximising their strategicality must attempt to transform their point of connection with some other agency or agencies into a 'necessary nodal point': this would be a channel through which traffic between them occurs on terms which privilege the putative strategic agency. To achieve strategic agency requires a disciplining of the discretion of other agencies.

An illustration of this can be derived from the development of the tripartite collaboration within the Norwegian Petroleum industry on Health, Safety and Environment (HSE) issues around the entrance to this millennium (For a more thorough description, see Moen et al. 2009). The patterns of tripartite collaboration between authorities, employers and employees in Norwegian working life is a distinctive feature of the "the Norwegian model" (Ravn & Øyum, forthcoming; Andersen, Torvatn & Forseth 2008; Engen & Lindøe 2008). The Norwegian work environment legislation prescribes close collaboration between workers and employers and it involves significant restrictions of the management prerogative of the employers (Ryggvik 2008 b).

This tradition of tripartite collaboration on HSE issues in the Norwegian petroleum industry threatened to disintegrate in the late 90s. Union representatives claimed that HSE conditions had eroded after a period of intensive cost-cutting, whereas several industry representatives claimed that HSE conditions had never been better. Norwegian Petroleum Directorate (NPD) supported the trade unions and their view of the risk level.

During this period of conflict and different views a parallel and connected process of consensus building and collaboration took place. One important measure in this consensus process was the establishment of Safety Forum, a joint tripartite arena for collaboration between the participants. In an article, the newspaper "Dagens Næringsliv" recaptures the history (Næss 2000): In mid June 2000 LO Industries (an employee organisation) took an initiative to establish a special safety council for the oil industry. The initiative was grounded in concerns within Norwegian oil and petrochemical worker's union (NOPEF) and NPD about the safety of the oil industry. On July 3, 2000, the Minister for Local Government and Regional Development, Sylvia Brustad, responded to the initiative and called NOPEF and the LO Industry to settle the establishment of the Safety Forum (Næss 2000). During the following fall the Safety Forum was established as a tripartite forum. By establishing a new arena for cooperation, the Minister used a change of organisational structure to consolidate the power of the authorities and to influence the way the parties interact. This step also created commitment to cooperation. It was difficult for the parties to refuse to participate in this forum, and once they participated, they had to commit themselves to contribute a process leading to less antagonism and more intensive cooperation. A more cooperative climate gradually emerged from year 2000. The establishment of Safety Forum can be seen as an attempt to construct an obligatory passage point enrolling the interests of the authorities, the employers and the employees. The Safety Forum became an organisational field in which agencies were defined, and simultaneously obliged to remain faithful to their alliances and the overall purpose with the forum, i.e. the work for increased safety in the Norwegian Petroleum industry.

6.4.2 Circuits of social integration

Within circuits of social integration the type of power is dispositional[31]. Social integration is understood in terms of relations of meaning and membership. The focus is directed at rules of practice and the circuit is conceptualised in terms of rules that fix and refix relations of meaning and membership. This part of the model provides a link to the perspective of Power in symbols and discourse. Whether relations of meaning can be fixed in organisationally stable forms across the many diverse sites of potential struggle will be highly dependent on *exogenous environmental contingencies*.

Clegg's conception of the links between the circuits of agency and the circuits of social integration incorporates many ideas from Actor-Network Theory as described in relation to the perspective of Power in collaboration and networks (Section 4.4). Clegg argues that a conception of rules is essential to an adequate understanding of power. Rules of practice are the centre of any stabilisation or change of the circuitry. According to Clegg, the characteristic mode of organisational change in the circuit of social integration is what Meyer and Rowan (1977) term institutional isomorphism[32]. Certain fixtures of meaning are privileged and certain membership categories are aligned with these meanings. Consequently, a specific organisational field or an 'actor network' is constructed. An 'actor network' concerns the interrelated set of entities successfully translated[33] by an actor. The achievement of episodic power will consist,

- first in constituting a relational field by 'enrolling' other organisations' agencies;
- second, in the 'stabilizing' of a network of power centrality, alliances and coalition among agencies within the field;
- third, in the 'fixing' of common relations of meaning and membership among the agencies within that field, such that they are reflexively aware of their constitution as a field.

Clegg (p 204-205) discusses how networks of interests are actually constituted and reproduced through conscious strategies and unwitting practices constructed by the actors themselves. With reference to Callon and Law (1982) he states that interests appear as "temporarily stabilized outcomes of previous processes of enrolment". Enrolling others to one's conception is a strategy in which formulation of one's own and others' interests may play a strategic role. It is one of the devices whereby we attempt to stamp our agency on others and other things through constituting networks of power.

Clegg (p 204) points at the work of Machiavelli, whose method was to map how agents actually "translate" phenomena into resources, and resources into organisational networks of control, of alliance, of coalition, of antagonism, of interests and of structure. "Translation" refers to the methods by which these outcomes are accomplished. Clegg refers to Callon (1986) who has identified four 'moments' of translation (Clegg, 1989, p 204):

- The first is 'problematisation', which involves the attempt by agents to enrol others to their agency by positing the indispensability of their "solutions" for (their definition of) the others' problems: this is achieved when these others are channelled through the "obligatory passage points" of practice which the enrolling agency seeks to "fix". Problematisation seeks to construct "hegemony" by fixing what Laclau and Mouffe (1985) call "nodal points" of discourse.

---

[31] http://en.wikipedia.org/wiki/Dispositional: A **disposition** is a habit, a preparation, a state of readiness, or a tendency to act in a specified way

[32] In sociology, an **isomorphism** is a similarity of the processes or structure of one organization to those of another, be it the result of imitation or independent development under similar constraints. There are three main types of isomorphism: normative, coercive and mimetic. http://en.wikipedia.org/wiki/Isomorphism_(sociology)

[33] The term "translation" is used in a sense similar to the usage in Actor Network Theory, see Paragraph 4.4.2.

- The second is termed 'intéressement' (Clegg, 1989: 205). This can be defined as the process of "interesting" or "enrolling" another agent to one's own agency: one agency "attracts a second by coming between that entity and a third. Intéressement is thus a transaction between three entities. It seeks to achieve the "fixing" or "locking in" of membership and meaning in certain "categorization devices".

- The third moment is termed 'enrolment'. This is the process whereby agencies seek to construct alliances and coalitions between the memberships and meaning which they have sought to fix.

- The fourth is 'mobilisation', which refers to the set of methods that agencies use to ensure that the representations of interests which other enrolled agencies make are in fact themselves fixed, that the agencies in question do not, as it were, betray or undercut their representatives and representations.

Clegg (p 225-226) proposes that issues of social integration, achieved through fixing rules governing relations of meaning and membership, become more predominant both within organisations and in organisation fields as they age. The fix is achieved by agencies exhibiting isomorphism in their adoption of innovation. The field becomes stabilised on certain rules of practice guiding innovation, such that membership and meaning characteristics tend towards a norm. However, all norms are temporal, not eternal. Even though agencies may try to innovate constantly, the aggregate effect of these many individual agency changes may well be to lessen the diversity of the field of organisations: their membership and meaning characteristics in terms of personnel, formal structure, culture, goals etc. tend towards homology, at least temporally. Institutional isomorphism concerns how an innovation, once made, becomes widely adopted throughout organisations in a specific field. What becomes institutionalised depends precisely on the power of agents' 'translation'.

Of special interest for the project of Robust Regulation is the conclusion of Clegg (p 227-228) that coercive pressure tends to come from centrally configured agencies in the organisation field and will be applied to dependent relations in the network. Changes of whatever kind are required by agencies are baled (bundled), as a result of existing configurations of episodic power relations, to demand their implementation. Obvious examples of these would be state legislation or routines requiring an organisational response, such that organisational structures stabilise and are fixed on rules institutionalised by state agencies. All forms of standardised reporting, coordinating or control mechanisms within a circuit of social integration will tend to reproduce existing configurations of power within a given organisational field. In order to secure resources from the environment, agencies may well have to conform to those rule practices which the nodally positioned agencies in that environment require before they will ensure that the resources are forthcoming. If agencies want certain resources then they will have to do certain things, adopt certain practices.

