The ambiguous challenge of intranets

Thommesen, Jacob; Havn, Erling C.

Publication date:
2003

Document Version
Publisher's PDF, also known as Version of record

Ph.D. Thesis

CTI Ph.D. Series. No. 4

The ambiguous challenge of intranets

Jacob Thommesen

Center for Tele-Information

Technical University of Denmark

Published by Center for Tele-Information, Technical University of Denmark, Kongens Lyngby, 2003

Printed by Schultz DocuCenter, Denmark

ISBN 87-90288-12-2

ISSN 1601-720X

Preface

This project was carried out between April 1998 and October 2002 at the Center for Tele-Information, under the Ph.D. program ‘Society, Technology and Planning’ at the Technical University of Denmark. It is part of a research program titled ‘Distributed Multi-Media technologies and applications’, financed by the Danish Ministry of Research. Empirical data is based on a case study in a pharmaceutical company that participated in the DMM research program.

Supervisor: Erling Havn, CTI.

Abstract

In this thesis I shall present the argument that intranets *increase* the role of *ambiguity* – confrontation between contradicting frames of interpretation – in organisational communication by encouraging processes across organisational borders. In the first chapter I discuss *philosophical* aspects of ambiguity and interpretation. Based on the ideal of rationality I emphasize the 'challenges' of ambiguity, which is *inhibitive* to rational processes, but also holds a potential for a rational and universalising resolution. In the second chapter I identify the role of ambiguity in *organisations*. Ambiguity increases with tendencies to cooperate and communicate across organisational boundaries, mainly as a reaction to developments in markets and industrial knowledge base, but also due to the potential provided by computer network. In the third chapter I identify some characteristics of two fundamental intranet media, *email* and the *web*, partly in the perspective of media richness theory, partly compared with philosophical discussions of classical media. The fourth chapter presents an intranet in a global company, in which problems and challenges related to ambiguity have proven significant.

Dansk resumé

I denne afhandling argumenterer jeg for, at intranet medier understøtter processer på tværs af organisatoriske grænser og dermed medfører en kraftigere tendens til *tvetydighed* i organisationer – hvor tvetydighed er forstået som en konfrontation mellem modstridende fortolkningsrammer. I første kapitel fokuserer jeg på de *filosofiske* aspekter af tvetydighed og fortolkning. Baseret på rationalitetsidealet frem understreger jeg, at tvetydighed indebærer en 'udfordring': det er en potentiel trussel mod rationelle processer, men rummer samtidig et potentiale for en rationel og universaliserende hermeneutisk forståelse. I det andet kapitel identificerer jeg 'tvetydige' processer i *organisationer*. De opstår med tendensen til netværksorganisering på tværs af organisatoriske grænser. Tværgående processer er primært motiveret af markedsbetingelser og udviklingen i den industrielle vidensbase, men forstærkes med det potentiale som computer netværk tilbyder. I det tredje kapitel identificerer jeg nogle karakteristika ved to centrale intranet medier, e-mail og web, dels i lyset af 'media richness theory', dels i lyset af klassiske filosofiske diskussioner af traditionelle medier. I fjerde kapitel ser jeg på et intranet i en multinational og stærkt differentieret virksomhed, hvor problemer med tvetydighed truer teknologiens brugbarhed og dermed muligheden for at udnytte dens potentiale.

1. Introduction – the ambiguous challenge of intranets

In this thesis I shall present the argument that intranets *increase* the role of ambiguity – confrontation between contradicting frames of interpretation – in organisational communication by encouraging processes across organisational borders. I further argue that ambiguity is a *challenge* to organisations: while there is a potential for a rational or universal resolution, ambiguity is also *problematic* as a source of conflicts, vulnerable compromises and sub-optimal solutions – and it inhibits the realisation of the potential benefits of the technology.

This argument brings to the *problem* treated in this thesis: how organisations – and organisational members – can and will handle the problem of ambiguity. There is a technical as well as an organisational aspect of this problem. The first aspect concerns the *capacity* of intranet media for processes aimed at resolving ambiguity: are they rich enough or too poor for resolution of ambiguity? And to what extent does richness matter.

The second aspect concerns the organisational means of resolving ambiguity: is it possible to resolve or reduce overall organisational ambiguity in order to realise the potential of intranet technology, by establishing common standards and terminology, thus by some degree of *centralisation* as a reaction to ambiguity. Or is it sufficient to support local, ad hoc resolution of ambiguity?

I emphasize a distinction between two different approaches to the latter *organisational* aspect. One is local, instrumental and normative: how should the *individual* organisation solve the problem of ambiguity? The other approach is general and analytical and aims at a causal explanation: how will organisations in *general* react to ambiguity, what are the most likely organisational consequences? Is the intranet a vehicle for *reducing* ambiguity by *control* and central planning – but also for *universality*? Or is it a vehicle for structural dissolution – or segmentation – and an increasing role of ambiguity? I intend to address the latter sociological question by considering the alternatives available in the first, thus by *understanding* means and motives of organisational action.

In this thesis I shall analyse the relation between ambiguity and intranets in organisations by integrating three different theoretical areas – ambiguity and interpretation as a more philosophical issue; the role of ambiguity in organisations; and the role and potential of intranet media – and finally looking at an empirical example of intranet implementation, in order to discuss the problem presented above.

1.1.1. Justification for this research theme

I have a double motivation with choosing this theme of research: It is of practical relevance, but also provides an opportunity to pursue my own theoretical interests.

During the case study exploring the experimentation with intranet technology in a multinational company we thus heard of many problems or challenges associated with ambiguity, and I found this theme to be a general problem behind many symptoms. My thesis will provide a better understanding of the relationship between ambiguity and computer media in organisations, which is a precondition for better facing the challenges.

Furthermore, I have a foundation in critical theory, and this thesis has thus also been motivated by a theoretical interest in arguing and testing its relevance in relation to phenomena associated with new technology, to confront it critically with phenomena that may deny its relevance. In this case, IT-supported organisational networking is interesting both as an example of a new *form* of organisation that is often regarded as replacing the classical bureaucracy, but also as an example of media use. Although modifications are required, this thesis will demonstrate that critical theory is still relevant.

1.2. Ambiguity and media – basic concepts of the thesis

Before presenting the outline of this thesis, I shall shortly explain two concepts that are essential to the theme of research: the concept of ambiguity, which is closely related to that of interpretation, and the concept of media, because I generally regard intranet technologies as media. Finally, I shall describe intranet technology at some length by focusing on characteristics relevant for this thesis.

1.2.1. Interpretation and ambiguity

Ambiguity is a conceptual meta-level conflict: a conflict not between individual statements, but between frames of interpretation. Normally, a problem is solved within a given frame of interpretation, by logical inference, subsuming under existing categories, i.e. identifying the proper routine (or combination of routines) to be applied. In case of ambiguity, the choice cannot be made *within* one of the interpretations.

Ambiguity is thus based on – contradicting – (frames of) interpretations, but it also provides a useful perspective on interpretations. Situations of ambiguity illustrate that an interpretation – 'community knowledge' as emphasized in 'social construction' literature – is not closed and that interpretations do not live in 'different worlds'.

An interpretation is a perspective that is applied when solving a problem, when looking at the world or a particular set of information. It is based on a set of implicit assumptions. Ambiguity arises when different interpretations are applied to the same problem or set of information. This situation cannot merely be resolved by processing the information itself, or by acquiring more information. Instead, people have to direct the attention 'away' from the issue and towards the frames, paradigms or mental models applied by the others, as well as one's own.

The situation may arise in an organisational decision process, when the participants realize that the problem is not simply to find a solution, but to choose among or combine apparently incommensurable solutions (or perhaps different routines).

1.2.2. Media characteristics: Linking and buffering

To understand the theme of research, it is convenient to distinguish between two different aspects of media: on the one hand media have a capacity for *linking* people; on the other hand they define the conditions for the resulting interaction, by *filtering* or *buffering* the interaction.

By their capacity for linking people together, media provide a potential for cooperation and coordination across internal as well as external organisational barriers. Cross-barrier cooperation is an attractive opportunity for organisations, in particular in relation to innovation in industries, where the technology and knowledge base is changing or developing rapidly, and the sources of knowledge are dispersed. However, cross-barrier cooperation is complicated by ambiguity, because the barriers are not merely physical but cognitive, since organisations have differentiated into multiple units and professions with different frames of interpretation.

The question is then how well these computer media, by their capacity for *buffering*, actually represent ambiguity and *support* resolution of ambiguity.

This situation puts the organisation in a dilemma of how to deal with increased ambiguity: either by reducing ambiguity and imposing corporate standards, etc., or by supporting the local processes aimed at ad hoc resolution of ambiguity.

Before elaborating on the research question I shall provide a short definition of the concepts involved and at the same time introduce to the chapters in which they are discussed.

1.2.3. Intranet media

An intranet is a local Internet with a firewall, where only a 'limited' number of people have access, usually the members of an organisation. The technical foundation of the Internet is a set of protocols that enables communication between all computers irrespective of differences in hardware, software etc. The term *inter*net refers to the fact that these protocols link different (local) networks.

Internet technology provides a platform – whether the Internet or an intranet – that hosts a number of different applications. I shall focus the two most prominent: email and hypertext (the web), which represent two different aspects of media, either as a medium for communication between people, as a *subject-subject* relation, or as a medium for organisation of knowledge, for *representation*, a *subject-object* relation.

1.2.3.1. Email – (interactive) communication

Email is the most significant of the internet applications that support horizontal communication between organisational members. It is more successful in organisations than both the '*chat*' function supporting synchronous multiparty communication, and *discussion groups* (BBS) that support asynchronous multiparty communication and sharing of documents. All these media are basically text-based, although for example it is possible to include 'richer' files – graphic, images, sound, movies – as attachment in an email. Email is a *new* medium, because it is text-based *and* highly interactive – in the sense that the (potential) response time is much shorter than a postal letter.

1.2.3.2. Hypertext – knowledge organized

The 'web' hypertext system as implemented in Berners-Lee's World Wide Web is the other main application. Two aspects of the web should be emphasized. First, it is a static medium characterized by openness and universality rather than interactivity. Second, the hypertext links provides a particular means for structuring and organising the content.

'Distribution' replaced by archive, 'sharing'

Hypertext turns vertical and horizontal communication – in the sense of physical transmission – into public files. *Distribution* or exchange by email of documents, deadlines, decisions etc. is replaced by web publication. Readers must access such a site, be aware of changes, news etc., instead of receiving information. And this is one reason why the ability to navigate on the intranet is so crucial.

This change in communication patterns is often described as one from 'push' to 'pull'. It is based on the potential for having only one copy of a document on the network, because 'access' to the electronic library has become so easy compared with the physical 'ancestor'. There are many potential advantages associated with this potential. One is the possibility for having one complete file on the intranet instead of several redundant and incomplete files. Another advantage is the possibility for having only updated information available and removing outdated information.

Dislocation: texts are separated from their local (situated) context

When organisational documents developed for – and sometimes by – one department are made accessible on the intranet, they are potentially separated from their 'local' context. This ability of text to go beyond their context is not new as such, but a basic characteristic of writing butt is reasonable to assume that this process is accentuated or magnified with the potential for publishing documents – 'sharing' information and knowledge – on the intranet.

Links - structure

The link is the basic feature of hypertext and is primarily a tool for *organisation* of knowledge. Hypertext allows a network without structure or standardization, unconstrained by the type definition requirements of a database. The links expose the schizophrenic character of the WWW, which aspires to be both a *personal* tool, with links representing subjective *associations*, and something beyond personal sphere by linking different 'files' into one shared, universal hypertext. Associative links may be useful as a tool to organise personal files, but the resulting structure is difficult to navigate and inhibits orientation. Further adding to the potential for chaos, the web is based on a particular type of hypertext links: *embedded*, *unidirectional* links.

1.3. Outline of the thesis

1.3.1.1. Ambiguity and interpretations – chapter 1

In the first chapter I shall discuss interpretations and ambiguity at a philosophical – and epistemological – level, without focusing on a specific context, organisational or other. I shall seek to answer a number of questions: what is the character of an interpretation, can one specify its elements? What is the relation between an interpretation and reality – is it a 'different world' or is it related to reality in terms of truth, efficiency or success? How can ambiguity be resolved – is there a potential for a *rational* resolution?

With the last question I introduce the essential issue of rationality, which I shall first present as an ideal in order to discuss the rationality of interpretations. In my definition of rationally I draw on various sources, notably Habermas and Popper.

I then continue to discuss interpretations in two different strands of literature. First I look at how the concept – and related concepts – has been used in organisational literature, contrasting 'charitable' or at least neutral approaches with more critical once. I then look at similar issues in philosophical literature, focusing on the concept of ideology in critical theory. The discussion of 'critique of ideology' is a useful perspective on interpretations because the very possibility for a critique is based on the assumption that is possible to transcend an interpretation. If one accepts a social constructivist or interpretivist definition of 'truth', then it is difficult to see a potential for a critical position.

1.3.1.2. Ambiguity in organisations – chapter 2

Organisations that implement computer networks in the hopes of communicating, sharing knowledge and cooperating across physical barriers and geographical distances will face the problem of ambiguity: the fact that barriers within organisations are not merely physical or geographical, but also cognitive. Communication with people from other departments suffers from misunderstandings and breakdowns, and information published on the intranet (by others) can be difficult to navigate and

decode. Departments battle and negotiate over organisational strategies and resources. These conflicts and misunderstandings are largely organisational rather than individual, in that they reflect the complexity of the organisation itself.

In the second chapter I thus focus on the role of interpretations and ambiguity *in organisations*, seeking answers to the following questions: where do individual interpretations come from? Why does ambiguity arise? Basically I argue that ambiguity should be understood in terms of three different processes: *rationalisation*, *differentiation* and *networking*.

1.3.1.3. The role and potential of intranet media – chapter 3

The purpose of this chapter is to discuss the capacity of intranet media for resolution of, or dealing with, ambiguity.

In order to do this I shall first discuss the basic characteristics of the technology. Then I turn to the contemporary discussion of media richness. The richness of a medium is generally determined by its capacity for *feedback* (interactivity), variety of *cues* (or modality), degree of *personalisation* and variety of *languages*. However, while Daft & Lengel argue that richer media are better suited for resolution of ambiguity in a timely manner, I shall emphasize – with Sproull & Kiesler – the potential conflict between the need for an open, 'rational' process and the 'need for speed'. I argue that rich media are convenient for conflict resolution and consensus making *in a timely manner*, but often at the cost of 'rationality', while the 'poor' text-based media (so far) characteristic of internet technology encourage critical verbalisation and clarification of frames of interpretation.

I shall then look at more philosophical discussions of traditional media, oral vs. written communication and to some extent nonverbal communication (art). The purpose is on the one hand to compare these discussions to the previous one of media richness, and on the other hand to identify the particularities of the new media. While text is traditionally *tangible* and *objectified* (orphaned), electronic text-based media are characterised by a high degree of interactivity (richer) and a paradoxical combination of *ephemerality* and potential for storage.

I suggest that organisations may be changed by three different changes associated with the new media

Verbalisation[1]: virtual communication requires that people 'put things in words'.

[1] I emphasize that I use the term 'verbalisation' in the sense described in my dictionary: "to express (something) in words" – thus, to make something explicit as opposed to i.e. 'tacit

Scripturisation[2]: new areas of communication are being transferred from oral to written communication, as when people use a mail in stead of the telephone

Electrification: paper files are transferred to electronic files.

1.3.1.4. Intranet in a global company – chapter 4

In the case study, I shall identify problems of ambiguity in relation to the intranet. I shall discuss whether ambiguity does play as significant a role as presumed, compared to other issues, and whether it is reasonable to speak of a connection between intranet technology and ambiguity. I shall further look at what is being done to reduce or handle ambiguity.

The case study was carried out as part of a larger research project, to which this thesis belongs. The focus in the larger project was on organisational experimentation with, and implementation of intranet technology, and that focus was guiding in our choices of which intranet applications we wished to investigate deeper, as well as in our interview guides. In this thesis I have selected those examples corresponding to my own emphasis on ambiguity, which is related to but also different from the over-all focus of the research project.

Intranet as a whole

The case is treated as four sub cases, starting with a look at the intranet as a whole. The organisation (primarily the IT department) has chosen a 'laissez faire' strategy to begin with: any department that is interested enough to invest the resources required can establish a site on the intranet. The quantitative success has been overwhelming, the total intranet growing rapidly with sites and application of very different scope and ambition, but it seems that the strategy has had problematic consequences: it is difficult to navigate and find relevant information, and some information resources are redundant.