6.4.3 Circuits of system integration

The 'circuits of system integration' are conceptualised in terms of techniques of discipline and production. The power passing through these circuits is of the facilitative type. The focus of attention becomes domination, i.e. empowerment and disempowerment of agencies' capacities. These capacities become more or less strategic as transformations occur which are dependent on changes in techniques of production and discipline. Clegg considers the two concepts of discipline and production as inseparable. Here we see parallels to the perspective of Power in collaboration and networks.

Clegg argues (p. 224) that the circuit of system integration cannot escape relations of meaning and membership. This circuit has to be fixed on obligatory points of passage through these if it is to have any effectiveness. It functions as a potent source of resistance to the stabilisation of existing memberships and meanings by generating new techniques of production and new modes of discipline, which, if they are not

already present within existing rules of practice, have the capacity to transform these. Existing structures of dominancy are thus in principle always open to subsidence, disruption and innovation.

The purposeful organisational agency must in the first instance depend on the subordination of the constitutive individual parts of the organisation. It is the ever variable achievement of this subordination which stands at the centre of any collective organisational agency. All forms of agency will be an achievement of control produced by discipline. With reference to Foucault (1977) and Weber (1978) Clegg uses the term "disciplinary practices" to render those micro-techniques of power which inscribe and normalise not only individuals but collective, organised bodies. One important example of disciplinary practices is surveillance ("oppsyn, overvåkning") in a broad sense.

Clegg (p 219) uses the word 'force' that he conceptualises in terms of that configuration of both power and knowledge which Foucault (1977) terms 'disciplinary power'. The purpose of force is to secure outcomes which cannot be achieved through circuits of social integration, particularly against those constituted as 'others' or as 'outsiders' in terms of their membership.

Clegg finds that system integration, premised on disciplinary techniques of production, will be a potent source of transformation and strain, posing new conduits (channels), new obligatory passage points which extant stabilisations of social integration may find difficult to escape or resolve. It will do this primarily through the production of new organisational forms. System integration will thus be the loci of potential instability and transformation, developing through the specific forms constructed around the core techniques of production and discipline.

The transformation of a given configuration of episodic power capacities has three distinct processes involved in it: variation, selection and retention.

- 'Variation' concerns sources of differences in techniques of production and discipline. The probability of disempowerment of an agency depends greatly on the position that that agency has constructed in the existing network configuration of episodic power as well as in the circuits of social integration. Innovation may be a result of either strategic action or environmental change.

- 'Innovation' may depend on factors which at the time were wholly contingent. However, not all sources of change will be selected. Organisations fitting environmental criteria are positively selected and survive, while others either fail or change to match environmental requirements (Aldrich 1979:29). Selection will occur through relative superiority in controlling and deploying resources, where control will usually be achieved through some extension of both inter- and intra-agency power.

- 'Retention' is favoured by reproduction of the selective variation. Rules of practice are at the core of games of power.

Clegg finds that it is not only as a result of struggles which occur explicitly over relations of meaning and membership that social change occurs. It can also be a function of those changes in the process of innovation which always pose potential transformations for the extant structuring of empowerment and disempowerment, dependent upon extant techniques of production and discipline. The techniques are not only carriers of innovation but almost invariably bearers of domination. Thus domination is never eternal, never utterly set in time and space: it will invariably be subject to processes of innovation which may as readily subvert as reproduce its functioning.

Accordingly, the circuit of system integration is altogether more dynamic and unstable than the circuit of social integration. System integration is a circuit of power which introduces a potent uncertainty and

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

75 of 99

dynamism into power relations, by offering opportunities for empowerment and disempowerment, through the development of techniques of production and discipline. Agencies have to be able to position themselves in order to control the 'nodal' or 'obligatory passage points' that system (and social integration) circuits potentiate. Techniques of production and discipline generate pathways through emergent issues which can, through the construction of networks of alliance and control by agencies, become a new set of standing conditions redefining both social relations and agencies' causal powers. Whether or not these are realised becomes contingent on the construction of those alliances and networks which can sustain the standing conditions.

For the project of Robust regulation the associated discussion of Clegg (p 193-198) about organisation and agencies is of particular interest. He demonstrates how incorporation and disciplining of agencies within organisations may be secured by different mechanisms such as contractual agreements, relations of meanings or relations of production. For example, organisations may be staffed by people who may be differentiated in terms of their variable control of different methods of production or ownership of means of production (e.g. the various occupational groups in the petroleum sector, and the employers, organised in their respective unions and associations). The different aspects of differentiating might be associated with specific "rules of the game" (for instance different views of the "rules of the game" by trade unions and employers, leading to different reactions and different conceptions of reality). Furthermore, he illustrates how structural differences of contexts have a major effect on the availability or not of discursive formulation of membership conditions of organisations in terms of categories of "interests" and how the concept of "interests" are a variable discursive formulation (for instance the intervention of the government and the media in the situation of distrust and a poor climate of cooperation). He also illustrates that people can be both subjects and subjected to differential and related social identities (for instance skilled worker and employee representative). Identities form relational complexes which function as major limits on the discretion of organisational action. (Various actors in e.g. Safety Forum may join forces if they have common interests, as when the trade unions joined forces and obtained support from the government, and thus restricted the possibilities for the employers to promote their conception of reality.) Discretion might be thought of in terms of who may do what, how, where, when and in which ways to whatever objects or agencies (for instance the clarification of roles and rules of the game between employers and employees, for instance in the work environment committee in Safety Forum, clarification of roles between the work environment committee and the safety representative). Customary and sometimes legally specific identities will be prescribed or proscribed for certain forms of practice, for instance how meetings in the work environment committee or Safety Forum are conducted. Embodied identities will be salient only inasmuch as they are socially recognised and organisationally consequential (for instance employee, employer, safety representative, employee representative). He finds that the problematic of "power in organizations" does not centre on the legitimacy or otherwise of subordinates' capacities, as in a more conventional view. On the contrary, it centres on the myriad of practices which inhibit authorities of becoming powers by restricting action to that which is "obedient", not only prohibitively but also creatively productively (for instance how "obedient" employees can work in relation to central authorities to restrict employers or raise demands on employers).

6.5 Reification of power and resistance

According to Clegg the greatest achievement of power is its reification (p 207). This is when power is regarded as thinglike, as something solid, real and material, as something an agent has. Clegg argues that episodic power that makes only one circuit and does not enter into other circuits of power is not restricted compared to instances that involves the other circuits. On the contrary, it is effective and economical. The reason is that it has no need to struggle against relations of meaning and membership, nor to institute new disciplinary techniques of production or of force. To the extent that power stays purely within the episodic circuit it automatically reproduces the existing configurations of rules and domination because it challenges neither social nor system integration and thus cannot innovate. Such one dimensional power can overwhelm resistance that remains in that circuit. In such occasions there is both more difficulty at stake for resistance than for power and more incentive to switch out of the episodic, taken-for-granted circuit of power.

According to Clegg, this incentive may provide motivation, but it will rarely be either the mother of invention or the reshaper of meaning. Questions of transformation arise only when practices of rule and/or existing techniques of domination are challenged. Under such conditions it may well be that the relational field which constitutes agencies, means of control, and resources is reconfigured.

Reified power will rarely if ever occur entirely without resistance. Power and resistance stand in a relationship to each other. Clegg refers to Barbalet (1985) who considers resistance to be "efficacious influence of those subordinate to power". Accordingly the power of an agent will always be less than the capacities that agent mobilised when attempting to achieve a specific outcome.

Clegg suggests that resistance to power may be of two kinds. One is 'organizational outflanking' a concept that he has taken from Mann (1986). 'Organizational outflanking' is resistance to power that consolidates itself as a new power and thus constitutes a new fixity in the representation of power, with a new relational field of force altogether. The other type of resistance is the one that leaves unquestioned the fixity of the terms in which the power is exercised; it merely resists the exercise and not the premises that make the exercise possible. In this respect resistance is compatible with reification and the exercise of power. What is reified is the fixity of power terms, the representation which constitute it as such, centred on particular obligatory passage points.

With reference to Mann (1986), Clegg uses the concept 'organisational outflanking' to explain why the dominated tend to comply rather than to revolt. This is due to their lack of organisational resources to outmanoeuvre existing networks and alliances of power and because the dominated often have limited capacities to develop effective collective organisation for resistance. They are embedded within collective and distributive power organisations controlled by others and are thus frequently 'organisationally outflanked'. Effective agency invariably implies organisation of other agencies in a process implicit to 'translation'.

Clegg thinks of organisational outflanking in at least two related ways: one concerns the absence of knowledgeable resources on the part of the outflanked, the other concerns precisely the resources that the organisationally outflanked may know only too well. Clegg points at the most evident absence of knowledge: ignorance. Here the relatively powerless remain so because they are ignorant of the ways of power such as matters of strategy or fail to recognise the games going on. They may also lack knowledge of other similar powerless agencies or face difficulties in coordinating resistance for instance due to isolation or division by different means. Second, he argues that routine relations, agencies, means, standing conditions, and resources are likely to endure if the organisation of concerted action cannot be attempted or envisaged as a feasible form of resistance. The resources will be judged to be unavailable or insufficient to overwhelm extant circuits of power.

Because the pathways of the circuits of social and system integration, as fields of force, will be carried by organisation, 'organisational outflanking' is basic to both social control and social change. Hence each of the circuits of social and system integration will have to reproduce stable relations of episodic power, through fixing obligatory passage points, if they are to reproduce the extant organisational carrying capacity.

6.6 Rules and ruling

Clegg (p 201) pays special attention to rules and ruling. He argues that power will always be inscribed within contextual "rules of the game" which both enable and constrain action. These rules may be taken to be underlying rationale of those calculations which agencies routinely make in organisational contexts. Actions in formal organisations are typically designated as such-and-such an action by reference to rules which identify it as such. Such rules can never be free of surplus or ambiguous meaning: they are always

indexical[34] to the context of interpreters and interpretation. Where there are rules, there must be indexicality. This implies that rules can never provide for their own interpretation. Issues of interpretation are always implicated in the processes whereby agencies instantiate and signify rules.

"Ruling" is an activity (Clegg, 1989:201). It is accomplished by an agency as a constitutive sense-making process whereby meanings are fixed. According to Clegg, both rules and games necessarily tend to be subject of contested interpretation, with some players having not only play moves but also the refereeing of these as power resources. Consequently, where rules are invoked there must be discretion. Thus, resistance is inherent in the regulation of meaning.

Clegg discusses the relationship between rules and power (p 209). He argues that in social games, rules will be rather fragile, ambiguous, unclear, dependent on interpretation, and subject either to reproduction or transformation depending on the outcome of struggles to keep them the same or to change them this way or that. The idea that traffic lights can cause traffic to stop makes sense only with reference to a set of explicit and implicit rules with which there is a widespread familiarity within a jurisdictional universe. Jurisdiction implies the probability of sanction of its breach in this formulation. "Rules are not absolute; they are open to diverse interpretation. Moreover, not all interpretations are equal" (p. 209). Drawing upon metaphors from chess, Clegg shows that power that is derived from rules of the game require that the basis of these rules is established. The question becomes on what basis are dispositional powers fixed so that the capacity to act is rooted and routinised? This question represents a move into the circuit of dispositional power. Clegg refers to Saunders (1979, p 61) who has pointed out: "it is not simply that powerful actors have greater scope in their permissible actions, but also that they can authoritatively reinterpret (within limits) what the rules mean".

In regarding behaviour as a specific type of social action which can be said to have been intended to be such and such an action, Clegg (p 210) argues that we necessarily make reference to our interpretations of social actions by reference to social rules. In many of the social games, the rules may not be clear and the players may be playing different games unknowingly or unthinkingly. One way of resisting power play is not even to acknowledge the game that one thinks that the other thinks is being played. A major strategy for resistance will always be to try to resist the meaning in which one is being implicated by the other's moves. If intentionality requires reference to rules on this account, one should have equal recourse to discussion of rules in order to provide an appropriate concept of causality. The effects of rules such as traffic rules are contingent on a rule being reproduced by being widely obeyed by those who should be subject to it. It is, in this sense, a normative rather than a causal imperative. It will be reproduced for just as long as people choose to obey it. One can easily imagine extraordinary situations of panic or lawlessness in which rules might not be reproduced. Clegg (p 211) provides examples such as war, a natural disaster such as an earthquake, or widespread social upheaval. In the field of safety within the petroleum sector, one might think of situations where improvisations prevent accidents but represent rule violation. Social causality is introduced by Clegg to distinguish a conception of causality that is different from the implicit model of Humean causalitity which was found in Dahl's stress on event causation (see Paragraph 3.1.1 above). Choice is essential to rules, irrelevant to law of a Humean kind (1976, Harré 1970, Clegg, 1979).

6.7 Developments and potentials for change

Changes in both social and system integration may be either endogenous or exogenous, i.e. they start either inside or outside the social system (Clegg, 1989: 24). Endogenous changes occur as a result of episodic power outcomes achieving either transformations in the rules that fix relations of meanings and membership or enhancement in the processes of innovation of techniques of production and discipline. Exogenous change occurs when environmental contingencies disturb the fixed fields of force of the circuit of either social or

---

[34] http://en.wikipedia.org/wiki/Indexicality: Anything we can construe as a sign that points to something – including a weathervane (an index of wind direction), or smoke (an index of fire) – is operating indexically

system integration. These circuits may thus be disintegrative as well as integrative. The obligatory passage points represent the securing of particular 'indexical' interpretations of the rules of membership and meaning.

In circuits of social integration, institutional isomorphism will tend to reproduce dispositionally existing fields of force. The circuit of system integration will tend to facilitate innovation. System integration, premised on techniques of production and discipline which are innovated under imperatives of competition and environmental efficiency, will tend to be a potent source of transformation and strain. It will open up for opportunities both for resistance under existing rules and for changes in the rules, changes which can create new agencies, new handicaps and new advantages, and new pathways through existing fields of force. Before any such changes can take place, however, there has to be an effective organisation on the part of any agencies which aspire to strategy. It is in conceptualising this that Clegg finds Mann's conception of 'organizational outflanking' to be useful.

6.8 Reflections on the post modern society

At the end of the book, Clegg applies the framework to make some reflections on the post-modern society that we have found relevant for the project of robust regulation. He argues that in the past, power centred on stabilizing and fixing obligatory passage points for the stable organisation of production and state management (p. 273). It centred on 'domination'. The fixing of this domination was 'legitimation'. He argues that the privileged pathways were the modern state, organisation and market.

However, Clegg argues that "for most of the postmodern world, there are indications that of these central institutions it is the market which has emerged as the dominant term of the trinity, the architectonic around which both the state and organization have come to be articulated. … Moreover, in much of the world it is no longer clear that rationality, as it might once have been considered, is an appropriate category with which to study political action" (p. 273). He refers to Bauman (1988:807), who "argues very clearly that the shift to post modern society is premised on the replacement of older modernist and intellectual notions of rationality with the reality of the marketplace as the privileged pathway through which all traffic increasingly must pass. … While, in the era of modernist power, the central focus and problems concerned stabilizing the obligatory passage points of state and organization generally on issues of disciplined work, production and surplus, in both the state and economy, in post-modernity the pathways would seemingly have become far more plural and diverse. … Where domination no longer requires legitimation, power can shift increasingly out of circuits of repression and prohibition into more production and positive forms" (Clegg, 1989: 274).

As a consequence, the focus of post-modern power shifts from the episodic agency circuit, to the dispositional and facilitative circuits. Power comes to be oriented "to focusing on proliferating and endlessly reproducing privileged pathways, only to devalue them deliberately with the next conceit" (Clegg, 1989: 274). In a consumer society seduction becomes the paramount tool of integration according to Bauman (1988).

Clegg goes on and argues that:

> In the post-modern world, power consists less in the control of the relational field of force in each circuit and more on the way in which the obligatory passage point of the market has become a 'black hole', sucking in ever more agency and spewing out an ever more diffuse power as the pursuit of things becomes an encompassing passion. When things are needed so much for their own sake, for what they can only ever fleetingly signify, power can be relaxed in terms of its repressions, except at the margins of post-modern life…" (p. 275).

Clegg ends his discussion about the post-modern world by asking whether forgetting of power may yet be the 'fate of our times?'

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

79 of 99

This raises some questions to the project of "Robust regulation". One is whether the national authorities must function on the premises of the market. Follow up questions are whether the power of national authorities will not be respected or even outflanked? Furthermore, as the market is international, how can authorities on the national level hold a strong position?