After looking at the intranet as a whole, three of these applications will be investigated. Most are quite simple, but some of them have wider perspectives, and they all demonstrate relevant aspects of problems with ambiguity.

---

knowledge'. The term does thus not serve to distinguish verbal communication from written communication.

[2] 'Scripturisation' is my translation of the Danish word 'skriftliggørelse'.

SHARING

This application was chosen for further study as an example of a more sophisticated use of intranet technology – in its *intentions* rather than its design. It was envisioned as a system for knowledge sharing, replacing top-down communication of formal routines with horizontal exchange of (written) informal routines. It was a corporate database of process knowledge, shared by employees in all units of the company. The system it is illustrative despite its lack of success, because this failure is hardly due merely to poor design, but also to fundamental problems with exchanging knowledge across organisational barriers (ambiguity).

SQUARE

This application is illustrative as a complementary to SHARING. It is a database of (obligatory) formal routines, combined with a system for distribution via the intranet to relevant departments– and an example of top down communication. It may be categorised as asymmetric interaction or even mere publication. This application demonstrates the technology's capacity as a tool for *reduction* (elimination) of ambiguity, both because this is the essence of formal routines, and because SQUARE is based on the separation between a description of *processes*, and a specification of the *organisational context* (unit, department) in which the processes are to be executed – assuming that (the description of) a process or routine can be de-contextualised, that it persists independent of organisational changes.

ProjectWeb

This application was designed as a standard website to be owned by a development project 'group'. It was chosen mainly for the long-term perspectives in using the technology to support a distributed or 'virtual' project group – characterised by high ambiguity. In the first group of interviews (on which this study is based), however, only a few simple functions were implemented. It thus contains a variety of documents produced during the project, including minutes, agendas, reports, information about deadlines etc.

1.4. Approach: Instrumental vs. Sociological perspective

This thesis will attempt to span two different approaches to technology: the *instrumental* aspect investigating its potential as a tool, and a 'sociological' aspect emphasizing its *effect* on organisations in general, i.e. on organisational structure and patterns of communication. As an example, a 'sociological' perspective will seek to explain why knowledge management systems fail, whereas the instrumental perspective will try to provide advices on how to avoid failure.

The *instrumental* approach may focus on the alternatives available to an organisation, i.e. a choice or balance between a 'control' strategy and a 'laissez-faire' strategy,

between an emphasis on centralised databases, reduction in publication and distribution costs etc., and an emphasis on achieving a new 'information culture'.

This approach may imply the role (for the researcher: me) as a consultant: what are the strengths and weaknesses of each strategy? It is basically a *normative* approach: i.e. I can 'commit myself to' rationality, advice the use of rational means over others (instead of asking – descriptively – whether organisations actually act rationally).

This approach is somewhat based on the other: analyses and advices are based on the assumption that technology has 'effects', or at least a *potential*: an objective 'feature' that guides the choices.

This approach may be criticized for focusing on 'strategies' and thus assuming the role of some rational organisational subject/actor that is able to calculate and choose on the behalf of the whole organisation. This critique is relevant, but I shall try to argue that the assumption is reasonable and necessary, at least as an ideal, which the researcher must address…

(Personally, I am uncomfortable with focusing solely on this instrumental approach: it is not my goal to end up as a management consultant. My research theme is thus not based on formulating and addressing problems faced by individual organisations (management) – yet the research should also offer such observations, as a 'by-product.)

This approach is more descriptive, too 'elevated' from the individual organisation to provide advises at that level.

Yet it is connected to the first approach. It is based on the assumption that the organisations actually adopt (choose) the technology for some reason, that the organisations have good – rational – reasons for adopting it. And it further assumes that organisations (should) adopt one strategy rather than the other; a theory about the general effect of the technology cannot be based on the argument that the choice is arbitrary.

1.4.1. Theoretical intentions

The purpose is to establish an understanding of organisation, rationality, knowledge, language and experience, inspired by critical theory and the Weberian tradition. This understanding needs to be updated, so the presentation shall include a comparison with more recent literature on knowledge in organisations (OL and KM literature), and consideration of some of the most relevant critiques against Weber and critical theory. The theoretical purpose is a major part of this thesis: I shall attempt to translate issues from classical critical theory into current issues in organisational literature.

I shall then move on to discuss, what KM (and OL) is about as an actual trend and problem, seen from this perspective.

1.4.1.1. Why critical theory?

Critical theory shared with Weber the thesis that the process of *rationalization* – and its intertwining with *capitalism* – constitutes the driving force of modern society, that the ambiguities and contradictions of this process provide the key to understand most phenomena.

The main focus was on the role of *knowledge* in society: the development and fundamental changes in the societal base of knowledge. One example was the shift in production from a craft-based experience to rational planning and scientific knowledge. In this perspective critical theory were also concerned with *media*. On the one hand in carrying out studies on the effect of technologies like radio and television under a sociological and psychological perspective. But also on a 'self-reflective' level: how different media and genres support and limit the process of thought. Benjamin analysed the relation between (the decline of) experience and the *narrative* as its medium. Both Benjamin and Adorno emphasized and defended the *essay* as a convenient 'form' for philosophical thought. And Adorno defended the capability of art to express aspects of knowledge excluded by scientific thinking.

Critical theory maintained an ambiguous dialogue with philosophy. Their general intention was to convert philosophical themes into social research, based on a critique of all metaphysical systems. On the one hand, philosophy is an important source of inspiration. On the other, philosophy in itself is at a dead end: attempts at reviving metaphysical systems in the form of fundamental truths are futile; and confining philosophy to critical examination of logical arguments and structures in science is fruitless. Still, Adorno differed from Horkheimer in a less dismissive attitude towards philosophy:

> "Adorno much more than Horkheimer tries to redeem the utopian elements in the transcendental notions of subjectivity and the unconditional. His plan of materialistic criticism here is to save the best parts of idealism rather than to get rid of it completely, which is the more radical intention of Horkheimer's antiphilosophy." (Brunkhorst 1999)

The project of critical theory required a confrontation not only with logical positivism, but also with other 'critical' movements emphasizing problematic aspects of modernization, i.e. Husserl, Heidegger, and Bergson. This may appear paradoxical, as critical theory had much in common with these critiques of modernity. Yet they parted from these in the attempt to rescue the hopes of progress, and the remaining emancipatory potential of rationality and modernity.

These philosophical questions still have relevance today. There are many similarities between the hype about knowledge management and best practice sharing and

taylorisation. Many critical contemporary theories about organisation and organisational knowledge are directly or indirectly inspired by these other (anti-modern) critiques of modernity: communities-of-practice, situated practice, social construction.

To a large extent, today's debates about organisational knowledge repeat philosophical discussions between positivism and phenomenology. The conversion to social or organisational studies in principle constitutes a progress, yet the historical dimension is too easily forgotten, and many approaches suffer from inattentiveness to philosophical issues.

The combination of rationality and capitalism makes critical theory more relevant than other Marxist approaches. One example is Braverman and his school of 'labour process studies': he contributed with a critical account of scientific management, yet his analysis and those he inspired suffered – and suffers still – severely from the fact that he didn't really understand the concept of rationality. He was right in emphasizing the control aspect, but wrong in dismissing rationality as mere 'control by capital'.

Weber dealt with 'organisational theory' but not with empirical studies of organisations. Neither can critical theory be characterized as organisational studies, and most of their research was oriented towards the societal and cultural level (although Adorno played an influential role in research on groups). Yet processes of organisation were the key to all these studies. On the one hand, organisations cannot be analysed in isolation, as independent units. On the other, 'organizing' (rationalization) is a fundamental process in modernization – the organisation is *not* merely a product of external forces.

1.4.1.2. Selection of literature

The thrust of this study is on theoretical and philosophical analysis. The researcher must qualify his theses and avoid cementation of prejudices by seeking falsification and contradiction. This qualification is based on confrontation with either theoretical literature or empirical material (or both). Within the limitations of this thesis I have found a greater necessity for theoretical and conceptual 'clarification' than for the establishment of 'controlled experiments'.

Besides the emphasis on critical theory I employ a 'contrapuntal' strategy in the selection of literature – this strategy is a central element in my 'method' or approach and requires a few words of justification.

This study is based on a very broad selection of literature[3]. The aim is to encompass the discussion between different traditions instead of focusing merely on one tradition. The criterion for including this multitude of authors and texts is twofold: a text (author) is selected either for its 'positive' contribution to the issue, *or* for a 'negative' contribution in the form of a counter-argument to a central thesis.

The danger of eclecticism is to ignore the contradictions between various traditions – an ignorance that will result in incoherence. I try to avoid this risk by emphasizing contradictions and disagreements with the ambition of resolving them, rather than ignoring them. Rather than weaving an eclectic patchwork, I strive to overcome apparent incommensurability by identifying similarities *and* contradictions.

The choice of Adorno, Habermas and Weber needs no further argumentation, but the other philosophical authors deserve some introduction in terms of relevance. Evidently, the approach to these authors is very selective, i.e. a few texts by Popper, and a small (50 p) section of Gadamer's *Wahrheit und Methode*. It may be argued that this selective attitude can never do justice to these authors, that the risk of misunderstanding them is much greater on such scarce material. Again I argue that they are selected for their contribution (negative or positive) to the central issue. The texts are chosen for their 'good arguments', although the 'proper' (or reasonable) presentation and interpretation of these arguments does require deeper 'understanding' of the tradition behind them. The arguments cannot simply be 'picked' out of their context…

Popper is included for quite ambiguous reasons. On the one hand he contributes as a critic and opponent to both Marxist and interpretivist theories. I.e. his critique of the concept of ideology is used to elaborate and qualify it by considering his arguments. On the other hand there are strong parallels between his 'critical rationalism' and Habermas' (and Adorno's) defence of rationality. He is thus an interesting companion in the reading of the main literature.

Gadamer is relevant as a philosophical background to the interpretivist tradition in organisational theory, and to the question of 'basic assumptions', 'theories-in-use', 'interpretation' etc. – concepts that are essential for an analysis of organisational

---

3 In this context, a few words on my use of language are required. I prefer to bring citations in original language when possible, and therefore this thesis includes text in German as well as a few French citations. At some occasions I have found it necessary to include citations in Danish, either because it is a relevant Danish reference, or because I have not been able to get hold of the original and therefore contends with a Danish translation. Furthermore, I have preferred to cite from the case study in Danish, in order to emphasize authenticity. I provide English translation for all Danish citations in the main text.

knowledge. Furthermore, the debate between Gadamer and Habermas has much to offer for the analysis of organisations.

Derrida is included mainly for his discussion of writing vs. speech, which has relevance for the analysis of media use in organisations. Furthermore, there are strong parallels between Adorno and Derrida, which serve to qualify the understanding of both.

1.4.1.3. Compliance or critique?

How shall the observer or researcher approach the 'sensemaking' (Weick) of an organisation? By accepting it as 'what the organisational members regard as true', or by approaching it with the armour of a critical rationality: 'what are your reasons for this belief – are they valid' (and *not* accept it as the sovereign 'decisions' of 'competent practitioners'/communities of practice?

With an ethnomethodological or social constructivist approach it is assumed that people 'know what they do', that they are (the) experts in their domain, and that technology should support and 'match' the existing processes. The theories of *situated learning* and *communities of practice* share this *affirmative* approach to basic assumptions and tacit knowledge of a community. This approach does not allow itself to be *critical* of its object of study (i.e. a community). The rational analysis of the theory would – per definition – fall short of the tacit knowledge of the members of the community. The approach is based on the assumption that behind any apparent irrationality in organisational action, there is surely a good 'reason'.

The affirmative approach is intellectual suicide and distinguishes the proponents both from the more cynical 'sociology of knowledge', and from methodologies analysing basic assumptions as the expression of some cultural identity, or a 'historical' point of view. Yet, neither approach is capable of rationally accepting the *truth claim* of the assumptions or expressions, as an attempt to say something about the world, an attempt that is exposed to rational critique. People (texts) must be taken serious in the sense that we not only see their utterances and activities as *expressive*, but that we go far enough in our understanding to open for a critical analysis.

Even if the relativist approach – to some extent – is acceptable when dealing with foreign cultures or primitive societies, it seems to lose all credibility when communities in question are dealing with the same technologies, product and material as many others in modern organisations.

March and various co-authors seem to take a different approach. They regard rationality (problem solving) as an ideal, but observe several other forms of 'organisational learning', and they acknowledge fallibility in organisational action. If it were based on fundamental assumptions of human (and organisational) inadequacy, then it would be highly problematic; as recognition of fallibility, however, their

critical attitude towards organisational action presupposes the possibility of rationality - organisations are measured against the ideal of rationality[4]. There is a possibility that reason (in research) may 'recognize itself' in organisational action. This provides a level of communication between research and organisational actors. According to Popper and Habermas, critical *rationality* constitutes a common ground. To ask critical questions or point out potential inefficiencies is not a sign of arrogance, but of understanding and dialogue.

The question of rationality is not an incidental one in a discussion of methodology. Habermas argue – with Weber – that rationality is *the* fundamental issue 'of our times', and that it integrates three different 'levels': a meta-theoretical ('philosophical'), an empirical, and a methodological level. Thus, any methodological discussion of rationality is already deeply integrated in and dependent on theoretical and empirical levels of analysis.

[4] "the idea of error implies that of truth as the standard of which we may fall short." (Popper 1961)

2. Ambiguity and Interpretation

The primary purpose of this chapter is to discuss the role of interpretation (and ambiguity), which is relevant for organisational studies, but not restricted to organisations. I shall compare the issue as treated in organisational theories with similar discussions in philosophy, sociology and theory of science. And even though I thus do treat organisational theory, I attempt to abstract the discussion of interpretations and ambiguity from the organisational context. This chapter is not about organisations, but about organisations in general.

This discussion is a precondition for the later discussion of media and the concept of media richness: once we know more about the different aspects of interpretations and ambiguity, and of the processes for reduction of ambiguity, we will be in a better position to judge the role of – and need for – media.

I shall emphasize the *problematic* aspects of interpretations, by confronting affirmative theories of interpretations – or culture, basic assumptions, theories-in-use, sensemaking etc. – with theories that focus on groupthink, irrationality, inefficiency as well as inequalities in status and power as a source of bias. Some of the most obvious critical questions are: what are the sources of interpretations, where do they come from – from 'inside' or 'outside'? How do they survive, and how can they be challenged? How is ambiguity – due to contradicting interpretations – reduced? How is consensus achieved? Is there any relationship between interpretation and reality – must the interpretation somehow 'answer' to reality?

The literature in this chapter is thus distributed across two different dimensions: I present both affirmative and more critical theories; and I draw parallels and arguments are from different disciplines, different levels: organizational theory, psychology, sociology, philosophy and hermeneutics. The cross-disciplinary approach obviously faces serious difficulties in comparing different levels and disciplines: there is a risk of drawing dubious analogies, and of weaving an eclectic patchwork by disregarding contradictions and 'ambiguities' between traditions. Yet I am convinced that the theories cannot be 'incommensurable' in any fundamental sense, and the struggle with achieving 'communication' between different theories with the intention of identifying contradictions is the precondition for avoiding the pitfalls of eclecticism.

This chapter opens with a short presentation of the concept of rationality, to a large extent inspired by Weber, Habermas and Popper. I have several reasons for taking rationality as starting point. One is that many (affirmative) 'interpretivist' theories have been developed in a reaction to assumptions about rationality etc. Another reason is my fundamental motivation in this thesis is to preserve rationality as an *ideal* and a source of critique against certain aspects of interpretation and ambiguity. Yet, this does not imply a simple contrast and distinction between 'rationality' and

'interpretation'. Rationality should be regarded as a particular form of interpretation[5], and not all forms of interpretation are rational. A main purpose in this chapter is to be able to distinguish between rational and irrational forms of interpretation.

After this definition of rationality I shall proceed to present the issues of interpretation and ambiguity as treated in various strands of organizational theory. Different theories have different perspectives and will emphasize different (critical) aspects. Many of the encountered problems will be philosophical and sociological in nature, suggesting that the study of organisations is too important to be left entirely to organisational theory. Indeed, several of the organisational theories presented are based on psychological theories, notably social psychology. Nevertheless, although psychology (Weick, Sproull & Kiesler) offers a relevant perspective on and contribution to organisational studies, it is too narrow a foundation for a study of both organisations and groups – these are issues that cannot be reduced to psychology. Instead I emphasize *philosophical* aspects of 'psychological' theories, i.e. by identifying general epistemological questions behind Weick's theory. And 'groupthink' discussed by Sproull & Kiesler is basically a micro-level example of interpretation and ambiguity – tendencies to groupthink are not merely a 'law of psychology'.

Thus, I proceed to identify issues of interpretation and ambiguity in *philosophical* literature. I shall present the theory of hermeneutic understanding as developed by Gadamer: basically an affirmative approach to interpretation, yet with due consideration of critical issues. These approaches are then confronted with their critical opponents, on the one hand arguments from the classical philosophy of enlightenment, including the critical rationalism of Popper, on the other hand – and with greater emphasis – the modern, albeit paradoxical inheritors of this tradition: critical theory and the notion of *critique of ideology*. This tradition appears to be the most irreconcilable with hermeneutic (and interpretivist) approaches, because it is based on a fundamental suspicion and dismay vis-à-vis (almost) *any* 'interpretation'.

---

[5] Habermas distinguishes between to views on rationality: the realist, which assumes that rational discussion are based on references to an objective world; and the phenomenological, which involves a consideration of the mediating subject – assuming that all 'references' are based on a particular view or interpretation, eventually based on an intersubjective agreement about the objective world: "Der Phänomenologe bedient sich nicht umstandslos des Leitfadens zielgerichteter oder problemlösender Handlungen. Er geht nämlich von der ontologischen Voraussetzung einer objectiven Welt nicht einfach aus, sondern macht diese zum Problem, indem er nach den Bedingungen fragt, unter denen sich die Einheit einer objektiven Welt für die Angehörigen einer Kommunikationsgemeinschaft konstituiert. Objektivität gewinnt die Welt erst dadurch, dass sie für eine Gemeinschaft sprach- und handlungsfähiger Subjekte als ein und dieselbe Welt gilt" (Habermas 1981). Habermas' account of the ‚phenomenological' view on rationality has something in common with Adorno's insisting on the awareness of the discrepancy between thought and matter; but Adorno would probably not agree that the world only achieves objectivity in the perception of a ‚community'...

The hermeneutics debate between Gadamer and Habermas thus provides rich and useful material for the study of ambiguity in organisations.

Finally I shall shortly discuss *experience* as a particular foundation for interpretation, an alternative and contrast to (critical) rationality.

2.1. Characteristics of rationality

In the following, the concept of rationality will be specified by emphasizing the most relevant characteristics.

2.1.1.1. Rules and laws – universality

We are presumed to live in a world of objects that will act the same way in similar situations: this regularity can be expressed in 'laws of nature' to be 'discovered' – suggested – by science. This emphasis on *causality* has implications on practice: The anticipatory calculation characterizing 'rational action' is based on prediction, which presupposes causality. Furthermore, the universality and de-personalization characteristic of rules is the basis for the materialization of formal *rules* in modern organisations, in contrast to situated, context-dependent experience.

Causality is necessarily an *abstraction* from experience (or from facts), according to Hume's classical argument that observations – sense impressions, 'factual knowledge' – cannot tell us anything about causality. As an example, March & Olsen emphasize ambiguity of *understanding*, which refers to the difficulties in identifying cause-effect relationships. The point is that 'experience' does not by itself offer *explanations* that are necessary to understanding the complex (or even non-existent) connections between actions and outcomes. Such explanation/understanding requires *interpretation*. We cannot generalize from singular observations to universal laws. Laws are not simply 'discovered' but constructed, which is related to the next characteristic.

2.1.1.2. Duality of theory and observations – atomisation of knowledge

Gellner – an anthropologist in defence of Western rationality against relativism – sees atomisation of information, the separation between theories (explanations) and facts as a means or strategy to avoid and "eliminate self-maintaining circular belief systems":

> "As the main device of self-maintaining systems is the package-deal principle, which brings about the self-maintaining circle of ideas, break up information into as many parts as possible, and scrutinize each item separately. This breaks up the circles and destroys the selfmaintenance." (Gellner 1997)

It's an argument quite similar to Poppers critical rationalism: it implies a critical distance to explanations, which should be 'clearly' stated rather than 'woven' into experience and narratives. This principle is illustrated by Benjamin's distinction

between different historical forms of mediation. It's convenient to regard it as a distinction between pre-modern and modern forms of knowledge[6], although Benjamin himself does not emphasize *modernity* – nor does he share Gellners explicit commitment to rationalism, but attempts a more neutral distinction.

> „Historisch besteht eine Konkurrenz zwischen den verschiedenen Formen der Mitteilung. In der Ablösung der älteren Relation durch die Information, der Information durch die Sensation spiegelt sich die zunehmende Verkümmerung der Erfahrung wider. Alle diese Formen heben sich ihrerseits von der Erzählung ab; sie ist eine der ältesten Formen der Mitteilung. Sie legt es nicht darauf an, das pure An-sich des Geschehenen zu übermitteln (wie die Information das tut); sie senkt es dem Leben des Berichtenden ein, um es als Erfahrung den Hörern mitzugeben. So haftet an ihr die Spur des Erzählenden wie die Spur der Töpferhand an der Tonschale." (Benjamin 1992)

Benjamin emphasizes the discrepancy between *information* and *experience*. Information – the ideal of newspaper journalism – focuses on individual 'atomistic' occurrences. Information is de-contextualised and does therefore neither fit into (personal) experience, nor with *tradition*: „Die Abdichtung der Information gegen die Erfahrung hängt weiter daran, dass die erstere nicht in die 'Tradition' eingeht"(Benjamin 1992). Information differs from the narrative an older form of mediation, in which occurrences are integrated into a 'lived' context.

> "Hätte die Presse es darauf abgesehen, dass der Leser sich ihre Informationen als einen Teil seiner Erfahrung zu eigne macht, so würde sie ihren Zweck nicht erreichen. Aber ihre Absicht ist die umgekehrte und wird erreicht. Sie besteht darin, die Ereignisse gegen den Bereich abzudichten, in dem sie die Erfahrung des Lesers betreffen könnten." (Benjamin 1992)

We are no longer capable of narratives because today events only reach us ripe with explanations; because what we hear is already equipped with explanations, and matches the form of information, not that of the narrative:

> "Jeder Morgen unterrichtet uns über die Neuigkeiten des Erdkreises. Und doch sind wir an merkwürdigen Geschichten arm. Das kommt, weil uns keine Begebenheit mehr erreicht, die nicht mit Erklärungen schon durchsetzt wäre. Mit andern Worten: beinah nichts mehr, was geschieht, kommt der Erzählung, beinah alles der Information zugute. Es ist nämlich schon die halbe Kunst des Erzählens, eine Geschichte, indem man sie wiedergibt, von Erklärungen freizuhalten." (Benjamin 1991a)

---

[6] Habermas contrasts the modern 'understanding of the world' ('Weltverständnis') with the mythological one, which corresponds largely to Gellners characteristic of 'selfmaintaining circles of ideas' (Habermas 1981).

The narrative is always *practical* and may contain an implicit advice (for the listener who learns to re-tell it) – thus integrating the practical and the descriptive, contrary to the principle of basing rational anticipatory action on descriptive prepositional knowledge (causal explanations).

> "[Die Erfahrung] führt, offen oder versteckt, ihren Nutzen mit sich. Dieser Nutzen mag einmal in einer Moral bestehen, ein andermal in einer praktischen Anweisung, ein drittes in einem Sprichwort oder in einer Lebensregel – in jedem Falle ist der Erzähler ein Mann, der dem Hörer Rat weiß. Wenn aber 'Rat wissen' heute altmodisch im Ohre zu klingen anfängt, so ist daran der Umstand schuld, dass die Mitteilbarkeit der Erfahrung abnimmt. Infolge davon wissen wir uns und andern keinen Rat." (Benjamin 1991a)

The narrative described by Benjamin is thus an example of the 'suspicious' form of knowledge that Gellner, cited in the beginning, strives to overcome by 'breaking up information'. A similar point can be derived from Benjamin's distinction between the (pre-modern) chronicler and the (modern) historian. The latter must focus on explanations rather than allude to the 'general patterns of history':

> "Der Historiker ist gehalten, die Vorfälle, mit denen er es zu tun hat, auf die eine oder andere Art zu erklären; er kann sich unter keinen Umständen damit begnügen, sie als Musterstücke des Weltlaufs herzuzeigen. Genau das aber tut der Chronist... Indem jene ihre Geschichtserzählung den göttlichen Heilsplan zugrunde legen, der ein unerforschlicher ist, haben sie die Last beweisbarer Erklärung von vornherein von sich abgewälzt. An ihre Stelle tritt die Auslegung, die es nicht mit einer genauen Verkettung von bestimmten Ereignissen, sondern mit der Art ihrer Einbettung in den großen unerforschlichen Weltlauf zu tun hat." (Benjamin 1991a)

Gellners argument about 'breaking up information' seems to acknowledge the role of mediation, because it implies that that knowledge about the world, by itself, does *not* comes to us in the form of facts and atomic observations – information must be *atomised*, i.e. by dissolution or destruction of existing holistic 'package-deal' explanations.

2.1.1.3. Intellectual rationalisation – a social body of knowledge

As already suggested, with Benjamin's idea of the decline of experience in face of modern 'information', the accumulation of rational, scientific knowledge affects ordinary life. Science *does* have implications for the world outside the ivory towers of academia – to counter the argument made by Berger & Luck man that the history of 'ideas' have no impact on daily life:

> "Theoretical thought, 'ideas', *Weltanschauungen* are not *that* important in society". "To exaggerate the importance of theoretical thought in society and history is a natural failing of theorizers"; "... common sense 'knowledge'

> rather than 'ideas' must be the central focus for the sociology of knowledge." (Berger & Luckman 1967)

I find their argument unacceptable, because modern science provides 'knowledge' of a particular (rational) structure, a knowledge that is applied in most institutions/organizations and everyday practices of modern living.

In Weber's attempt to explain the fundamental implications of the intellectual rationalisation characteristic of the Western world, he speaks of 'disenchantment' as the loss of a magical perception of the world. This does not mean that every individual possesses the scientific or technical knowledge of all things, for example what makes the trolley capable of moving. In fact we may *individually* be less knowledgeable about our tools and everyday practices than Primitive Man. But we are all convinced that there is a technical and rational explanation available, and that all things can in principle be controlled via calculation – and we would no longer regard it as a mystery, a result of magic.

> "Machen wir uns zunächst klar, was denn eigentlich diese intellektualistische Rationalisierung durch Wissenschaft und wissenschaftlich orientierte Technik praktisch bedeutet. Etwa, dass wir heute, jeder z. B., der hier im Saale sitzt, eine größere Kenntnis der Lebensbedingungen hat, unter denen er existiert, als ein Indianer oder ein Hottentotte? Schwerlich. Wer von uns auf der Straßenbahn fährt, hat – wenn er nicht Fachphysiker ist – keine Ahnung, wie sie das macht, sich in Bewegung zu setzen. Er braucht auch nichts davon zu wissen. Es genügt ihm, dass er auf das Verhalten des Straßenbahnwagens 'rechnen' kann, er orientiert sein Verhalten daran; aber wie man eine Trambahn so herstellt, dass sie sich bewegt, davon weiß er nichts. Der Wilde weiß das von seinen Werkzeugen ungleich besser. Wenn wir heute Geld ausgeben, so wette ich, dass, sogar wenn nationalökonomische Fachkollegen im Saale sind, fast jeder eine andere Antwort bereit halten wird auf die Frage: Wie macht das Geld es, dass man dafür etwas – bald viel, bald wenig – kaufen kann? Wie der Wilde es macht, um zu seiner täglichen Nahrung zu kommen, und welche Institutionen ihm dabei dienen, das weiß er. Die zunehmende Intellektualisierung und Rationalisierung bedeutet also *nicht* eine zunehmende allgemeine Kenntnis der Lebensbedingungen, unter denen man steht. Sondern sie bedeutet etwas anderes: das Wissen davon oder den Glauben daran: dass man, wenn man *nur wollte*, es jederzeit erfahren *könnte*, dass es also prinzipiell keine geheimnisvollen unberechenbaren Mächte gebe, die da hineinspielen, dass man vielmehr alle Dinge – im Prinzip – durch *Berechnen beherrschen* könne. Das aber bedeutet: die Entzauberung der Welt. Nicht mehr, wie der Wilde, für den es solche Mächte gab, muss man zu magischen Mitteln greifen, um die Geister zu beherrschen oder zu erbitten. Sondern technische Mittel und Berechnung leisten das. Dies vor allem bedeutet die Intellektualisierung als solche." (Weber 1919)

I have taken the liberty to cite Weber's classical argument at some length, in order to justify, against Berger & Luckman's argument above, that rationalisation and

'theoretical thought' has profound implications for everyday life and has affected 'common sense knowledge'.

Similarly, Habermas argues that 'Primitive Man' differs from people of civilized societies because of the 'social body of knowledge', not because he is (more) capable of logical thinking. All human beings, primitive as well as civilized, have the same capacity for logical inference.

> "Der Grad der Rationalität von Weltbildern variiert... nicht mit der Stufe der kognitiven Entwicklung der Individuen, die ihr Handeln an ihnen orientieren. Wir müssen davon ausgehen, dass erwachsene Mitglieder primitiver Stammesgesellschaften grundsätzlich dieselben formalen Operationen erwerben können wie Angehörige moderner Gesellschaften, wenngleich die höherstufigen Kompetenzen dort weniger häufig auftreten und selektiver, d. h. in engeren Lebensbereichen angewendet werden." (Habermas 1981)

Habermas basically argues that rationality is a fundamental human capacity. Yet while rationality of everyday life and practices is given (as a potential) with natural language and hence not 'imposed' on the Lifeworld from 'the history of ideas', the possibility for exploiting the rational *potential* of language depends on the knowledge available in a particular society or culture. This potential has historically been repressed, but is being emancipated through modernization, particularly with the 'symbolization of the sacred' – calling into question all that was hitherto accepted as given. Modernisation is characterised as an extension and development of this social body of knowledge more or less available to the individuals living in modernity.

This duality between a 'social body of knowledge' and a fundamental potential for rationality in ordinary language can be illustrated by comparison with Heidegger (and Derrida). According to Heidegger, our understanding of the world is based on 'world-disclosing' paradigms created by 'demi-gods' or poets, with Galileo as the most prominent and influential. Galileo thus founded a mathematical view of the world in order to 'disclose' it for calculation, by reducing Nature to dead objects[i](Heidegger 1962). And Derrida argues that literature has primacy over oral communication in the sense that literature has shaped the interpretations we employ – also in everyday life.

Compared with Heidegger and Derrida, however, Habermas seems to have something in common with Berger & Luckman in admitting everyday life some autonomy. According to Habermas, the process of modernization is characterized by *differentiation*, the separation of various expert cultures – science, art – from the everyday life of the Lifeworld[7]. On the one hand, everyday life is affected by expert cultures in the sense that knowledge or experience developed/acquired in those

7 I.e. the separation of monological theories characteristic of science from the hermeneutic understanding in natural language.

spheres are translated into the Lifeworld, i.e. new experience gained in art is imported via literary critics. On the other hand, everyday life has some autonomy, in the sense that it has the 'power of negation': it is capable of critically *testing* the theoretically based knowledge (originating in expert cultures), for example by testing its problem solving capacity.

I emphasize argument about the potential of everyday life for negation, and the duality between natural language and 'theoretical ideas', because is essential to the approach to interpretations. It emphasizes the potential for rationality and progress against more fatalistic theories, according to which we are helplessly enclosed in totalising 'frameworks of interpretation'.

2.1.1.4. Action anticipatory

Rational action is characterized by: anticipatory calculation of alternatives, intention (Weber, March), and 'logic of consequentiality'. This characteristic is often qualified by comparing with alternative 'forms of action'. Thus, Weber distinguishes rational from *traditional* and *affective* action:

> "Zweckrational handelt, wer sein Handeln nach Zweck, Mitteln und Nebenfolgen orientiert und dabei sowohl die Mittel gegen die Zwecke, wie die Zwecke gegen die Nebenfolgen, wie endlich auch die verschiedenen möglichen Zwecke gegeneinander rational *abwägt*: also jedenfalls *weder* affektuell … *noch* traditional handelt." (Weber 1998)

March prefers to contrast the 'logic of consequentiality' with that of 'appropriateness', acting according to *routines* that are (considered) 'appropriate' in the actual situation.