6.9   Advices for the use of the framework

It is worth noting that even though Clegg positions circuits of agency at the highest level of the circuits, he argues that the agency is not an appropriate point of departure for an analysis of power. Instead he advises to start with social relations that constitute effective agency, particularly where it is organisational in form (Clegg, 1989, p 207). It is necessary that the relational focus considers the relational field of force in which power is configured. One aspect of this configuration is the social relations in which agency is constituted. Power is seen as a phenomenon that can be grasped only relationally.

Clegg (p 209) finds that there is little point in constructing a priori abstract lists of specific resources as power resources. Whether they are power resources depends on how they are positioned and fixed by the players, the rules and the game. This point is at the centre of the translation approach. The central questions become:

- How is the constituting, fixing and re-fixing of certain obligatory passage points secured?
- By what means is organisational outflanking, the central mechanism of social transformation, secured?

From our point of view the framework of Clegg can be used as a tool to construct narratives about current regulation activities demonstrating circuits of power, their interactions and in particular their nodal points and how these develop and become fixed. Another opportunity is to use it as a tool to reveal potential nodal points within the oil sector where the authorities are not represented/are represented and the potential of these points to influence the situation with respect to safety. There is also a potential to reveal why and how certain actors influence the development.

7 Discussion and conclusions

7.1 Four overlapping perspectives on power

When working with this report, the authors had repeated discussions on how to group theories of power into a manageable set of perspectives. It was not obvious what set of perspectives would be helpful in making sense of the literature. Neither was it obvious, once we had decided on the perspectives, where the different theories fitted in. It was clear that the four perspectives that we had identified were not mutually exclusive. A theory may contribute to more than one perspective and still be consistent.

This absence of clear-cut and mutually exclusive categories may be confusing at the outset, but it may also help us reflect on how the perspectives and theories are related. **Figure 4** provides an overview of the four perspectives on power and how some of the theories we have reviewed fit into the perspectives.
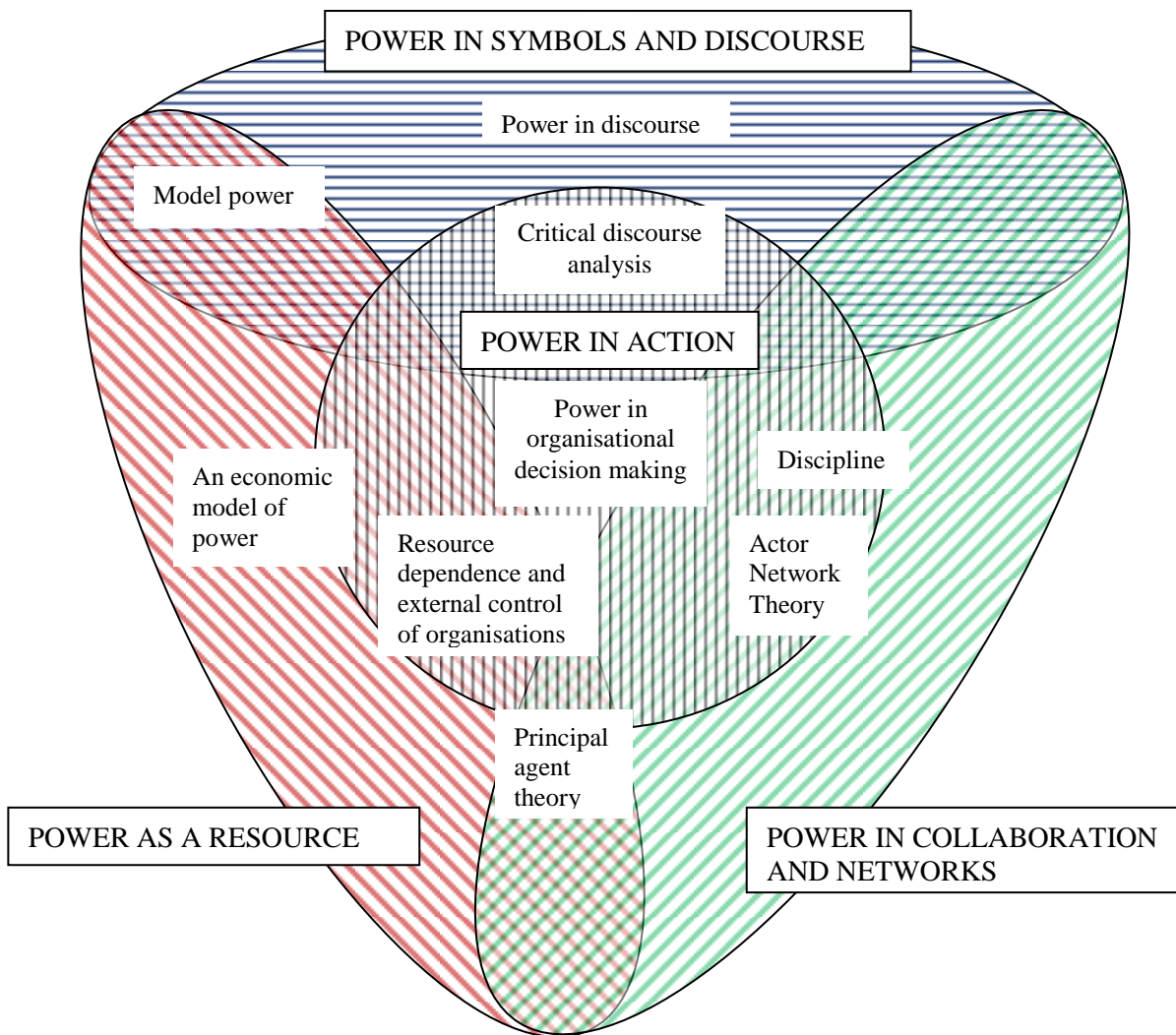
Figure 4. Theories mapped onto four overlapping perspectives on power.

The first perspective, "power in action", is represented by the circle in the centre of the figure. The three other perspectives, "power as a resource", "power in collaboration and networks" and "power in symbols and discourse", are represented by three ellipses. We have then mapped the different theories onto this representation of the perspectives:

- Pfeffer's outline of *power strategies and tactics in organisational decision making* fits right into the centre of "power in action".
- Hernes' *economic model of power* considers power as a resource which one actor can deploy to make another actor do something he would not otherwise do.
- Pfeffer and Salancik's work on *resource dependence and external control of organisations* views power as a resource, when it discusses resource dependences. However, this Pfeffer and Salancik also discusses the strategies and tactics that organisations may use to manoeuvre when they are

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

82 of 99

exposed to conflicting demands from external actors. Therefore this work fits into the perspective "power in action" as well.

- *Principal-agent theory* may be viewed as an extension of the economic model of power, as it prescribes how a principal may use his control of resources that are of interest to the agent as a source of power. At the same time, it may contribute to understanding power in collaboration and networks, because it proposes means to align the interests of different actors (the principal and the agent).

- Bråten's theory of *model monopoly* views power as a resource which enables one actor to dominate another actor. The theory is clearly also concerned with power in symbols and discourse – one of the keys to establishing and breaking a model monopoly is to redefine the delimitation of the domain of discourse.

- The work on *discipline* by Foucault and others is clearly concerned with power in collaboration, but it also displays power in action.

- *Actor-network theory* analyses power in terms of networks of heterogeneous materials, but it is also concerned with power in action – i.e. the things actors do to fit together and stabilise networks which serve their purposes.

- *Foucault's work on discourse* is obviously concerned with power in discourse. In this contest, power is conceived as anonymous. It does not belong to a specific actor, and is thus not conceptualised as a resource which an actor can exploit to get another actor do things he would not otherwise do.

- Foucault's conception of power in discourse is part of the theoretical foundation for *critical discourse analysis*. Critical discourse analysis also aims to capture how specific discourses may reproduce and change knowledge, identities and social relations, including power relations.