Essential in rational action (and in the concept of problem solving) is thus the emphasis on '*anticipatory*', the separation between plan and execution: i.e. problem solving is a separate, purely intellectual task that is carried out before the act itself, before the solution is actually applied. Rationality is thus defined by a distinction between *action* and *learning* (acquisition, evaluation of knowledge), while experience is based on *integration* of action and learning, or to some extent action *before* learning: 'shoot first, ask questions afterwards'.

This distinction between plan and execution is often criticized. One critique is exemplified in Lucy Suchman's (ethnomethodological, phenomenological) theory of *situated action* (Suchman 1990)): the argument is that people are *not* able to calculate actions in advance, but must always act 'in situ' by taking the unique context in consideration. Separation – between plan and execution, as well as that between subject and object (see below) – is a conceptual misunderstanding of human practice; that is not how people act.

Marxists (both Braverman and critical theory) emphasize that the separation between plan and execution corresponds to the social separation between Capital and Labour, or between management and employees, i.e.:

> "Die Distanz des Subjekts zum Objekt, Voraussetzung der Abstraktion, gründet in der Distanz zur Sache, die der Herr durch den Beherrschten gewinnt" (Horkheimer & Adorno 1968).

I find that Suchman's denial of this separation is a fruitless denial of an unavoidable and irrevocable characteristic of rationality. It may be very relevant to question and criticize the implications of this distanciation and mediation, but to deny it by referring to some fundamental characteristic of human practice is delusive. And by apparently denouncing the very separation between plan and execution Braverman, too, shuts himself of from modernity. As argued by Horkheimer & Adorno, the separation between plan and execution is closely linked to another fundamental characteristics of rationality: the separation between *subject* and *object* (see below).

A similar, though not identical, critique of the emphasis on *anticipation* seems implied in Weick's theory about *sensemaking*, which he characterizes as *retrospective* (Weick 1995). To some extent, though, rational action is also 'retrospective' in the sense that it should be 'justifiable' and able to answer to critique (see later).

A psychological aspect of the separation between plan and execution is the suppression or postponement of drives (Freud, Hegel), i.e. as emphasized by Habermas in his analysis of Hegel:

> „labor breaks the dictates of immediate desires and, as it were, arrests the process of drive satisfaction."(Habermas 1971a)

2.1.1.5. Subject-object

Knowledge refers to an objective world, one that is perceived instrumentally in order to manipulate it.

2.1.1.6. Publicity, intersubjectivity, universality

There is a tension between the principles of universality and intersubjectivity, though, a problem that is essential to the discussion of interpretations. A 'community' can be too narrow; the clear demarcation of a community as opposed to others contradicts the idea of universality – universality goes beyond community and intersubjectivity.

Adorno thus strongly criticizes the ‚fetish of collectivity and organization' and – in Brunkhorst's words - "the insidious tyranny of neighbourhood opinion" (Brunkhorst 1999). He regards groups or collectivities as less capable of grasping truth than an isolated individual.

> "Das individuelle Bewusstsein, welches das Ganze erkennt, worin die Individuen eingespannt sind, ist auch heute noch nicht bloß individuell, sondern hält in der Konsequenz des Gedankens das Allgemeine fest. Gegenüber den kollektiven Mächten, die in der gegenwärtigen Welt den Weltgeist usurpieren, kann das Allgemeine und Vernünftige beim isolierten Einzelnen besser überwintern, als bei den stärkeren Bataillonen, welche die Allgemeinheit der Vernunft gehorsam preisgeben haben. Der Satz, dass tausend Augen mehr sehen als zwei, ist Lüge und der genaue Ausdruck jener Fetischisierung von Kollektivität und Organisation, die zu durchbrechen die oberste Verpflichtung von gesellschaftlicher Erkenntnis heute bildet." (Adorno 1979a)

Thus, while *groups* generally are socialized and conformist, (rational) thinking in the individual mind reaches beyond the individual *qua* its inherent universality. Yet this knowledge residing – hibernating – in the individual mind is not private or tacit: the reference to the 'consequentiality' of thought is in my opinion best understood as a reference to the logical structure and rational potential of language. Knowledge is possible only through cognition and use of language (or art) – it must be expressed. And language is not the 'property' of some community. Brunkhorst emphasizes

> „how distant Adorno's radical individualism is from all forms of communal or collective identity. Whereas, for instance, the ‚communitarianism' fashionable today in the West developed from Herder to Hegel, for Adorno *all* freedom of modernity begins with criticism of that model's metaphysical character of compulsion."

Habermas more or less agrees with Adorno's critique of narrow-minded communities, but he struggles with a dilemma. On the one hand he argues that truth is based on consensus, and thus established in a 'community' – an argument apparently in conflict with Adorno. On the other hand he argues against communitarianism that communicative rationality within the community 'reaches beyond' any local, self-sufficient consensus by appealing to universality.

> "The moral point of view ... requires that maxims and contested interests be generalized, which compels the participants to *transcend* the social and historical context of their particular form of life and particular community and adopt the perspective of *all* those possibly affected. This exercise of abstraction explodes the culture-specific lifeworld horizon within which processes of ethical self-understanding take place… [M]oral knowledge that raises a claim to universal validity must in addition detach itself from the contexts in which ethical knowledge remains embedded." (Habermas 1993)

Habermas thus draws a compromise between the emphasis on intersubjectivity and Adorno's critique of communities by referring to an (ideal of) open-ended consensus.

In summarizing this discussion I shall emphasize a distinction between two different critiques of 'community knowledge'. On the one hand, there is the argument, elaborated above, that a community is 'particularistic' and narrow-minded if it does

not appeal to universality. One could add that the ideal of an isolated autonomous community may also be 'totalitarian' on a small scale, repressing unpopular views.

On the other hand, there is the sociological argument, often forwarded by Adorno, that any actual 'community' in the modern world is in fact subsumed under, and determined by (false, unjust) totality. No modern community or group is autonomous, but a representative totality. It is naïve to regard communities of today as fundamental or primary, because they are in reality mediated and socially 'determined'. As an example, Adorno criticizes Popper's emphasis on *intersubjectivity* as a guarantee for critical rationality in scientific institutions: the ideal of research as based on 'cooperation' does not recognize that research today is no independent activity but fundamentally mediated and conditioned by societal structure. One may say that science is both *social* (intersubjective etc.) and *societal*:

> "Die Formen wissenschaftlicher Kooperation enthalten unendlich viel an gesellschaftlicher Vermittlung; Popper nennt sie zwar eine 'sozial Angelegenheit', kümmert sich aber nicht um deren Implikate" (Adorno 1979b).

2.1.1.7. Transparency

The ideal of publicity is related to that of *transparency* (or explicitness), which is associated with a deep suspicion against any form of *tacit* knowledge. In a colourful allegory, Hume argues that *obscurity* is used as a shield against critical reason – in this case by metaphysics:

> "But this obscurity in the profound and abstract philosophy, is objected to, not only as painful and fatiguing, but as the inevitable source of uncertainty and error. Here indeed lies the justest and most plausible objection against a considerable part of metaphysics, that they are not properly a science; but arise either from the fruitless efforts of human vanity, which would penetrate into subjects utterly inaccessible to the understanding, or from the craft of popular superstitions, which, being unable to defend themselves on fair ground, raise these intangling brambles to cover and protect their weakness. Chased from the open country, these robbers fly into the forest, and lie in wait to break in upon every unguarded avenue of the mind, and overwhelm it with religious fears and prejudices. The stoutest antagonist, if he remit his watch a moment, is oppressed. And many, through cowardice and folly, open the gates to the enemies, and willingly receive them with reverence and submission, as their legal sovereigns." (Hume 1910).

Clarity?

In order to avoid the dangers in the forests of obscurity and ensure transparency, *clarity* is often presented as a requirement – implying that 'unclear' arguments must be discarded. The emphasis on clarity goes back to Descartes (Adorno 1991), who also emphasizes the need for *simplicity*, by breaking down complex issues. A more recent proponent of clarity is Popper, whose critical rationalism requires such 'formal'

criteria: a theory cannot be true, but it can be more or less open to criticism and falsification, which is the only means of progress (see later):

> "we do possess criteria which, *if we are lucky*, may allow us to recognize error and falsity. Clarity and distinctness are not criteria of truth, but such things as obscurity or confusion *may* indicate error. Similarly coherence cannot establish truth, but incoherence and inconsistency do establish falsehood. And, when they are recognized, our own errors provide the dim red lights which help us in groping our way out of the darkness of our cave." (Popper 1963)[8]

On the other hand, he does not regard *accuracy* and *precision* as reasonable criteria:

> "Although clarity is valuable in itself, exactness or precision is not: there can be no point in trying to be more precise than our problem demands. Linguistic precision is a phantom, and problems connected with the meaning or definition of words are unimportant." (Popper 1963)

As evident from Hume's example, clarity has served the positivists as a weapon in their denouncement of metaphysical systems, and of philosophers like Hegel, who could thus be easily discarded for being unclear (rather than read and criticized). And Popper refuses to take Adorno serious for the same reason.

It is thus not surprising that Adorno finds these criteria problematic. Such subjective criteria are inevitably based on the problematic assumption that reality is always 'clear'. A rigid demand for clarity creates blindness towards those areas or moments that do not fit in. Rather than displaying clarity at any price, philosophy should strain itself to put words on that, which cannot be spoken – the unspeakable. Basically, he argues that the demand for clarity emphasizes one function of language: *communication*, over the other: *expressing* the matter ('Ausdruck der Sache') – it requires that in order to make yourself understandable to others, you must compromise with what you want say, with the content.

> "Am ehesten würde der Not eine Philosophische Sprache gerecht, die auf Verständlichkeit dringt, ohne mit Klarheit sie zu verwechseln. Sprache, als Ausdruck der Sache, geht nicht in der Kommunikation, der Mitteilung an andere auf. Sie ist aber - und das wusste Hegel - auch nicht schlechthin unabhängig von Kommunikation." (Adorno 1991)

His argument seems to question the previous emphasis on critical reception and dialogue. Nevertheless, he does admit that the two functions of language cannot be

---

[8] Kuhn arrives at similar criteria in his later attempts to defend the rationality of paradigm choice. He argues that particular values are stable (and valid) across different paradigms – and may therefore act as paradigm-neutral criteria for choice: accuracy, consistency, perspective, simplicity and fruitfulness (Kuhn 1970;Pedersen 1996).

separated, and by suggesting *comprehensibility* as a more relevant criterion (for philosophy) he still adheres to the ideal of transparency.

2.1.1.8. Language, symbolization

As already emphasized, rationality is communicative and based on *language*. It is a precondition for a critical dialogue that things and issues can be 'symbolized', pulled into the realm of language – a process I already characterised as verbalisation. Language reaches beyond the isolated individual because of its *universality*, and because of its *objectivity*, its capacity for 'reference' to something external to human 'community'.

> "die Sprache selbst [verneint] bereits jenen ganzen Menschen, das je redende Einzelsubjekt, vermöge ihrer Allgemeinheit und Objektivität…: erst einmal geht sie auf Kosten des Soseins der Individuen." (Adorno 1964)

Language is a mediator between (human) Mind and Matter, an objectified externalisation of Man, no longer merely a 'member' of its 'subject'. In Habermas' analysis of Hegel:

> "As the name of things, the symbol has a double function. On the one hand, the power of representation consists in making present something that is not immediately given through something else that is immediately given, but which stands for something other than itself. The representational symbol indicates an object or a state of affairs as something else [*ein Anderes*], and designates it in the meaning that it has for us. On the other hand, we ourselves have produced the symbols. By means of them speaking consciousness becomes objective for itself and them experiences itself as a subject. ... In order that nature can constitute itself into the world of an "I," language must thus achieve a twofold mediation: on the one hand, of resolving and preserving the perceived [*angeschaut*] thing in a symbol, which represents it, and on the other, a distancing of consciousness from its objects, in which the "I," by means of symbols it has produced itself, is simultaneously with the thing and with itself. Thus language is the first category in which spirit is not conceived as something internal, but as a medium which is neither internal nor external. In this, spirit is the *logos* of a world and not a solitary self-consciousness." (Habermas 1974)

In accordance with the emphasis on *anticipation*, language is the foundation for rational action.

> "... a subject can carry out only those actions whose intentions he can in principle describe. The limits of action are determined by the range of possible descriptions. This in turn is established by the structures of language in which the self-understanding and worldview of a social group is articulated. Thus the boundaries of action are drawn by the boundaries of language" (Habermas 1988)

2.1.1.9. Law of contradiction - coherence

This refers to the requirement that all (rational) knowledge be included in a unitary system, free of contradictions. This principle guarantees coherence and excludes relativism, emphasizing that rationality in principle cannot tolerate alternative forms of knowledge. Drawing on Kant, Horkheimer & Adorno thus argue that the idea of systematic unity, and the ability to derive the particular from universal, is the sole contribution from reason:

> "Forstanden … sætter 'en vis kollektiv enhed som mål for forstandshandlingerne', og denne enhed er systemet. Dens foreskrifter er anvisninger på, hvorledes begreberne skal bygges hierarkisk op. Hos Kant – som hos Leibniz og Descartes – består rationaliteten i, 'at man såvel ved opstigningen til højere arter som ved nedstigningen til lavere sorter fuldender den systematiske sammenhæng'. Det 'systematiske' i erkendelsen er 'dennes sammenhæng ud fra ét princip'. Tænkning, som oplysningen forstår den, er ensbetydende med tilvejebringelsen af en samlet, videnskabelig orden og afledningen af erkendelser af kendsgerninger fra principper, hvad enten disse tydes som vilkårligt satte axiomer, medfødte ideer eller højeste abstraktioner… Modsigelsessætningen er systemet i en nøddeskal. Erkendelse består i subsumering under principper. Den er ét med den dom, der føjer sig ind i systemet. Anden tænkning end den, der tager sigte på systemet, er uden retning eller autoritær." (Horkheimer & Adorno 1993)[9]

2.1.1.10. Critique and justification

Critical dialogue is often emphasized as fundamental characteristics of rationality:

> "Rationalität hat weniger mit dem Haben von Erkenntnis als damit zu tun, wie sprach- und handlungsfähige Subjekte *Wissen erwerben und verwenden.*" (Habermas 1981)

Popper[10] describes the scientific community (the ideal of rationality) as one where theories are accepted but always potentially open to critique, be it based on counter-

---

[9] "The intellect ['Verstand'] … aims at a certain collective unity, and this unity is the system. Its prescriptions are guidelines to build up concepts hierarchically. For Kant, rationality means that by ascending to to higher species, as well as by descending to lower sorts, one fulfils the systematic coherence. The 'systematic' in knowledge is this coherence based on one principle. Thought, as conceived by the Enlightenment, is equivalent to the construction of a united scientific order, and to the deduction of knowledge of facts from principles, be they arbitrary axioms, inborn ideas or the highest abstractions… The law of contradiction is the system in a nutshell. Knowledge means subsuming under principles. It is identical to the judgment that is inserted into the system. Any other thought than that aiming for the system, is without direction or authoritarian."

[10] Critical theory (Habermas, Adorno) vs. critical rationality (Popper) Association of these two traditions is ambiguous. There are similarities, yet the differences and disagreements have been

evidence or on logical arguments. Theories are open to 'rigorous refutations'. They are never 'true' in any absolute sense, but they are better than earlier versions – and they cannot constitute a closed framework or paradigm (or horizon). Fallibilism is based on an asymmetry between true and false: the critical method is fundamentally different from any other method and does not depend on a justified 'foundation' for its validity. Popper rejects the

> ”untenable dogma that criticism, in order to be 'valid', must proceed from assumptions which are established or justified.” (Popper 1961)

And he emphasizes the possibility for *immanent criticism*, which is distinct from *transcendent criticism*. While the latter is based on an alternative: "assumptions which are of the nature of a competing theory", *immanent criticism* is based on assumptions that

> "may, for example, be part of the theory against which the criticism is directed… Or they may be assumptions which would be generally found acceptable, even though they do not form part of the theory criticized." (Popper 1961)

The asymmetry and role of critique is also emphasized in the distinction between *genesis* and *justification* of a theory, a principle Popper also maintains in isolating the *source* of knowledge from the process of rational critique, and in his distinction – in relation to the theory of science – between *Context of Discovery* and *Context of Justification*.

Similarly, Habermas defines modernity as based on a rationality, where consensus is potentially open to critique and requires justification: "die Rationalität einer Äusserung [ist] auf Kritisierbarkeit und Begründungsfähigkeit zurückzuführen." (Habermas 1981). He argues that this applies to actions as well as to statements, that there is no fundamental difference between know-how and know-that: "auch dieses know-how kann grundsätzlich in die Form eines know-that übergeführt werden" (Habermas 1981). He thus rejects the

---

manifest as well: Adorno characterized Popper as a positivist, while Popper later neglected his role – and interest – in the debate on positivism in German sociology, dismissing Adorno as irrelevant and with a tiresome tendency to blur a banal content in unnecessarily complicated sentences – incapable of clarity. Brunkhorst concludes that Adorno agreed with Popper's idea of a critical science, because it coincides with his own critique of metaphysics or idealism. Yet, metaphysics or idealism only one form of the identity thinking criticized by Adorno, who also criticizes instrumental reason (the third form of identity thinking being "subsuming of single elements or objects under general concepts") – "this idea is strange to the analytical philosophers like Popper or Quine". "For Adorno, fallibility alone is not enough to avoid unconscious and uncomprehended relations of domination, repression and unjust exclusion" (Brunkhorst 1999). Habermas' emphasis on criticizability and justifiability is similar to the strong Popperian demand of falsifiability, but less rigorous and less dependent on ‚hard facts' or ‚clarity'.

classical Aristotelian distinction between *theory* and *practice*, which regards the latter as a different realm.

Against Derrida, Heidegger, Rorty and others that regard language (or Being, literature, culture) as closed and self-reproducing systems of meaning, Habermas emphasizes the potential for *negation* in everyday language. This is achieved because the demand for justification ('Geltungsanspruch') reaches beyond the horizon of the given context:

> "Ihre Negationskraft zieht die innerweltliche Sprachpraxis aus Geltungsansprüchen, die über die Horizonte des jeweils bestehenden Kontextes herauszielen." (Habermas 1985)

2.1.1.11. Who, and what, can be rational?

Weber argues for methodological individualism: only individuals, not classes or nations, can act rationally. Weick uses a similar restriction to argue that organizations cannot be said to act rationally, because they cannot be assumed to achieve the 'four-fold agreement' necessary for rational action. Rationality thus requires an acting *subject* to agree on *ends* and *means* and principles of *evaluation* – to emphasize the central elements. Compared to Weber, however, does not focus on individuals, but also recognizes (small) groups as capable of rational action.

> "rationality is best understood as in the eye of the beholder. It is *his* aims and how he consciously sets out to accomplish them that constitute the clearest, most easily specified component of rationality. To say that 'systems' or organizations engage in rational decision-making makes sense only if we can specify some set of persons who agree on some desired outcome, on a specified set of means to attain this outcome, on ways in which the specific means will be activated, and on how it will be known whether the desired outcome was attained or not. Since this fourfold agreement is more difficult when large numbers of persons are involved, it is likely that rationality will characterize mostly small groups of actors and that, at any moment in time, organizations will have several different and contradictory rationalities." (Weick 1979)

It seems necessary here to anticipate the later discussion of organisations in order to illustrate the implications of this definition of rationality. If Weick's argument is read as a refusal to regard organisations as rational – and the reference to 'several different and contradictory rationalities' refers to *ambiguity* in organisations, which will soon be discussed – then it obviously disagrees with Weber's theory about modern organisations being fundamentally rational. It may seem paradoxical that Weber bases *his* conclusion on an *individualist* (or *subjectivist*) concept of rationality, similar to Weick's. The reason may be that Weber sees organisations not as a 'large group of people', but as the rational 'design' of an individual entrepreneur.

It is too narrow to apply the term rational merely to people – and even more inadequate to reserve it for individuals. This restrictions fails to recognize that rationality also been 'objectified' or externalised into objects, i.e. modern science, or the formal procedures of a bureaucratic organisation – both examples in fact being essential to Weber's own sociology.

Habermas appears to extend the definition by arguing that the term rational can be applied not only to persons, but also to 'symbolic expressions' (acts as well as statements):

> "Wenn wir nach grammatischen Subjekten suchen, die den Prädikatausdruck 'rational' ergänzen können, bieten sich zunächst zwei Kandidaten an. Personen, die über Wissen verfügen, und symbolische Äußerungen, sprachliche und nicht-sprachliche, kommunikative oder nicht-kommunikative Handlungen, die Wissen verkörpern, können mehr oder wenig rational sein. Wir können Männer und Frauen, Kinder und Erwachsene, Minister und Busschaffner 'rational' nennen, nicht aber Fische oder Fliederbüsche, Gebirge, Strassen oder Stühle. Wir können Entschuldigungen, Verspätungen, chirurgische Eingriffe, Kriegserklärungen, Reparaturen, Baupläne oder Konferenzbeschlüsse 'irrational' nennen, nicht aber ein Unwetter, einen Unfall, einen Lottogewinn oder eine Erkrankung." (Habermas 1981)

Although he thus does not restrict his definition to *individual* behaviour, even rational 'expressions' must apparently be associated with an *agent*, an acting subject. Neither the 'change of state' in an automatic ('selbstgeregelt') system, nor a stimuli-provoked response can be 'rational' – or only in a 'transferred' ('übertragen') sense. The concept requires that the acting – or speaking – subject *by itself* can justify its (speech) acts:

> "Manchmal sprechen wir ja von der 'Rationalität' eines Reizstimulierten Verhaltens, der 'Rationalität' der Zustandsänderung eines Systems. Solche Reaktion können als Lösungen von Problemen gedeutet *werden*, ohne dass der Beobachter der interpolierten *Zweckmäßigkeit* der beobachteten Reaktion eine *Zwecktätigkeit* unterstellt und diese einem entscheidungsfähigen, propositionales Wissen verwendenden Subjekt als Handlung zurechnet... Verhaltensreaktionen durch innere oder äußere Stimuli gereizten Organismus, umweltinduzierte Zustandsänderungen eines selbstgeregelten Systems lassen sich zwar als *Quasihandlungen* verstehen, nämlich so, als ob sich darin die Handlungsfähigkeit eines Subjekts äußerte. Aber von Rationalität sprechen wir hier nur in einem übertragenen Sinne. Denn dir für rationale Äusserungen geforderte Begründungsfähigkeit bedeutet, dass das Subjekt, dem diese zugerechnet werden, unter geeigneten Umständen *selbst* in der Lage sein soll, Gründe anzuführen." (Habermas 1981)

2.1.1.12. Individual autonomy

Rationality is associated with *autonomy*. The individual subject is capable of acquiring (objective) knowledge, and of acting according to its own knowledge (and calculations), instead of submitting to authority, or by accepting the prejudices of a given community. *"Man can know: thus he can be free*" (Popper 1963). Or in Kant's words about enlightenment:

> "Aufklärung ist der Ausgang des Menschen aus seiner selbst verschuldeten Unmündigkeit. Unmündigkeit ist das Unvermögen, sich seines Verstandes ohne Leitung eines anderen zu bedienen. Selbstverschuldet ist diese Unmündigkeit, wenn die Ursache derselben nicht am Mangel des Verstandes, sondern der Entschließung und des Mutes liegt, sich seiner ohne Leitung eines andern zu bedienen. Sapere aude! Habe Mut, dich deines eigenen Verstandes zu bedienen! ist also der Wahlspruch der Aufklärung." (Kant 1784)

The ideal of autonomy was a core idea of both liberalists and philosophers of enlightenment. It was maintained by critical theory *against* late capitalism, which they believed to be on the verge of engulfing this fundamental principle of liberalism.

The ideal of autonomy is complex and ambiguous. It seems to contradict the principles of intersubjectivity, but that would be mistaken. It does *not* correspond to an anarchistic or solipsist ideal of an isolated subject: there may be a tension, but no fundamental and irreconcilable contradiction between socialization and autonomy. On the contrary: both Adorno and Habermas maintain that autonomy is based on socialization.

Nevertheless, the principle of autonomy does confront the emphasis on *community* – it emphasizes the individual *before* the – local, primary – community (see also previous discussion). This principle anticipates an essential issue regarding interpretations. It is a point of critique against radical versions of 'social construction' etc., notably the idea of *legitimate peripheral participation*: learning as socialization (Lave & Wenger 1991). Their theory appears to reduce the individual to a 'cultural dope', to paraphrase (paradoxically) Garfinkel's own ethnomethodological critique of Parsons. This is a theory of pure, un-mediated socialization, of total individual submission under the collective, where the ideal of autonomy is abandoned.

2.2. Interpretation and ambiguity in organizational theory

Weick's book about *The Social Psychology of Organisations* (Weick 1979) has been influential in organizational theory and is a major work in what his been labeled the 'interpretivist' school or paradigm (Burrell & Morgan 1979;Hatch 1997). His theory differs from rationalist and functionalist approaches by focusing on processes of ambiguity, interpretation, enactment and, more recently, sensemaking. Daft & Lengel's theory of media richness is based on Weick's distinction between ambiguity and uncertainty(Daft & Lengel 1986).

March & Olsen are interesting, because they take inspiration from Weick and incorporate concepts of interpretation and ambiguity within a functionalist and rationalist framework. As a result, they emphasize other, more problematic aspects of consensus-based understanding than Weick.

The same is true for Sproull & Kiesler. They focus on the micro-sociological level and draw on group studies carried out within the discipline of social psychology. They describe processes of 'groupthink', which I think may be regarded as somewhat similar to those described by Weick, though restricted to the level of groups – whereas as Weick has been more elaborate in extending social psychology to the level of organizations.

2.2.1. Weick: ambiguity and sensemaking

Weick and Daft & Lengel define ambiguity/equivocality as 'two or more conflicting interpretations'. In his more recent work Weick prefers the term equivocality, because ambiguity is too often associated with 'clarity':

> "it is important to retain the word equivocal ... because it explicitly points to the presence of two or more interpretations as a trigger to sensemaking. Although the word ambiguity also means the presence of two or more interpretations, it can also mean something quite different, namely, a lack of clarity, which … makes it quite similar to uncertainty." (Weick 1995)

Nevertheless, in this thesis I shall use the concepts of ambiguity and equivocality in the same meaning, and the literature generally seems to use them interchangeably. But the distinction between ambiguity/equivocality and uncertainty is essential to the definition.

Uncertainty is associated with traditional (rational) decision theory etc. It is characterized by 'lack of data', and the way to reduce uncertainty is by gathering more data. Weick also characterizes uncertainty as the *absence* of any interpretation. To some extent, the process of reducing uncertainty corresponds to the previous definition of (instrumental) *rationality*, and Weick's distinction aims at identifying a process of intersubjective 'understanding' that differs significantly from processes analyzed by decision theory etc. On the other hand, reduction of uncertainty in Weick's definition is not quite identical to (critical) rationality: Critical rationality is not characterized by 'lack of interpretation' (= theory). On the contrary, it requires a theory for its critique, and the theory itself does not emerge from 'more data' (as argued by Hume etc.), but has its origin elsewhere: experience, inspiration etc. – according to Popper, context of discovery is *not* 'rational'.

The problems of ambiguity, on their part, do not meet "the assumptions necessary for rational decision making".

> "The problem is that there are too many meanings, not too few. The problem faced by the sensemaker is one of equivocality, not one of uncertainty. The problem is confusion, not ignorance." (Weick 1995)

In order to reduce ambiguity, people do not need *more information*, because information will not resolve misunderstandings. "Instead, they need values, priorities, and clarity about preferences" (Weick 1995) – although it would be misleading to associate interpretations merely with *values*: In most definitions, interpretation also includes causal explanations, assumptions about cause-effect relationships, which suggest appropriate *means*. This is, for instance, implied in his reference to the 'fourfold agreement' of rationality (see p. 30), emphasizing 'elements' of knowledge that cannot be specified in terms of evidence and are thus open to interpretation.

2.2.1.1. Reduction of ambiguity

According to Daft & Lengel, equivocality is reduced when participants "exchange opinions to clarify ambiguities, define problems, and reach agreement" (Daft & Lengel 1986). The emphasis is on *definition* and *enactment* as a collective 'act' – on *agreeing* and consensus formation rather than truth. And Weick thus focuses on the *process* of sensemaking rather than on fixed interpretations, not unlike Zimmerman's distinction between the ethnomethodological emphasis on the 'occasioned' character of ongoing processes of understanding, and the notion of *culture* as something more static:

> "By use of the term *occasioned* corpus, we wish to emphasize that the features of socially organized activities are particular, contingent accomplishments of the production and recognition work of parties to the activity. We underscore the occasioned character of the corpus in contrast to a corpus of member's knowledge, skill, and belief standing prior to and independent of any actual occasion in which such knowledge, skill, and belief is displayed or recognized. The latter conception is usually referred to by the term culture." (Zimmerman & Power 1971), cited in (Habermas 1981).

A crucial point in Weick's definition is that the process of reducing ambiguity will not gain from more *information*. How should this be understood? In one sense it is correct that the process will gain less from more 'data' than from a clarification of *both* frames and values. Still, once various 'interpretations' are specified, it is not evident that information cannot support the choice of one over the other. Furthermore, it could be argued that clarification of 'frames' or 'basic assumptions' is just another type of information.[11]

[11] Thus, paradoxically, Habermas characterizes hermeneutic understanding as a process where one can specify what further information is needed (thus the opposite of Weick's definition): "Bei Verständnisschwierigkeiten, die sich aus einem grossen kulturellen, zeitlichen oder sozialen Abstand ergeben, können wir prinzipiell angeben, über welche zusätztlechen Information wir verfügen müssten, um zu verstehen: wir wissen, dass wir ein Alphabet

2.2.1.2. Social and cognitive aspects of equivocality

Weick's theory combines the purely *cognitive* aspect emphasizing the difficulty in understanding the *issue* and applying an appropriate interpretation, with the *social* aspect of equivocality: that conflicting interpretations are held by different (groups of) people. This corresponds to the *agent* or subject of a rational action.

It may be useful to compare Weick's theory of 'enactment' with Poppers 'bold conjectures': tentative scientific theories fostered in the Context of Discovery. 'Enactment' corresponds to the process by which a theory is accepted 'for the time being', a process Popper characterizes as *decisionism*. The difference is that Weick's model does not seem to distinguish between genesis and justification, that he does not share the idea of *critical* reception envisioned in Popper's ideal of a scientific community. Poppers emphasis on the truth claim of any theory, and the idea of progressing towards truth has no correspondence in Weick's 'psychology of knowledge'.

2.2.2. March: ambiguity and interpretation as a distortion

March' and others' focus on *ambiguity* on the micro- or meso-level is inspired by Weick but differs by their emphasis on its potentially *dysfunctional* role, both as a distortion of rational choice processes (March & Olsen 1976a), and as a de-coupling of the ideal (experiential) learning cycle (Levitt & March 1988;March & Olsen 1976b;March & Olsen 1976a;March & Olsen 1976b). March & Olsen refers to four types of ambiguity, two of which correspond to the two elements of interpretation mentioned previously:

> "By the term *ambiguity* we intend to signify four major kinds of opaqueness in organizations. The first is the ambiguity of *intention*. Many organizations are characterized by inconsistent and ill-defined objectives. It is often impossible to specify a meaningful preference function for an organization that satisfies both the consistency requirements of theories of choice and the empirical requirements of describing organizational motive. The second lack of clarity is the ambiguity of *understanding*. For many organizations the causal world in which they live is obscure. Technologies are unclear; environments are difficult to interpret. It is hard to see the connections between organizational actions and their consequences. The third lack of

---

entziffern, das Lexikon kennenlernen oder kontext-spezifische Anwendungsregeln erschliessen müssen. Innerhalb der Toleranzgrenzen der üblichen umgangssprachlichen Kommunikation können wir beim Versuch, unverständliche Sinnzusammenhänge hermeneutisch aufzuklären, wissen, was wir (noch) nicht wissen" (Habermas 1971a). And he further argues that this characteristic also reveals the constraints of hermeneutic understanding: in situations where one cannot specify the need for information, other processes are needed.