We have not attempted to fit Clegg's model of *circuits of power* into a specific point in **Figure 4** because we read it as a synthesis which attempts to capture aspects of all four perspectives. The circuits of agency are concerned with power as a resource. The circuits of social integration capture aspects of power in discourse. The circuits of system integration capture aspects of power in collaboration. However, a direct mapping of Clegg's circuits of power on the four perspectives is a simplification, and it does not capture the way Clegg integrates the three circuits. For instance, Clegg's account of circuits of agency draws heavily on actor-network theory, which we have mapped to "power in collaboration and networks". Moreover, because Clegg conceives of power in terms of processes, the perspective "power in action" seems to pervade the whole framework, although it may be most salient in the agency circuits, which focus on episodic power relations. However, Clegg's account of power in action is much more complex than the Pfeffer's list of power tactics and strategies, which we discussed in Section 2.1.

7.2   The perspectives as a source of research issues and hypotheses

The purpose of compiling this outline of perspectives on power is to explore how various conceptualisations of power can help us understand the robustness of the risk regulation regime within the Norwegian petroleum sector. It is thus appropriate to conclude this report by proposing a number of research issues and hypotheses concerning the robustness of the Norwegian regulatory regime based on the four perspectives on power outlined in this report.

We have presented a preliminary list of such issues and hypotheses in **Table 2**. The research issues are formulated as questions, whereas the hypotheses are formulated as statements.

Table 2. Research issues and hypotheses based on the four perspectives on power.

Research topic	Power in action	Power as a resource	Power in collaboration and networks	Power in symbols and discourse	Issues that bridge two or more perspectives
How does the Norwegian regulatory regime handle disagreements and conflicts among the parties involved in tripartite collaboration?	What power strategies and tactics did the parties use during the controversies about the risk level in the Norwegian petroleum industry around year 2000?	Did the parties use their control of the interests of other actors to influence the outcome of the controversies?	Was the disruption and restoration of tripartite collaboration around the year 2000 associated with a change between transitive and intransitive power relations? How did Lisbeth Olgadotter Vattne establish herself as a significant actor in the controversy? (ANT-perspective)	Was the disruption and/or restoration of tripartite collaboration around year 2000 associated with changes in discourse or the introduction of new discourses?	
Implications of enforced self-regulation as regulatory principles		How does self-regulation influence the power of safety representatives and trade unions?	Does enforced self-regulation influence the approaches to coordination and discipline in the regulated organisations?	Did the introduction of self-regulation lead to new discourses that are systematically different from discourses reflecting the Nordic model?	
Formulation of regulations: prescriptive versus goal-oriented rules.	Use of goal-oriented rules can lead to conflicts between the companies and regulatory authorities concerning the interpretation of the rules. They can also lead to conflicts within company concerning the interpretation of the rules.	Use of goal-oriented rules can give more power to persons and groups in the companies who have the knowledge and authority to translate goal-oriented rules into prescriptive rules.	Can goal-oriented rules lead to conflicts concerning the legitimacy of the regulatory institution's interpretation of the rules?	Do goal-oriented regulations leave workers and their safety representatives in a position as model-weak actors?	A power struggle may arise between different knowledge traditions relevant to implementation of prescriptive rules versus interpretation of goal-oriented rules respectively. (Knowledge as a *resource* and knowledge as representing *power in symbols and discourse*.)

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

84 of 99

Research topic	Power in action	Power as a resource	Power in collaboration and networks	Power in symbols and discourse	Issues that bridge two or more perspectives
What are the implications of outsourcing and contracting for regulation of HSE in the petroleum sector?		The regulatory authorities have to deal with asymmetries of power between regulated groups and organisations.	Operators may employ economic incentives as a means to secure compliance with HSE regulations among their contractors. Such incentives may have unintended side effects (e.g. concerning reporting of undesired events). (Principal-agent theory)		
What regulatory issues arise as new categories of licensees and operators enter the Norwegian petroleum sector? How can these issues be analysed and handled?			What nodal points can the regulatory authorities approach when new organisational structures (e.g. drilling consortiums) are introduced?		
What threats and possibilities does the Deepwater Horizon accident bring about for the Norwegian risk regulation regime?		Can the expenses related to having a major accident lead investors to pay more attention to how oil companies deal with safety issues? Can this expand the power base of the regulatory authorities?	Can the Deepwater Horizon accident be used as a basis for strengthening the collaboration between the oil companies and the regulatory authorities?	Has the Deepwater Horizon accident led to the emergence of new discourses concerning safety in the petroleum sector? Can this have an impact on the effectiveness of regulatory strategies?	
How do the new trends in management ideology (e.g. Corporate Governance, Corporate Social Responsibility) influence the regulatory regime?		Can regulatory authorities derive power from their capacity to strengthen or weaken the reputation of companies in the petroleum (e.g. by publishing audit reports)? Should they use that source of power?	Can similarities between HSE requirements and CG principles give an additional incentive for companies to comply with HSE requirements?		

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

85 of 99

Research topic	Power in action	Power as a resource	Power in collaboration and networks	Power in symbols and discourse	Issues that bridge two or more perspectives
Implications of technological change, such as the introduction of integrated operations, for the regulatory regime		Does the introduction of new information and communication technologies change decision processes in a way that influences the opportunities for employees and their representatives to influence safety critical decisions? (e.g., more rapid decision making)		Can the introduction of new technologies lead to new model monopolies and changes in the balance of power between the stakeholders?	
What regulatory issues can arise as the petroleum resources on the Norwegian shelf are depleted?		Will the influence on the allocation of new licenses loose its significance as a source of power for the regulatory authorities?			

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

86 of 99

The elaboration of research issues and hypotheses is a major part of any research project. It is therefore beyond the scope of this report to elaborate each research issue and hypothesis in the table. We shall, however, comment on the first research topic, i.e. the handling of disagreement and conflicts among companies/employers' federations, trade unions and the regulatory authorities.

The patterns of tripartite collaboration between authorities, employers and employees in Norwegian working life is a specific feature of the so-called "Norwegian model". This tradition of tripartite collaboration on health, safety and environment (HSE) issues in the Norwegian petroleum sector threatened to disintegrate in the late nineties (Moen et al., 2009). Union representatives claimed that HSE conditions had eroded after a period of intensive cost-cutting, whereas several industry representatives claimed that HSE conditions had "never been better". A turning point occurred in year 2000, and a more cooperative climate emerged. The tripartite collaboration was "restored", in the wake of this change; new tripartite arenas such as "Safety Forum", "Regulatory Forum", and "Working together for Safety" were established. A major research project was initiated to help build a common perception of the risk level in the industry.

One may apply several perspectives on power to analyse the revival of the tripartite collaboration:

- Using the perspective "power in action", Moen et al. (2009) explored the tactics and strategies used by the parties (a) to defend their positions in controversies with the other parties, and (b) to reverse a trend towards disintegration of collaboration. They found that the parties continued to use a variety of power tactics even as they agreed to establish new arenas for tripartite collaboration. The Norwegian authorities went far beyond a narrow regulatory role when they took actions to revive tripartite cooperation and establish a consensus concerning the safety level and the need for safety. Moen et al. concluded that the capacity of the parties to build new trust even as they continue to fight for their interests, and the willingness of the authorities to intervene contributed to the robustness of the regulatory regime in the Norwegian oil industry.

- The perspective "power as a resource" leads us to examine the power base of the actors, in terms of their control of the interests of other actors. For instance, the regulatory authorities may exert an influence on the allocation of new licences for exploration and production. One may hypothesise that the "exchange value" of this control increases with increasing expected prices of oil. Consequently, the "bargaining position" of the regulatory authorities would be improved during periods when oil prices increase or are expected to increase. Another interest controlled by the authorities is the form and content of the HSE regulations. The regulatory authorities may, e.g., threaten to introduce stricter regulations, or to replace goal-oriented rules with prescriptive rules. The oil companies may threaten to reduce their activity level, and thus threaten employment both in their own organisations and in their suppliers' organisations. Such threats may appear particularly realistic when oil prices are low.

- The perspective "power in collaboration and networks" invites us to ask whether all parties can be said to have increased their power by turning from a confrontational to a collaborative mode of interaction. Can the transition to increased cooperation be conceived as a transition from transitive to intransitive power (Paragraph 4.1.3)? Does this interpretation add to our understanding of the robustness of the Norwegian regulatory regime? From the perspective on Actor-Network Theory, one may study how the mother of the victim of the fatal accident at Oseberg East on Christmas Eve 2000 established herself as a significant actor in the controversies concerning the safety.

- Using the perspective "power in symbols and discourse", we may examine whether impersonal power, inherent in symbols and discourse, played a role in the disintegration and revival of tripartite

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

87 of 99

collaboration. Did new kinds of discourse enter the arena, for instance in the aftermath of the fatal accident at Oseberg East on Christmas Eve 2000? This issue was explored by Forseth et al. (2010).

7.3 Implications for research on the regulation of HSE

In this section we shall comment on some of the opportunities and challenges that may arise if the perspectives on power outlined in this report are adopted in research on the regulation of HSE.

The introduction of several perspectives on power may allow researchers to create multilayer accounts of the phenomena they study. One may, for instance, start the study of a phenomenon by identifying important actors, the power tactics and strategies in use, and the power resources that the actors draw on (and perhaps some that they might have drawn on), and finally examine discourses related to the phenomenon. We should be prepared to find tensions between the accounts that can be produced using different perspectives. This can be illustrated by the competing accounts of the Challenger accident (Presidential Commission on the Space Shuttle Challenger Accident, 1986; Vaughan, 1996; see also Antonsen, 2009). Whereas the Presidential Commission emphasised the displays of power during the meetings immediately prior to the launch decision in their account of the accident (power in action), Vaughan claimed that a more valid account could be made by analysing how the discourses about the anomalies in previous launches developed under the pressure to carry out the launch programme (emphasis on power in symbols and discourse).

Several perspectives on power include the intentions and/or interests of actors as crucial parts of an account of power. Unfortunately, "intentions" and "interests" are not straightforward concepts to operationalise. Actors may not want to reveal their "real" intentions and interests, they may be ambivalent or inconsistent, and several authors (e.g., Hernes, 1978; Lukes, 2005) claim that actors may not be aware of their "real" interests ("false consciousness"). The way actors present their intentions, e.g. by using political language, may be part of their power tactics. On the other hand, can a researcher reasonably claim to know the intentions and interests of actors better than they do themselves?

Research on power does not, in general, take place totally outside the field of conflicting interests. The researcher is, to some extent, also an actor in the power games she is studying. The researchers may have their own agendas and interests. Some actors may want to enrol the researchers for their cause, or to keep the researchers at a distance. This applies even to past struggles, as some actors may want to take control over the writing of history. We see no easy way to handle these problems. The impact of the researchers on the phenomena they study may be reduced by restricting the study to events in the past and by relying on written texts as data. It may be of some consolation that the way actors handle researchers may provide valuable insight into the way these actors operate in a field of conflicting interests.

The researchers clearly need to reflect on their own position with regard to the topic and material they study. Social anthropologists are often concerned about the problem of "going native". In a textbook on discourse analysis, Jørgensen and Phillips (1999) warn about the difficulties in analysing a text from within one's own fields of interest, as one may have "blind spots" due to the things one has been socialised to take for granted. We share their concern, but we also believe that safety scientists may gain a better understanding of their own position and role by studying phenomena related to power within their own field of interest.

One of the ways in which a researcher can become an actor in a conflict is by the way he delimits his study. Accident investigators are (or should be) aware that their conclusions depend on how far they follow the causal chains back in time, away from the place of the accident, and up the tiers of the organisations involved. The parties in international conflicts always present their armed attacks as the response to an attack or threat from the other party. This illustrates how delimitations in time can be used, deliberately or

inadvertently, to change the understanding of a conflict. Researchers therefore need to reflect carefully about the scope of their studies, for instance how they delimit their studies in time and which actors they include.

7.4 Concluding remarks

This report was written because the authors needed to search for perspectives on power that could be employed to study the regulation of HSE. We believe it may be helpful in some other contexts of HSE research as well, for instance regarding the handling of conflicting objectives in decision processes within organisations. However, we want to emphasise that we have never thought of the report as a general text on theories of power. Writing such a text requires deep familiarity with the literature on power, and was thus beyond the capacity of the authors.

We are also aware that this report by itself is not sufficient to demonstrate the fruitfulness of focussing on power in research on regulation. Such fruitfulness has to be demonstrated through new empirical findings or new interpretations of available results, or by showing that individuals, groups or organisations can use the power perspectives to make sense of their HSE challenges and find new solutions. SINTEF has published two empirical studies of the robustness of tripartite collaboration as a component of the regulatory regime in the Norwegian petroleum industry (Moen et al., 2009; Forseth et al., 2010) based on perspectives on power discussed in this report. A further study is in progress.

The overall approach of this work – the organisation of literature according to four perspectives on power – was at least helpful for the authors in making sense of the literature. We hope the readers will share this perception.

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

90 of 99

References

Aldrich, H. (1979). *Organizations and Environments.* Englewood Cliffs NJ: Prentice Hall.

Andersen, T. K., Torvatn, H. & Forseth, U. (2008). Safety representatives and managers: Partners in health and safety? In Martorell, S. et al. (Eds.) *Safety, Reliability and Risk Analysis, vol. 4*, 3039-3047. London: Taylor and Francis Group.

Antonsen, S. (2009). Safety culture and the issue of power. *Safety Science, 47,* 183-191.

Arendt, H. (1958). *The Human Condition.* Chicago: University of Chicago Press.

Arendt, H. (1970): *On violence.* London: Allen Lane, Penguin.

Ashby, W.R. (1981). Self-regulation and requisite variety. In F.E. Emery (ed.): *Systems Thinking. Volume One.* Harmondsworth: Penguin Education, 100-120. Earlier published as Chapter 11 in W.R. Ashby (1956): *Introduction to Cybernetics,* Wiley.

Ball, T. (1976a). Power, Causation and Explanation, *Policy*, Winter: 189-214.

Ball, T. (1976b). Review of S. Lukes, *Power: A Radical View* and Nagel 1975, *Political Theory,* 4:246-9. Referenced by Lukes (2005).

Barbalet, J.M. (1985). Power and Resistance, *British Journal of Sociology,* 36(1):521-48.

Barth, E., Moene, K., Wallerstein, M. (2003). *Likhet under press. Utfordringer for den skandinaviske fordelingsmodellen.* Oslo: Gyldendal Akademisk.

Bauman, Z. (1988). Viewpoint: Sociology and Postmodernity, *Sociological Review,* 36(4): 790-813.

Biggart, N.W., Hamilton, G.G. (1984). The Power of Obedience, *Administrative Science Quarterly,* 29(4):540-9.

Bråten, S. (1983). *Dialogens vilkår i datasamfunnet.* Oslo: Universitetsforlaget.

Bråten, S. (2000). *Modellmakt og altersentriske spedbarn.* Bergen: Sigma.

Callon, M., (1986). Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fishermen of St Brieuc Bay, in J. Law (ed.), *Power, Action and Belief: A New Sociology of Knowledge?* Sociological Review Monograph 32. London: Routledge and Kegan Paul.

Callon, M., Law, J. (1982). On Interests and their Transformation, *Social Studies of Science,* 1:615-25.

Clegg, S.R. (1979). *The Theory of Power and Organization.* London: Routledge and Kegan Paul.

Clegg, S.R. (1989). *Frameworks of Power.* London: Sage.

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

91 of 99

Clegg, SR., Courpasson, D. and Phillips, N. (2006). *Power and Organizations.* Los Angeles: SAGE Publications.

Clegg S.R. and Haugaard, M. (eds.) (2009) *The Sage Handbook of Power*. London: Sage.

Coleman, J.A. (1973). *The Mathematics of Collective Action.* London: Heineman.

Coleman, J. (1977). Notes on the Study of Power, pp 183-98 in R.J. Liebert and A.W. Imerskein (eds), *Power, Paradigms and Community Research.* London: Sage Publications.

Dahl, R.A. (1957). The concept of power. *Behavioral Science,* 2, 201-215.

Eisenhardt, K.M., 1989. Agency theory. An assessment and review. *Academy of Management Review, 14* (1), 57-74.

Engelstad, F. (2005). *Hva er makt?* Oslo: Universitetsforlaget.

Engen, O.A. and Lindøe, P.H. (2008). Atferdsbasert sikkerhet tilpasset norske forhold. In R.K. Tinmannsvik (ed.) *Robust arbeidspraksis. Hvorfor skjer det ikke flere ulykker på sokkelen?* Trondheim: Tapir.