> clarity is the ambiguity of *history*. The past is important, but it is not easily specified or interpreted. History can be reconstructed or twisted. What happened, why it happened, and whether it had to happen are all problematic. The fourth lack of clarity is the ambiguity of *organization*. At any point in time, individuals vary in the attention they provide to different decisions; they vary from one time to another. As a result, the pattern of participation is uncertain and changing." (March & Olsen 1976a)

They thus argue that specific and essential elements of decision-making cannot be clear and thus are vulnerable to politics and dissent. I shall emphasize two of these elements, quite similar to Weick's remark about a 'fourfold agreement'.

2.2.2.1. Purpose and causality – two 'elements' of interpretation

One ambiguous element is *purpose* and criterions of success: goals, values, and preferences. On the one hand this is generally regarded as a subjective category and may not seem controversial. On the other hand it complicates significantly the view of organisations, which are often defined as means to a (given) end (Adorno), or "oriented to targets" (Levitt & March 1988) (see later).

The second element vulnerable to ambiguity is *causality*: knowledge about cause-effect relations, 'connections between organizational actions and their consequences' in particular, are essential to the choice of means in rational decision making. I see this element as the essence of their second and third types of ambiguity: knowledge of causal relationships in the environment, and in the interpretation of history.

To regard causality as 'open' to interpretation corresponds to the classical argument (Hume, Kant) that causality is not observable, that it is not possible to make an induction[12], to infer a universal rule on the basis of (any amount of) empirical observations. However March and his co-authors do not lean on this abstract argument, but emphasize strongly the *objective* dimension, insisting that some environments are more complex and difficult to 'explain' than others. March & Olsen thus seem to argue that real-life organisations are generally more exposed to complex environments than individuals. Such environments amplify the *need* for interpretation and may be the original, objective source of ambiguity between interpretations. This emphasis on the objective dimensions differs from Weick's interpretivist approach – and from social constructivist approaches in general – who maintain a 'subjective' or 'epistemological' distinction: ambiguity defined as two ore more conflicting interpretations. As opposed to interpretivism and social construction, March & Olsen explicitly "wish to acknowledge the possibility, and frequent dominance, of what is usually called objective reality" (March & Olsen 1976b).

[12] It should be clear that I use this term in the logical sense, as the opposite of deduction: to derive a particular statement from a general rule.

The argument about types of ambiguity can be 'converted' to an idea about the nature of a (frame of) interpretation. An interpretation is defined by agreement – corresponding to Weick's 'fourfold agreement' – about, at least, those elements: – *purpose* and *causality*. There is no ambiguity *within* an interpretation.

2.2.2.2. Ambiguity or one-eyedness: both restrictions on rationality

Similar to Weick's reference to 'several different and conflicting rationalities', March and his co-authors argue that large, complex organisations have various subgroups with different frames of interpretations. March emphasizes the (potential) irrationality, both within individual interpretations (no ambiguity), and of the processes involving several interpretations (ambiguity).

Basically, individual interpretations are here regarded as fallible, rather suspicious assumptions about the objective reality. On the one hand, interpretations are 'conservative' and "resistant to experience", and may even be *enacting* these experiences (Levitt & March 1988). On the other hand, if interpretations may be modified, it is not necessarily – even unlikely – due to better information about the environment, because they are "vulnerable to paradigm peddling and paradigm politics" (Levitt & March 1988). The choice of words clearly emphasizes the irrational aspects: "Individuals, as well as organizations or nations, develop myths, fictions, legends, and illusions" (March & Olsen 1976a). (Mis-)interpretations jeopardize the possibility for choosing adequate strategies.

On the other hand, March emphasizes that processes involving ambiguity threaten the rationality of decision making, evaluation etc. Fractions bargain over decisions with a tendency to inflated promises – characteristic of political processes – and they tend to be critical and negative in their evaluation of results (of the actions suggested by 'the others'):

> "Conflict and decision advocacy within putatively rational decision processes lead to inflated expectations and problems of implementation and thus to disappointment". "[E]valuations of outcomes are likely to be more negative or more mixed in organizations than they are in individual" (Levitt & March 1988).

2.2.2.3. Rationality as an implicit ideal

It is worth noticing March's rather 'ambiguous' attitude to rationality. He tends to emphasize the more *irrational* aspects of organizations, i.e. referring to signal and symbol, garbage cans, interpretation and ambiguity. But the more or less explicit conclusion: that organizations tend to behave irrationally is *not* a dismissal of the concept and relevance of rationality. On the contrary, the critique preserves rationality as an implicit ideal – as evident in Habermas' and McIntyre's argument (in another context) that the distinction between irrational and rational practices (which is crucial for several of March' texts) is a *normative* evaluation on the part of the researcher:

> "… to characterize actions and institutionalised practices as rational or irrational is to evaluate them. Nor is it the case that this evaluation is an element superadded to an original merely descriptive element. To call an argument fallacious is always at once to describe and to evaluate it. It is highly paradoxical that the impossibility of deducing evaluative conclusions from factual premises should have been advanced as a truth of logic, when logic is itself the science in which the coincidence of description and evaluation is most obvious. The social scientist is, if I am right, committed to the values of rationality in virtue of his explanatory projects in a stronger sense than the natural scientist is. For it is not only the case that his own procedures must be rational; but he cannot escape the use of the concept in his inquiries." (MacIntyre 1971), cited in (Habermas 1981).

2.2.3. Groupthink

Just as March remains *within* the tradition of assuming 'rational behaviour', the theory of groupthink presented by Sproull & Kiesler converges towards a theory of 'the inevitable irrationality of groups'. Here, too, the critical approach is based on an ideal of rationality, against which organizational (and group) processes are measured.

Sproull & Kiesler deliver a critical account of the processes – at the micro-level – that lead to common interpretations and results in groups, and they argue that the problematic processes may result in inferior or sub-efficient solutions/performance. While groups are potent action-oriented, they are also inhibited in their tendency to groupthink, characterized by: *cohesiveness, egocentrism, and extremism*. They are capable of swift and coordinated action, but they can also be problematic or sub-optimal when they tend to consider only a narrow range of alternatives, and to avoid critique.

2.2.3.1. <u>The virtues of critique</u>

Before elaborating on the critique-inhibitive factors, it is essential to notice that this argument implies a positive view on the role of critique and dissent in problem solving, corresponding to the emphasis on critique and justification in the previous definition of rationality. Contrary to Levitt & March's denunciation of the negative role of "conflict and decision advocacy within putatively rational decision processes", Sproull & Kiesler might thus regard ambiguity and political processes in organisations more positively: they force decision makers to put forward arguments and clarify assumptions. Factors that encourage critique and increase the number of alternatives considered will only strengthen the rationality of decision-making. A similar positive account of ambiguity is implied in the argument, presented by Brown & Duguid and others, that the very strength of *organisations* lies in their potential for challenging the 'blindfolds' and myopic tendencies of individual communities (groups) within the organisation:

> "most formal organizations are not single communities of practice, but, rather, hybrid groups of overlapping and interdependent communities. Such

> hybrid collectivities represent another level in the complex of knowledge creation. Intercommunal relationships allow the organization to develop collective, coherent, synergistic organizational knowledge out of the potentially separate, independent contributions of the individual communities". "By yoking diverse communities - with different belief systems and distinct evaluative practices - together into cohesive hybrids, organizations as a whole challenge the limits of each community's belief. This process generates knowledge through what Hirschhorn calls the 'productive tension' or Leonard-Barton, 'creative abrasion,' forcing particular communities beyond their own limits and their own evaluative criteria." (Brown & Duguid 1998)

However, while Levitt & March seemed unaware of the rational potential of dialogue, the argument above is a little too enthusiastic, without regard for the negative aspects of ambiguity and conflict. Conflicts and bargaining between (representatives) fractions in organisations are no guarantee of rational debate and hermeneutic understanding, and disagreements may also be 'resolved' – or appeased – by other, and less rational means. Habermas thus argues that communicative rationality may be obstructed by *strategic* behaviour – when *persuasion* replaces *convincing*. I find the enthusiasm expressed by Brown & Duguid somewhat hollow when it is not based on a distinction between rational debate and other processes for 'reduction of ambiguity'.

2.2.3.2. Critique-inhibitive factors: pleasantness, time, and attention to status

Sproull & Kiesler suggest various reasons for the tendency of groups to avoid critique.

Pleasantness, trust, and social relations

One reason is that conflicts would threaten cohesiveness and the sense of belonging and identity (cosiness). The focus on the experience of pleasantness (cohesiveness), rather than efficiency (or rationality) is illustrated by an experiment reported by Sproull & Kiesler:

> "Because people like working in groups, they often do not measure and report their group behavior objectively. Cohesiveness and consensus are pleasant, so group members conclude that their group has done well, whether or not this impression has validity. Experiments can separate perceptions from actual group behavior. An experimental study of brainstorming in a computer-based group decision support system at the University of Arizona illustrates the sometimes incorrect connection between how well group members like a group and how they evaluate its performance. Researchers put a confederate in each group to compare the effect of a critical member with a supportive member. Electronic discussion groups with a planted group member who criticized others produced more new ideas and achieved more than groups whose planted member was highly supportive. Yet group members' perceptions of their success did not match the performance facts. Groups with the critical group member did not like their group and incorrectly thought the group did poorly, whereas groups with the supportive

> member liked their group and incorrectly thought they did very well." (Sproull & Kiesler 1991)

By this example they emphasize a conflict between *critique* and *cohesiveness*: rational critique is a potential threat to the experience of pleasantness, while the maintenance of group identity tends to inhibit critique. And because critique is essential to rationality and thus to group performance, this cohesive tendency may also affect the quality of the result. That group work is perceived as pleasant is no guarantee that it performs well, rather the opposite.

This argument may also be extended to provide a critical perspective on the recent emphasis on personal relations, social networks or *social capital* (Bourdieu 1977). In an argument quite similar to Sproull & Kiesler's, O'Reilly *et al* suggest that the tendency of managers to rely on *trusted* sources tends to exclude sources of *expertise*.

> "when obtaining information in this manner, managers may judge the validity of the information based on the credibility of the source, not the facts of the matter. This may lead to the acceptance of a piece of information as "true" or "false" depending on how much the recipient trusts the sender. The research on source credibility also suggests that it may be the "safeness" or trustworthiness of the source, more than expertise, that determines whether information is believed ... Thus information may be acquired from accessible, trustworthy sources rather than from potentially higher quality sources that, while being perceived of as having the expertise, are not considered trustworthy. These tendencies may … reflect the structural barriers that are created by group pressures and can act to limit the range of "acceptable" information seeking." (O'Reilly *et al.* 1987)

This observation implies a potential conflict between trust and rationality: using personal relations and relying on trust is a restriction on rationality because it threatens the potential for critical and unprejudiced reception. And the tendency to embrace a trusted source seems to be the antithesis to Poppers *critical rationality*: he argues that the source is not important, because any content must in principle be subject to 'ruthless critique' (p. 28)[13].

[13] It may be argued that even Poppers critical rationality seems to imply some level of trust. Although any theory is in principle subject to critique and never true in an absolute sense, some theories have to be accepted until they are falsified. Critical rationality is not a scepticist distrust of all 'knowledge'. Yet this ('performative') accept of a theory may hardly be described as trust, because it is – in principle – based on the institution of science rather than personal relations. Perhaps the reliance on scientific theories should be described as confidence in Luhmann's terms? Luhmann defines trust – as opposed to confidence and familiarity – as related to action: trusting means taking a risk (Luhmann 1988). (Relying on 'falsifiable' scientific theories by applying them also means 'taking risks', but the structure is different). And he argues that trust is inevitable in social life (Luhmann 1968). He also suggests a

Besides the limitations on rational critique, O'Reilly *et al* also emphasize another negative aspect of relying on personal networks: it narrows the range of knowledge available and thus limits the range of alternatives considered, as also emphasized in more recent literature emphasizing the potential weakness of *strong ties* (personal relations, social network) and the benefits of *weak ties* in terms of searchability and avoiding redundancy:

> "strong ties … inhibit efficient search, whereas weak ties … provide a more advantageous search position in the network than strong ties as these ties are less likely to provide redundant knowledge." (Augier & Vendelø 1999)[14]

This argument about the potential contradiction between critical rationality and cohesiveness, emphasizing the tendency of reliance on trust and personal relations to inhibit critical distance, anticipates the media discussion, where Sproull & Kiesler link the potential for rational critique with the 'detachment' and social buffering characterizing electronic communication (p. 144).

Need for speed

Another reason for the reluctance to critique is that groups often operate within a time limit, and critique will prolong the process and delay the product.

Attention to status and hierarchy

Last, but not least, there is a tendency to accept, without critique, suggestions and arguments from high status members. The critical and rational potential is thus inhibited by attentiveness to status (among other factors), a status that is based on organisational hierarchy or other 'irrelevant' (from a rational perspective) factors, rather than expertise. By thus emphasizing factors external to the group such as status and hierarchy Sproull & Kiesler seem to recognize that a group is not an independent unit, primarily determined by group-internal forces. Group performance is not merely explained with reference to some properties of the *group* defined as an abstract category, independent of social structure etc., with emphasis on *emerging* leadership based on individual qualities and social skills. Instead of such a 'narrow' perspective, they also explore the actual processes through which social structure affects group processes, how it affects information processing in groups. Group dynamics allow the

---

historical change in the function of trust, and that the traditional distinction between *familiar* and *unfamiliar* fields of activity has lost importance (Luhmann 1988).

[14] It should be mentioned, however, that this literature also emphasizes the potential of strong ties for providing 'non-codified' knowledge (Augier & Vendelø 1999) or other 'types' of knowledge that differ from the rational ideal. Yet I have omitted that perspective in this context, and it does not contradict the argument presented here about a tension or conflict between trust and critical rationality.

influence of ‘external factors’, because group members are aware of hierarchy and status.

In the citation above, Sproull & Kiesler emphasize the need for *observation* of group behaviour and performance, rather relying on people’s own experience. Taken at face value, this argument faces severe methodological and philosophical difficulties. In real-life groups, operating in real-life organisations rather than the laboratories of social psychologists it is not so evident to identify an external, ‘objective’ observer capable of soberly judging the results of the group. And Sproull & Kiesler actually recognize that not all tasks can be ‘estimated objectively’. Instead, they try to apply ‘neutral’ criteria such as the ‘number of alternatives considered’.

Groupthink is complementary to ambiguity. To some extent, ambiguity in large organisations may be caused by the tendency to ‘groupthink’, to form local consensus – although it would be mistaken to imply a merely *psychological* explanation of organisational ambiguity. On the other hand, ‘groupthink’ is also the reason why group meetings (face-to-face) constitute a good organisational tool to *reduce* ambiguity.

2.3. Gadamer: hermeneutic recovery of inheritance

The principle of *hermeneutic understanding*, presented by the German philosopher Gadamer, as a process involving the clash between different *horizons* has much in common with Weick’s *sensemaking* and the reduction of ambiguity between conflicting interpretations. There is no direct inspiration, as Weick generally refers to Anglo-Saxon rather than continental literature, but there are parallels between continental hermeneutics and Anglo-Saxon interpretivism. The advantage of bringing in Gadamer and other philosophers is to draw attention to the philosophical problems of interpretivism etc.

Gadamer argues that common understanding must be based in a common system of prejudice (‘horizon’, paradigm). His concept of understanding departures from the *psychological* focus of classical hermeneutics and philology, the study of texts: instead of looking for the ‘inner’ life – ambitions, intentions, history – of the author, the hermeneutic reader of an ‘alien’ text must investigate and reveal the historical and cultural context, from which the text emerged. Gadamer extends this principle beyond the study of texts, to a general concept of (hermeneutic) understanding, which is not about identifying the subjective intentions of an individual, but about revealing the pre-understandings characterizing his historical period (or culture). The *process* of understanding consists in establishing such common ground, generally by merging initially ‘incommensurable’ horizons.

The argument to some extent hinges on the concept and role of *prejudice*, which was denounced vividly by the enlightenment philosophers. Gadamer basically argues that the enlightenment has been too critical and failed to see that prejudice may also

contain valuable knowledge – that some parts of our inheritance and tradition are worth preserving. To understand the controversial in this argument a few examples of enlightened remarks about prejudice will be illustrative. Such critiques are the classical roots of March' and Sproull & Kiesler's suspicious approach to interpretations and groupthink, and they remain relevant as a counterbalance to Gadamer, as well as to Weick's rather too affirmative (suspiciously neutral) approach to sensemaking.