Fairclough, N. (1992) *Discourse and Social Change.* Cambridge: Polity Press.

Fairclough, N. (1995) *Critical Discourse Analysis*. London: Longman.

Follett, M.P. (1918). *The new state: group organization, the solution for popular government.* New York: Longman, Green. (Referenced by Clegg et al., 2006)

Follett, M.P. (1924). *Creative experience.* New York: Longman, Green. (Referenced by Clegg et al., 2006).

Forseth, U., Rosness, R., Blakstad, H.C. (2010). Arguments about Safety in the Norwegian Petroleum Industry - Discourse Analysis. *Working on Safety*, Røros, 7.-10. September 2010.

Forseth, U., Rosness, R., Mostue, B.Aa. (2011). *Rammebetingelser for HMS som etableres i kontrakt. En intervjustudie.* Report SINTEF A19670. Trondheim: SINTEF Technology and Society.

Foucault, M. (1972) *The Archeology of Knowledge*. London: Routledge. Translated from *L'Archéologie du Savoir*, Paris: Galimard.

Foucault, M. (1977). *Discipline and Punish: The Birth of the Prison.* Harmondsworth: Penguin.

Foucault, M. (1980) *Power/knowledge: Selected Interviews and Other Writings 1972-1977,* ed. Colin Gordon, Brighton: Harvester Press.

Foucault, M. (2008). *Overvåkning og straff.* Oslo: Gyldendal. (Original title: *Surveiller et punir.* Éditions Gallimard, 1975). (English translation Foucault, 1977)

Goehler, G. (2000). Constitution and use of power. In H. Goverde, P.G. Cerny, M. Haugaard and H.H. Leitner (eds.). *Power in Contemporary Politics. Theories, Practices, Globalizations.*London: Sage, pp. 41-58.

Goehler, G. (2009). 'Power to' and 'Power over'. In S.R. Clegg and M. Haugaard (eds.) *The SAGE Handbook of Power.* Los Angeles: SAGE, 27-39.

Hall, S. (2001). Foucault: Power, knowlege and discourse. In M. Wetherell, S. Taylor and S.J. Yates (eds.). *Discourse Theory and Practice. A Reader.* London: Sage.

Hamilton, G.G. (1986). Patriarchalism in Imperial China and Western Europe: A Revision of Weber's Sociology of Domination, *Theory and Society,* 13(3): 393-425.

Hamilton, G.G., Biggart, N.W. (1984). *Governor Reagan, Governor Brown: A Sociology of Executive Power.* New York: Columbia University Press.

Hamilton, G.G., Biggart, N.W. (1985). Why People Obey: Theoretical Observations on Power and Obedience in Complex Organizations, *Sociological Perspectives,* 28(1):3-28.

Harré, R. (1970). Powers, *British Journal for the Philosophy of Science,* 21:81-101.

Haugaard, M. (ed.) (2002) *Power: A Reader*, Manchester and New York: Manchester University Press.

Heinrich, H.W. (1931). *Industrial Accident Prevention.* New York: McGraw-Hill. Referenced in Ryggvik (2008a).

Hernes, G. (1978). *Makt og avmakt. En begrepsanalyse.* 2nd edition. Bergen: Universitetsforlaget.

Hindess, B. (1996). *Discourses of Power. From Hobbes to Foucault.* Oxford: Blackwell.

Hood, C., Rothstein H., and Baldwin, R. (2001). *The Government of Risk. Understanding Risk Regulation Regimes*. Oxford: Oxford University Press.

Hopkins, A. (2000). *Lessons from Longford: The Esso Gas Plant Explosion.* Sydney: CCH.

Hopkins, A. (2008). *Failure to learn. The BP Texas City Refinery disaster.* Sydney: CCH.

Hopkins, A. (2011). Management walk-arounds: Lessons from the Gulf of Mexico oil well blowout. *Safety Science,49,* 1421-1425.

Hovden, J., Rosness, R., Rundmo, T., Saari, J., Seppälä, A. (1986). *Sikker atferd – ulykkesforebyggende tiltak.* Report STF75 A86031. Trondheim: SINTEF.

Hovden, J. (2002). The development of new safety regulations in the Norwegian oil and gas industry. In B. Kirwan, A. Hale and A. Hopkins (eds.) *Changing Regulation. Controlling Risks in Society.* Amsterdam: Pergamon, pp. 57-77.

Ims, M. and Engelstad, F., eds. (2003). *Olje og makt.* Rapport 56, mars 2003. Makt- og demokratiutrednings rapportserie. www.sv.uio.no/mutr/publikasjoner/rapp2003/rapport56/index1.html

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

93 of 99

Institute of Occupational Health (1987). *Successful Accident Prevention. Recommendations and ideas field tested in the Nordic Countries.* Reviews 12. Helsinki: Institute of Occupational Health.

Jørgensen, M.W. and Phillips, L. (1999). *Diskursanalyse som teori og metode.* Roskilde: Roskilde Universitetsforlag. (English translation *Discourse as Theory and Method,* 2002. London: Sage).

Kanigel, R. (1997). *The one best way: Fredrick Winslow Taylor and the enigma of efficiency.* New York: Viking. (Referenced by Clegg et al., 2006).

Kaplan, R.S., Norton, D.P., 1992. The Balanced Scorecard – Measures that Drive Performance. *Harvard Business Review*, January – February, 71-79.

Laclau, E., Mouffe C. (1985). *Hegemony and Socialist Strategy.* London: Verso.

Latour, B. (1987). *Science in Action.* Cambridge, Massachusetts: Harvard University Press.

Latour, B. (1991). Technology is society made durable. In J. Law (ed.) *A Sociology of Monsters: Essays on Power, Technology and Domination.* Sociological Review Monograph 38. London: Routledge.

Latour, B. (2005). *Reassembling the Social. An Introduction to Actor-Network-Theory*. Oxford: Oxford University Press.

Law, J. (1991). Power, discretion and strategy. In J. Law (ed.) *A Sociology of Monsters: Essays on Power, Technology and Domination.* Sociological Review Monograph 38. London: Routledge.

Law, J. (1992). Notes on the theory of the actor network: Ordering, strategy and heterogeneity. Lancaster: Centre for Science Studies, Lancaster University. (Revised in 2001 and 2003) www.comp.lancs.ac.uk/sociology/papers/Law-Notes-on-ANT.pdf

Law, J. (1996). The manager and his powers. Lancaster: Centre for Science Studies, Lancaster University. (Revised in 2001 and 2003) www.comp.lancs.ac.uk/sociology/papers/Law-Manager-and-his-Powers.pdf

Law, J. (2001). Ordering and obduracy. Lancaster: Centre for Science Studies, Lancaster University. (Revised in 2001 and 2003) www.comp.lancs.ac.uk/sociology/papers/Law-Ordering-and-Obduracy.pdf

Lindøe, P. (2008). Mål- og rollekonflikter ved myndighetsregulering – belyst ved delingen av oljedirektoratet. In R.K. Tinmannsvik (ed.) *Robust arbeidspraksis. Hvorfor skjer det ikke flere ulykker på sokkelen?* Trondheim: Tapir.

Lockwood, D. (1964).Social Integration and System Integration, pp244-57 in G.K. Zollschan and W. Hirsch (eds) *Explorations in Social Change.* London: Routledge and Kegan Paul.

Lukes, S. (2005). *Power. A Radical View.* Basingstoke: Palgrave Macmillan.

Machiavelli, N. (2003). *The Prince.* London: Penguin Books.

Mann, M. (1986). *The Sources of Social Power,* Vol 1: *A History of Power from the Beginning to A.D. 1760.* Cambridge: Cambridge University Press.

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

94 of 99

March, J.G., Olsen, J.P. (1976). *Ambiguity and Choice in Organizations*. Bergen: Universitetsforlaget.

Mayo, E. (1975). *The social problems of an industrial sivilization.* London: Routledge & Kegan Paul. Referenced by Clegg et al. (2006).

Mayo, E. (1986). *The psychology of Pierre Janet.* Westport. CT: Greenwood.

Meyer, M. W. (1987). The Growth of Public and Private Bureaucracies, paper presented to *Critical Perspectives on Organizational Theories, ISA-RC 17 Conference*, 18-22 July, Wassenaar, The Netherlands.