2.3.1.1. Enlightened denunciation of prejudice

An archetype of the suspicious and critical view of 'common understanding' is Bacons theory of a systematic tendency to prejudice in the human nature, the various *idols*. He is suspicious of common language, because words are generally 'infected' by commonly accepted, but erroneous and untrustworthy meanings, the *idols of the marketplace*[ii]. According to Bacon, people (by the nature of man) are likely to accept a given viewpoint once and for all and then resist any form of critique and counterevidence:

> "The human understanding, once it has adopted opinions, either because they were already accepted and believed, or because it likes them, draws everything else to support and agree with them. And though it may meet a greater number and weight of contrary instances, it will, with great and harmful prejudice, ignore or condemn or exclude them by introducing some distinction, in order that the authority of those earlier assumptions may remain intact and unharmed." (Bacon 1994)

The enlightened remedy against the seductive entrapments of passed-on (pseudo-) knowledge was to avoid prejudice altogether and rely only on 'secure' knowledge, as illustrated in the first law of Descartes' *method*:

> "never to accept anything for true which I did not clearly know to be such; that is to say, carefully to avoid precipitancy and prejudice, and to comprise nothing more in my judgement than what was presented to my mind so clearly and distinctly as to exclude all ground of doubt" (Descartes 1637).

Quite similar to Kant's later definition of enlightenment, d'Holbach bases his critique of prejudice on the ideal of autonomy: to rely on prejudice is childlike, immature. Yet he also suggests another reason for the persistence, quite different from Bacons theory about inborn (anthropological) tendencies: he argues that prejudice can have the function of *serving particular interests* and *maintaining unjust conditions* – which makes him the ancestor of modern 'critique of ideology'.

> "The source of man's unhappiness is his ignorance of Nature. The pertinacy with which he clings to blind opinions imbibed in his infancy, which interweave themselves with his existence, the consequent prejudice that warps his mind, that prevents its expansion, that renders him the slave of fiction, appears to doom him to continual errour. He resembles a child

> destitute of experience, full of idle notions: a dangerous leaven mixes itself with all his knowledge: it is of necessity obscure, it is vacillating and false: - He takes the tone of his ideas on the authority of others, who are themselves in errour, or else have an interest in deceiving him." (d'Holbach 1770)

2.3.1.2. Gadamer to the rescue – of useful prejudice

Gadamer, though, argues that the enlightenment is in fact haunted by its own prejudice, the prejudice against prejudice:

> "Es gibt nämlich sehr wohl auch ein Vorurteil der Aufklärung, das ihr Wesen trägt und bestimmt: Dies grundlegende Vorurteil der Aufklärung ist das Vorurteil gegen die Vorurteile überhaupt und damit die Entmachtung der Überlieferung." (Gadamer 1960)

He insists that some prejudices are worse than others, and some are indispensable. Instead of denouncing prejudice altogether, one should aim to distinguish harmful or inhibitive prejudices from those that are useful. In order to do this, he maintains a classical distinction between two different *sources* of prejudice: 1) the authority of others (i.e. tradition), vs. 2) one's own hastiness:

> "Man müsse unterscheiden das Vorurteil des menschlichen Ansehens und das der Übereilung. Diese Einteilung hat ihren Grund in dem Ursprung der Vorurteil im Hinblick auf die Personen, die sie hegen. Es ist weder das Ansehen anderer, ihre Autorität, was uns zu Irrtümern verführt, oder es ist die in einem selbst gelegene Übereilung." (Gadamer 1960)

Comparing with organisational theory, one might say that enactment and sensemaking, understood as local and internal processes, falls in the second category, whereas Sproull & Kiesler's attention to status and hierarchy emphasizes the first: the authorities of others.

2.3.1.3. Authority recognized

This first source of prejudice, the authority of others, is yet another example where the philosophers of enlightenment have been too 'hasty' in their own judgment. As evident from the previous citations, and in Kant's definition, the enlightened, autonomous subject should no longer rely on others' judgment (see the previous discussion of community vs. universality, p.23). Now Gadamer argues that this disregard of authority must be modified. It is indispensable to recognize authority based on expertise. He even argues that this is the basic foundation of authority, that authority is mostly based on better knowledge rather than obedience – the authority of 'one who knows better':

> "Der von der Aufklärung in Anspruch genommene Gegensatz von Autoritätsglaube und Gebrauch der eigenen Vernunft besteht an sich zu Recht. Sofern die Geltung der Autorität an die Stelle des eigenen Urteils tritt, ist Autorität in der Tat eine Quelle von Vorurteilen. Aber dass sie auch eine Wahrheitsquelle sein kann, ist damit nicht ausgeschlossen, und das hat die

> Aufklärung verkannt, als sie schlechthin alle Autorität diffamierte... In der Tat ist nicht nur die Diffamierung aller Autorität ein durch die Aufklärung selber festgewordenes Vorurteil. Sie hat auch dazu geführt, dass der Begriff der Autorität deformiert worden ist. Auf dem Grunde eines aufklärerischen Begriffs von Vernunft und Freiheit konnte sich im Begriff der Autorität das schlechthinnige Gegenteil von Vernunft und Freiheit, der blinde Gehorsam hervorkehren… Dergleichen liegt aber keineswegs im Wesen von Autorität. Gewiss kommt Autorität zunächst Personen zu. Die Autorität von Personen hat aber ihren letzten Grund nicht in einem Akte der Unterwerfung, sondern in einem Akt der Anerkennung und der Erkenntnis – der Erkenntnis nämlich, dass der andre einem an Urteil und Einsicht überlegen ist und dass daher sein Urteil vorgeht, d.h. vor dem eigenen Urteil den Vorrang hat. Damit hängt zusammen, dass Autorität nicht eigentlich verliehen, sondern erworben wird und erworben sein muss, wenn einer sie in Anspruch nehmen will. Sie beruht auf Anerkennung und insofern auf einer Handlung der Vernunft selbst, die, ihrer Grenzen inne, anderen bessere Einsicht zutraut. Mit blinden Kommandogehorsam hat dieser richtig verstandene Sinn von Autorität nichts zu tun. Ja, unmittelbar hat Autorität überhaupt nichts mit Gehorsam, sondern mit *Erkenntnis* zu tun... Gewiss gehört Autorität dazu, befehlen zu können und Gehorsam zu finden. Aber das folgt nur aus der Autorität, die einer hat. Auch die anonyme und unpersönliche Autorität des Vorgesetzten, die sich aus der Befehlsordnung herleitet, entspringt zuletzt nicht dieser Ordnung, sondern macht sie möglich. Ihr wahrer Grund ist auch hier ein Akt der Freiheit und der Vernunft, die grundsätzlich dem Vorgesetzten, weil er mehr überschaut oder besser eingeweiht ist, Autorität zubilligt, also auch hier, weil er es besser weiß." (Gadamer 1960)

It easy to imagine situations where one feels obliged to accept others' expertise on a subject where one's own knowledge appears insufficient. Recall Sproull & Kiesler's argument that critique was inhibited in groups because of the wrong type of authority, based on status and hierarchy rather than expertise. This argument also illustrates another distinction, however: that organisational hierarchy is not (necessarily) based on expertise – contrary to Gadamer's argument about 'die Befehlsordnung' as being based on recognition of someone as knowledgeable (or *qualifications*, to use a modern term).

2.3.1.4. Focus on the message, not the messenger

In the process of understanding, one is simply trying to test the validity in what the other says (writes), by achieving his perspective and reconstruct, even strengthen his argument:

> "Wenn wir einen Text zu verstehen suchen, versetzen wir uns nicht in die seelische Verfassung des Autors, sondern wenn man schon von Sichversetzen sprechen will, so versetzen wir uns in die Perspektive, unter der der andere seine Meinung gewonnen hat. Das heißt aber nichts anderes, als dass wir das sachliche Recht dessen, was der andere, was der anderen sagt, gelten zu lassen suchen. Wir werden sogar, wenn wir verstehen wollen,

> seine Argumente noch zu verstärken trachten. So geschieht es schon im Gespräch. Wieviel mehr noch gilt es beim Verstehen von Schriftlichem, dass wir uns in einer Dimension von Sinnhaftem bewegen, das in sich verständlich ist und als solches keinen Rückgang auf die Subjektivität des anderen motiviert. Es ist die Aufgabe der Hermeneutik, dies Wunder des Verstehens aufzuklären, das nicht eine geheimnisvolle Kommunion der Seelen, sondern eine Teilhabe am gemeinsamen Sinn ist." (Gadamer 1960)

The aim is to understand what the other has to say, not primarily to 'identify' with the other. It is motivated by the expectation that the Other has something useful or relevant to say. Thus, Gadamer distinguishes hermeneutic understanding from what he characterizes as the *historical* reading, which regards a text as merely an expression of its historical period, as a means to learn more about this period (or horizon) for its own sake, rather than because of its relevance to us.

While understanding is not identification ('Einfühlung') of one individual with another or 'secret communion of the souls', neither does it imply subsuming the other under one's own perspective – as implied in (instrumental) rationality, where new knowledge must be entered into an existing system of categories etc. This distinction – between understanding as a merger of horizons, and as simply subsuming new elements under an existing horizon – may illustrate a difference between Gadamer and Popper. Popper, too, wants to acquire useful knowledge from sources denounced by some of the philosophers of enlightenment, when he acknowledges *tradition* as a useful source of knowledge:

> "The fact that most of the sources of our knowledge are traditional condemns anti-traditionalism as futile. But this fact must not be held to support a traditionalist attitude: every bit of our traditional knowledge (and even our inborn knowledge) is open to critical examination and may be overthrown". "Knowledge cannot start from nothing – from a *tabula rasa* – not yet from observation. The advance of knowledge consists, mainly, in the modification of earlier knowledge" (Popper 1963).

Compared with Gadamer, however, Poppers emphasis on 'the modification of earlier knowledge' seems to assume that we can merely extract useful knowledge from 'ancient' sources and after 'critical examination' fit it into our modern (scientific) knowledge. This process does not imply that we also have to question our own 'horizon' – not least because Popper vividly rejects the very idea of a 'framework'. By contrast, Gadamer's hermeneutic understanding means achieving higher *universality* by overcoming one's *own* particularity (i.e. that of the modern world), as well as that of the other (i.e. tradition).

2.3.1.5. Transparency and consciousness

The 'miracle of understanding' is *not* some secretive community of the souls. In this argument Gadamer seems to side with the enlightenment against romanticist ideas of an 'obscure' or tacit cultural or mythological baggage. While the horizon or prejudice

per definition cannot be confirmed in terms of 'empirical evidence', Gadamer still defends the classical principle of transparency: the process of understanding is triggered when we meet with alien horizons (i.e. a text from a different historical period), which requires us to direct our attention against our own as well:

> "Es sind die undurchschauten Vorurteile, deren Herrschaft uns gegen die in der Überlieferung sprechende Sache taub macht." (Gadamer 1960)

Only by becoming *conscious* of our prejudice are we able to distinguish between inhibitory and productive ones. The idea of a tacit, collective knowledge is a romantic and sterile reaction against enlightenment:

> "In Wahrheit ist die Voraussetzung des geheimnisvollen Dunkels, in dem ein allem Denken vorausliegendes mythisches Kollektivbewusstsein liegt, ebenso dogmatisch-abstrakt, wie die eines Perfektionszustandes vollendeter Aufklärung oder die des absoluten Wissens. Die Urweisheit ist nur das Gegenbild der 'Urdummheit'. Alles mythische Bewusstsein ist immer schon Wissen, und indem es von göttlichen Mächten weiß, ist es über ein bloßes Zittern vor der Macht (wenn man schon ein solches für das Urstadium halten soll), aber auch über ein in magische Rituale gebanntes Kollektivleben (wie wir es etwa im frühen Orient antreffen) hinaus. Es weiß von sich, und in diesem Wissen ist es schon nicht mehr schlechthin außer sich." (Gadamer 1960)

2.4. Critique of ideology – Adorno and Habermas

Critique of ideology is the opposite of hermeneutic understanding, with its inherently critical approach to interpretation and prejudice. It is interesting as an archetype of all critical approaches to interpretation, uncompromising and consequent in its rejection of consensus and prejudice, but also illustrative in facing epistemological problems that are relevant for other traditions.

First, I shall present Adorno's strong definition of ideology and discuss it in the light of Popper's critique and rejection of the very concept of ideology – and that of frameworks in general. Then I shall look at Habermas' attempt to maintain the notion of ideology while incorporating the idea of hermeneutic understanding.

Adorno defines ideology as 'false consciousness': a system of beliefs and values that is *socially reproduced* (functional) – not 'incidental' – and *false* (Adorno 1979c). Before elaborating on these two criteria it is worth noticing the anti-pragmatic distinction between *truth* and *function*: that an idea survives or 'works' is no compensation for truth.

2.4.1. Socially reproduced

That ideology is socially reproduced (*functional* – socially 'necessary') is generally accepted as a basic requirement in a critical theory and analysis of ideology. With

some modification, this theory takes up d'Holbach's reference to people having an *interest in deception*. By emphasizing social reproduction or necessity, Adorno rejects the idea that the persistence of prejudice be due to people's stupidity or inborn blindness ('eingeborene Verblendung'), the idea that people by nature are easy victims to seduction – of which Bacons anthropological theory of 'idols' is an illustrative example.

Adorno's theory of ideology is thus not based on the *epistemological pessimism* rejected by Popper, not least with a moral-political argument denouncing its authoritarian tendencies:

> "Disbelief in the power of human reason, in man's power to discern the truth, is almost invariably linked with distrust of man. Thus epistemological pessimism is linked, historically, with a doctrine of human depravity, and it tends to lead to the demand for the establishment of powerful traditions and the entrenchment of a powerful authority which would save man from his folly and his wickedness." (Popper 1963)

This 'agreement' between Popper and Adorno on the rejection of epistemological pessimism does not go much further, however: while Adorno concludes that there must be a social explanation for the persistence of an ideology, Popper denies the idea of systematically reproduced ignorance, and denounces any *conspiracy theory of ignorance*:

> "which interprets ignorance not as a mere lack of knowledge but as the work of some sinister power, the source of impure and evil influences which pervert and poison our minds and instil in us the habit of resistance to knowledge." (Popper 1963)

The emphasis on the social reproduction or function of an ideology seems to conflict with Poppers argument that the *source* of knowledge is irrelevant: there can be no 'suspicious' sources of knowledge, and no sources have more authority than others (Popper 1963) – in contrast to Gadamer's argument, no-one can be assumed to 'know better'. Rational critique is in principle not affected by the source, and no source can protect an idea from critical rationality – because processes of justification are separated from those of genesis.

However, Poppers argument about the irrelevance of the *source* of knowledge may not contradict the idea of a social *reproduction* of ideology. There is a difference between 1) *source* or *origin*, and 2) *function/social reproduction*. Adorno does not denounce the *source* of an ideology – on the contrary, going back to the source may reveal progressive and emancipatory elements of an ideology. Ideologies are not necessarily *designed* for deception.

Complementary elements

The two elements emphasized by Adorno – falsity and social reproduction – are complementary: if an idea seems irrational or false, we must look for another explanation for its persistence. But interpretivism or hermeneutic understanding would now require that we make an extra effort to acknowledge the rationality, by strengthening the arguments of the opponent, and by questioning our own assumptions. The dilemma is illustrated by Lukes' argument that we must choose between a *charitable* and a *critical* attitude:

> "When I come across a set of beliefs which appear *prima facie* irrational, what should be my attitude towards them? Should I adopt a critical attitude, taking it as a fact about the beliefs that they *are* irrational and seek to explain how they came to be held, how they managed to survive unprofaned by rational criticism, what their consequences are, etc.? Or should I treat such beliefs *charitably*: should I begin from the assumption that what appears to me to be irrational may be interpreted as rational when fully understood in its context?" (Lukes 1970)[15]

Conversely, if there is a 'causal' explanation for the accept of an idea, this should at least make us suspicious and provoke the question whether the idea in itself is in fact false or irrational – since it depends on other factors than truth for its survival. This principle is illustrated by the asymmetric principle in classical history of science: we look for social explanations only for beliefs that are false or mistaken – the true beliefs are upheld because of good arguments, not because they are socially reproduced.