Meyer, J., Rowan, B. (1977). Institutionalized Organizations: Formal Structure as Myth and Ceremony, *American Journal of Sociology,* 83:340-63.

Mills, C.W. (1940). Situated Actions and Vocabularies of Motive, *American Sociological Review,* 5: 904-13.

Mills, C. W. (1959). *The Causes of World War Three.* London: Secker & Warburg. Referenced by Lukes (2005).

Moen, A., Blakstad, H.C., Forseth, U. and Rosness, R. (2010). Disintegration and revival of tripartite collaboration on HSE in the Norwegian petroleum industry. In Briš, R., Soares, C.G. and Martorell, S. (eds.) *Reliability, Risk and Safety. Theory and Applications,* Vol. 3, 2191-2198. London: CRC Press.

Monteiro, E. (2000). Actor-Network Theory and information infrastructure. In Ciborra C.U. and associates: *The Dynamics of Corporate Information Infrastructures*. Oxford: Oxford University Press.

Morris, P. (2002). *Power. A Philosophical Analysis.* 2nd edn. Manchester: Manchester University Press; 1st edn 1987. Referenced by Lukes (2005).

Nahapiet, J. and Ghoshal, S. (1998). Social capital, intellectual capital and the organisation advantage. *Academy of Management Review, 23*(2), 2-266. Cited by Clegg et al. (2006).

Neumann, Iver B. (2001). *Mening, materialitet, makt: En innføring i diskursanalyse.* Bergen: Fagbokforlaget, 2001.

Næss, A. 2000. Brustad sier ja til sikkerhetsråd. (Brustad says yes to a safety council.) Oslo: *Dagens Næringsliv*. 4 July:11

Olien, R.M. and Olien D.D. (2000) *Oil and Ideology: The Cultural Creation of the American Petroleum Industry*. Chapel Hill: University of North Carolina Press.

Osmundsen, P., Aven, T. og Vinnem, J.E. (2008). Safety, economic incentives and insurance in the Norwegian petroleum industry. *Reliability Engineering and System Safety, 93,* 137-143.

Osmundsen, P., Toft, A. og Dragvik, K.A. (2006). Design of drilling contracts – Economic incentives and safety issues. *Energy Policy, 34*, 2324-2329.

PROJECT NO.
50 41 20

REPORT NO.
SINTEF A21367

VERSION
1

95 of 99

Parkin, F. (1976). System Contradiction and Political Transformation: The Comparative Study of Industrial Societies, pp 127-44 in T.R. Burns and W. Buckley (eds), *Power and Control: Social Structures and their Transformation.* London: Sage Publications.

Parsons, T. (1967). *Sociological Theory and Modern Society.* New York: Free Press.

Perrow, C. (1984). *Normal Accidents.* New York: Basic Books.

Pfeffer, J. (1981). *Power in Organizations*. Cambridge, Mass.: Ballinger Publishing Company.

Pfeffer, J. (1992). *Managing with Power. Politics and Influence in Organizations.* Boston, Mass.: Harvard Business School Press.

Pfeffer, J. and Salancik, G.R. (2003). *The External Control of Organizations. A Resource Dependence Perspective.* Stanford, California: Stanford University Press. (Original edition: New York: Harper & Row, 1978).

Phillips N. and Di Domenico, M. (2009). Discourse Analysis in Organizational Research: Methods and Debates in Buchanan, DA. And Bryman A. (eds.) *The Sage Handbook of Organizational Research Methods*. Los Angeles, London: Sage.

Pitkin, H. (1972). *Wittgenstein and Justice.* Berkeley, CA: University of California Press.

Presidential Commission on the Space Shuttle *Challenger* Accident (1986): *Report of the Presidential Commission on the Space Shuttle Challenger Accident*. 5 Vols. Washington, D.C. : Government Printing Office. Available at http://history.nasa.gov/rogersrep/genindex.htm

Quale, T. (1985). *Safety and offshore working conditions. The quality of work life in the North Sea.* Oslo:Universitetsforlaget.

Ravn, J. & Øyum, L. forthcoming. Towards "multi-collar" industrial relations: Cases of "trespassing" professionals in Norwegian Industrial relations. *Economic and Industrial Democracy.*

Ritzer, George (1997) *Postmodern Social Theory.* New York: McGraw-Hill.

Rosness, R., Guttormsen, G., Steiro, T., Tinmannsvik, R.K., Herrera, I.A. (2004). *Organisational Accidents and Resilient Organisations: Five Perspectives.* Report STF38 A 04403. Trondheim: SINTEF.

Rosness, R., Grøtan, T.G., Guttormsen, G., Herrera, I.A., Steiro, T., Størseth, F., Tinmannsvik, R.K., Wærø, I. (2010). *Organisational Accidents and Resilient Organisations: Six Perspectives.* Revision 2. Report SINTEF A17034. Trondheim: SINTEF Technology and Society.

Ryggvik, H. (2008a). Sikker atferd i et historisk perspektiv. In R.K. Tinmannsvik (ed.) *Robust arbeidspraksis. Hvorfor skjer det ikke flere ulykker på sokkelen?* Trondheim: Tapir.

Ryggvik, H. (2008b). Verneombudet, kollektivet og sikkerheten. In R.K. Tinmannsvik (ed.) *Robust arbeidspraksis. Hvorfor skjer det ikke flere ulykker på sokkelen?* Trondheim: Tapir.

Saunders, P. (1979). *Urban Politics.* Harmondsworth: Penguin.

Shilts, R. (1987). *And the Band Played On: Politics, People, and the AIDS Epidemic.* New York: St. Marin's Press. (Referenced by Pfeffer, 1992).

Stigler, G.J. (1971). The theory of economic regulation. *The Bell Journal of Economics and Management Science, 2* (1), 3-21.

St.meld. nr. 12 (2005-2006). *Helse, miljø og sikkerhet i petroleumsvirksomheten.* Oslo: Arbeids- og inkluderingsdepartementet. (White paper)

Swuste, P. van Gulijk, C. and Zwaard, W. (2008). Human behavior: The first safety theory. Keynote presentation. *Working on Safety 2008*, 30. September – 3 October 2008, Crete, Greece.

Swuste, P., van Gulijk, C., and Zwaard, W. (2010). Safety metaphors and theories, a review of the occupational safety literature of the US, UK and The Netherlands, till the first part of the 20th century. *Safety Science, 48*, 1000-1018.

Taylor, F.W. (1911). *Principles of scientific management.* New York: Harper. (Referenced by Clegg et al., 2006.)

Taylor, L. (1972). The Significance and Interpretation of Replies to Motivational Questions: The Case of Sex Offenders. *Sociology,* 6(1): 23-40.

Emery, F.E. and Thorsrud, E. (1976). *Democracy at Work.* Leiden: Nijhoff.

Turner, B. A. (1978): *Man-made disasters.* London: Wykeham Science Press.

Turner, B. A., Pidgeon, N. F. (1997): *Man-made disasters*. 2nd Edition. London: Butterworth-Heinemann.

Vaughan, D. (1996): *The Challenger Launch Decision*. Chicago: The University of Chicago Press.

Wacquant, L.J.D. (1993). Bourdieu in America: notes on the transatlantic importation of social theory. In C. Calhoun, E. LiPuma and M. Postone (eds.) *Bourdieu: critical perspectives* (pp. 235-262). Cambridge: Polity. (Cited in Clegg et al., 2006.)

Weber, M. (1971): *Makt og byråkrati.* Oslo: Gyldendal.

Weber, M. (1978). *Economy and Society: An Outline of Interpretive Sociology* (2 Vols), ed. G. Roth and C. Wittich. Berkeley: University of California Press.

Westrum, R. (1993): Cultures with Requisite Imagination. In J.A. Wise, V. D. Hopkin and P. Stager (eds): *Verification and Validation of Complex Systems: Human Factors Issues.* Berlin: Springer, 401-416.

Westby, O. and Forseth, U. (2008). *Kartlegging av aktørbildet på norsk sokkel – Tilbakemelding til selskapene.* Report SINTEF A6136. Trondheim: SINTEF Technology and Society.

Wetherell, M., Taylor, S. and Yates, Simeon K. (2004, 4rth ed.) *Discourse Theory and Practice.* London: Sage Publications.