2.4.2. The falsity of ideology – truth claim

The second characteristic is crucial to Adorno, and he criticizes a general tendency to abandon the emphasis on the 'falsity' of ideology (Adorno 1979c). He rejects the idea that ideology operates in a category, where the notion of truth and justification is meaningless. And he rejects the idea that the critique itself must remain neutral to the content of the ideology – or 'knowledge' – it studies.

This latter point is illustrated in Adorno's critique of the 'sociology of knowledge', which was directed at Mannheim, but remains relevant for more recent versions of this discipline, not least theories of 'social construction'. Critique of ideology, and critical thought in general, must take the 'content' seriously (Adorno 1970a). Without being able to address this question, the question of social reproduction is irrelevant or at

[15] "More briefly, the problem comes down to whether or not there are alternative standards of rationality," he continues. Habermas criticizes two assumptions in this citation: 1) that understanding is a question of choice, that one can 'deselect' understanding; 2) that hermeneutic understanding implies the recognition of alternative standards of rationality (Habermas 1981).

least without critical force. In Adorno's emphasis on denunciation of falsity there is a – albeit *negative* – parallel to Gadamer's requirement: that we must i.e. read a text with the intention of revealing what it has to tell us about something, revealing its *relevance* for us, rather than merely seeing it as an expression of its own historical period. The reader or subject must 'take the text seriously', respect its claim for truth – even though he may eventually reject it.

To illustrate this requirement, sociology of knowledge provides an example of a truth-neutral approach that does not respect the truth claim. According to this Adorno (and Gadamer, I suppose), it is *not* satisfactory to dispense with the question of truth and focus on how 'knowledge' works and develops, as sociologists of knowledge and more recent theories of ideology argue – as illustrated by proponents of the *Social Construction of Technology* (SCOT theory): "... the truth or falsity of scientific knowledge is irrelevant to sociological analysis of belief." (Pinch & Bijker 1997), and by the authors of *The Social Construction of Reality*:

> "To include epistemological questions concerning the validity of sociological knowledge in the sociology of knowledge is somewhat like trying to push a bus in which one is riding… [T]hese questions are not themselves part of the empirical discipline of sociology." (Berger & Luckman 1967)

Another example of neutral approaches dispensing with the truth claim is the literary approach to philosophy (and science) employed by Derrida – according to Habermas. Like Heidegger, who regarded Galileo as a *poet*, an artistic *creator* or inventor of the 'mechanical' worldview that enables modern science, Derrida approaches all texts in the role of a literary critic focusing on the *aesthetic* value and *effectualness* of a text, without interest for the truth 'content'. Habermas criticizes Derrida – and his American followers – for not respecting (or accepting) the distinction between Literature and Philosophy (And it seems that Derrida fails to fulfil a requirement for hermeneutic understanding by not expecting the text to tell anything relevant) (Habermas 1985). To Habermas the distinction is crucial: art is a separate sphere that dispenses with the normal conditions for a speech act in everyday life. He does recognize that art is not merely a self-sufficient *art pour l'art*, but is capable of 'experiencing' new knowledge, which must then be transferred to other spheres: everyday language or science. Yet the potential of art for experiencing something new emphasized by Habermas (and Adorno) differs from the irrevocable creation or disclosure described by Heidegger.

A further example is the *symbolic* concept of organisational culture (Schultz 1990) or other theories emphasizing *symbolic* meaning as a separate sphere with no claim of correspondence or universal truth.

After these examples of unacceptable truth-neutrality it is convenient to recapitulate the distinction and comparison between Gadamer and Adorno: they both avoid the *neutral* approach, but whereas Gadamer's *understanding* approach is compliant and

forthcoming ('charitable'), Adorno is suspicious and *critical*. There is a conflict between these approaches: understanding cannot be 'too' critical and certainly not dismissive, because it is to some extent inclined to listen and accept.

2.4.2.1. Meaning and values

Still, Adorno's attitude is not total rejection. His intention is to rescue the '*idea content'* of an ideology: the ideals inherent in any ideology should not be dismissed or ignored as meaningless, as mere subjective (irrational) values. Ideals must be taken seriously and then confronted with reality – and in some sense it is possible that reality is false, and ideals true! As an example, Horkheimer argues that despite the hypocrisy in preaching democracy in a society based on slavery and exclusion of women from political life, the ancient Greeks were not merely trying to protect the ruling elite by disguising the reality of their society, but also carried and developed the principle of universality, of universalising the conditions of the elite to be enjoyed by everybody. Similarly, Feuerbach criticized Religion as a 'twisted' expression for true needs and hopes: the idea of Paradise is in its essence a vision of a better future for humanity, but religion confined this utopia to a separate sphere, and nullified both the inherent critique of the actual conditions and the hope for change.

Adorno thus emphasizes the importance of what could be labelled the 'value'-element of interpretation or ideology (purpose, criteria for evaluation, see p.36), although he actually rejects the term 'value'. His point is that on the one hand the critical researcher cannot remain 'value-neutral', while on the other hand one should be critical rather than affirmative towards 'values' – because 'values' are not merely subjective and irrational but also hold a 'claim for truth'.

The blindfolding concept of values

This dilemma is illustrated in Adorno's critique of Weber and Durkheim, who practiced opposite approaches to values. Their examples can be regarded as archetypes of the Scylla and Charybdis of critical social research, and one can recognize the same methodological problems and choices in contemporary theories – and Adorno argues that in both cases the concept of value is blindfolding.

While Durkheim implicitly affirms collective values – as cohesive forces underlying the division of labour, to offer one example – Weber rejects moral judgments in science, with a methodological argument similar to the critique of the naturalistic fallacy:

> "Weber eifert wider die Werturteile in der Wissenschaft; Durkheim übernimmt die kollektiv sanktionierten Werte, setzt ihre Kollektivität ihrer Objektivität gleich und dispensiert sich damit von der Frage nach ihrer Möglichkeit in der Moral." (Adorno 1979d)

Adorno finds the very concept of values misleading and inhibitory for critical and rational analysis – it offers an unsatisfactory choice between (irrational) affirmation and rejection (and neutrality), neither of these being based on critical judgment. For Adorno, this demonstrates the impotence of scientific thought in dealing with questions of 'meaning'. By categorizing 'value' and meaning as private and subjective – whether requiring the researcher to remain neutral, or simply to take sides – modern thought and reproduces an objective condition of 'loss of meaning' characteristic of modernity, "die Katastrophe des Sinns" (Adorno 1996). Adorno argues that critical thought must be able to address such questions – and to *understand* them in terms of *justification* – without retreating to positivist neutrality, corresponding to the previous emphasis on 'truth claim'.

> "Der Wertbegriff selbst ist eine heteronome Verdinglichung. Ihn zu bejahen oder zu verneinen partizipiert gleichermaßen am falschen Bewusstsein. Freiheit zum Objekt heißt in der gesamten Tradition von Aufklärung, Hegel inbegriffen: Loslösung vom Wunsch als dem Vater des Gedankens. Zugleich aber steckt bereits im einfachen logischen Urteil, seinem Anspruch auf Wahrheit und auf die Verwerfung von Unwahrheit, konstitutiv jene Verhaltensweise, welche das Cliché den ihrerseits von ihrem Erkenntnisgrund abgespaltenen Wertungen zumisst. Denken, das die angeblichen Werturteil, wofern sie nicht ohne Begründungszusammenhang gefällt werden, verteufelt, stellt das dem Gedanken immanente kritische Moment still; Wertphilosophie, die nicht minder abstrakt ansichseiende Werte postuliert, überantwortet sich dem Dogmatismus... Durkheim hat der gleichen Vergegenständlichung der ursprünglich von der Ökonomie entlehnten Werte sich schuldig gemacht, die in deren Negation durch Weber supponiert ist." (Adorno 1979d)

One may say that Durkheim's theory contains only the first step of the critique of ideology: demonstrates only the *function* of an idea, but is unable to address the question of its truth – partly because truth involves moral judgment, and moral judgment is deemed beyond the scope of science. But Durkheim is neither critical nor neutral in his approach to this 'irrational' element of values – his approach is affirmative, regarding the very factuality (and functionality) as legitimising. This *implicit moral judgment* seems to be archetypical for many – even contemporary – functionalist approaches in social research[16].

[16] This paradox seems characteristic of studies of organisational culture (Schein, Schultz). First, a neutral approach 'reduces' culture to an object by, a phenomenon that the researcher refuses to understand in terms of its truth claim. The researcher cannot make any judgments about its truth or rightness. Then, the researcher analyses the 'merits' of the culture, not in terms of being true or right by its content, but in terms of its efficiency or functional adaptation – whether it 'serves' the organisation and brings success. It is a peculiarly indirect way of making a normative judgment.

2.4.3. Overcoming interpretations – critique or hermeneutic understanding?

Despite the disagreements, critique of ideology and hermeneutic understanding share the intention to 'transcend', to get beyond, and to overcome a given interpretation. According to Gadamer, this is possible when confronted with another interpretation, i.e. of the Antique; and in interpretivist theories, the potential for overcoming existing interpretation emerges with the confrontation between different 'social groupings' resulting in ambiguity etc. And critical theory often uses a historical method not unlike Gadamer's: to go back to previous historical periods to recover the hopes and visions for the future that have extinguished today with the 'loss of meaning'. Yet basically, critique of ideology – and critical thought in general – is about 'breaking the spell' (of an 'interpretation') *from within*.

2.4.3.1. Intellectual superiority?

But how is this possible? Popper is appalled by the idea that one person (the sociologist) can achieve true objectivity and rise above other people (and their ideologies). This critique is primarily directed at the 'sociology of knowledge' developed by the conservative Mannheim who argued that this objectivity could only be reached by ridding oneself of subjective interests – but Popper seems to direct a similar critique against theories of ideology.

This critique is highly relevant and deserves consideration. How can any *critique of ideology* or *sociology of knowledge* claim objectivity for itself, while everybody else has remained in the dark – and continue to live 'in errour'? How can the critic or sociologist insist on being right all on his own, when no one apparently accepts his arguments? This is obviously impossible within a consensus-definition of truth – 'if you do not agree, then I am wrong'.

Yet I find this critique more fair against 'sociology of knowledge' – Mannheim's as well as contemporary versions – than towards Adorno and Habermas.

2.4.3.2. Emancipation – through explanation and consciousness

Their critique of ideology is not 'disinterested' like Mannheim's, but linked to the emphasis on emancipation – and based on the ideal of autonomy. A *critique* is not merely a 'mechanical' theory about the persistence and reproduction of an ideology – it is also a *denunciation* of the ideology; it is intended as a step towards emancipation and the progress of thought.

> "Das Erkenntnisinteresse der Aufklärungstheorie ist erklärtermaßen kritisch; es setzt eine spezifische Erfahrung voraus, die ebenso in Hegels Phänomenologie des Geistes wie in Freuds Psychoanalyse festgehalten ist - die Erfahrung der Emanzipation durch kritische Einsicht in Gewaltverhältnisse, deren Objektivität allein daher rührt, daß sie nicht

> durchschaut sind. Kritische Vernunft gewinnt analytisch Macht über dogmatische Befangenheit" (Habermas 1971b)

This idea of emancipation through knowledge is based on the assumption that *ignorance* or unawareness is closely associated with *compulsion* and *lack of freedom* – a negative version of the Enlightenment association of knowledge with freedom and autonomy (see previously, p.32). Habermas compares examples from both psychology and sociology: in both cases people's behaviour may be determined by factors not realized by the subjects, exactly *because* the subjects are not aware of them. He argues that areas have been *de-symbolized* and *excommunicated* for various reasons: traumas in the past, or societal repression. Psychoanalysis deals with examples where an individual has reacted – unconsciously – to a traumatic experience in the past by denying it, and is then constrained in a fixed pattern of behaviour ('Wiederholungszwang')[17].

2.4.4. Habermas: true consensus or dogmatic accept?

Habermas tries to preserve the possibility of a 'critique of ideology' in his critical modification of Gadamer's hermeneutics. He faces the problem that the hermeneutic approach seems to exclude the concept of ideology. Because of his incorporation of hermeneutics, and – later – of pragmatic theory, thus accepting the consensus definition of truth, he has to modify and reformulate the problem of ideology. To anyone who wishes to preserve a critical approach to 'interpretations' while accepting some of the basic arguments presented by hermeneutics and pragmatics, it is necessary to understand Habermas' dilemma, as well as his solution.

2.4.4.1. Suspicious consensus – a Trojan horse

Habermas basically preserves the *suspicion* against any consensus – although he cannot, like the philosophers of enlightenment, simply denounce prejudice and consensus. But he maintains that a consensus might be a Trojan horse that preserves injustice and social inequalities, by legitimating or confirming the given relations of power. The consensus or interpretation handed down by Tradition – or that 'offered' by a group, to draw the parallel to groups and organisations – may be infected with repression. This is possible, because due to the very nature of hermeneutic understanding, prejudice based on some 'historical' consensus retreats from critical

[17] The very history (lesson?) of critical theory is (if one accepts their analysis) an example of a persisting ideology: its function in society is apparently strong enough to let it survive the revelation practiced by critique. In this case, the critique is without guarantee of 'effect' (emancipation and change) – because the critique faces powerful forces/structures, and because the critique is separated from a corresponding subject or agent capable of acting at a higher level.

attention – with other words a frame of interpretation allows us to focus on other aspects, because we no longer need to question this frame.

Habermas now argues that such a 'historical' consensus may be unjust and erroneous, if it was established under conditions of power and inequality, if it was developed under conditions where critique was not possible – if the conditions for a free, rational dialogue were not met.

> "Nun lehrt aber die tiefenhermeneutische Erfahrung, dass sich in der Dogmatik des Überlieferungszusammenhängs nicht nur die Objektivität der Sprache überhaupt, sondern die Repressivität eines Gewaltverhältnisses durchsetzt, das die Intersubjektivität der Verständigung als solche deformiert und die umgangssprachliche Kommunikation systematisch verzerrt. Deshalb steht jeder Konsensus, in dem Sinnverstehen terminiert, grundsätzlich *unter dem Verdacht, pseudokommunikativ erzwungen zu sein*: die Alten nannten es Verblendung, wenn sich im Schein des faktischen Verständigseins Missverständnis und Selbstmissverständnis ungerührt perpetuierten. Die Einsicht in die Vorurteilsstruktur des Sinnverstehens deckt nicht die Identifizierung des tatsächlich herbeigeführten Konsensus mit dem wahren." (Habermas 1971a) (*My italicisation*)

Having established this suspicion against consensus, Habermas criticizes Gadamer's approach for its uncritical and affirmative approach: hermeneutic understanding is by nature compliant ('charitable' according to Lukes) and with an inherent tendency to confirm automatically a consensual agreement based on intersubjective understanding. He thus finds Gadamer's recognition of *authority* as based on superiority in knowledge deeply problematic – on the contrary, Habermas argues that authority is more often threatened by, than based on rationality:

> "Dogmatische Anerkennung einer Überlieferung, und das bedeutet die Annahme des Wahrheitsanspruchs dieser Tradition, kann freilich nur mit Erkenntnis selber gleichgesetzt werden, wenn in der Tradition Zwanglosigkeit und Unbeschränktheit der Verständigung über Tradition gesichert wären. Gadamers Argument setzt voraus, dass sich die legitimierende Anerkennung und das Autorität begründende Einverständnis gewaltlos einspielen. Die Erfahrung systematisch verzerrter Kommunikation widerstreitet dieser Voraussetzung. Permanenz gewinnt Gewalt ohnehin nur durch den objektiven Schein der Gewaltlosigkeit eines pseudokommunikativen Einverständnisses. Eine derart legitimierte Gewalt nennen wir mit Max Weber Autorität. Deshalb bedarf es des prinzipiellen Vorbehalts universaler und herrschaftsfreier Verständigung, um *dogmatische Anerkennung von wahrem Konsensus grundsätzlich zu unterscheiden. Vernunft im Sinne des Prinzips vernünftiger Rede ist der Fels, an dem bisher faktische Autoritäten eher zerschellt sind, als dass sie auf ihn sich gegründet hätten.*" (Habermas 1971a) (my italicisation)

It is worth noticing how Habermas' focus on the ideal of a true consensus based on a free rational debate *replaces* Adorno's emphasis on truth. Because of his incorporation

of hermeneutics and pragmatic theory, Habermas must abandon the strong concept of truth still adhered to by Adorno. Yet despite the consensus-definition of truth his approach is not neutral or disinterested: instead of denouncing falsity, he insists on the critical distinction between a consensus based on 'free debate' (critical rationality) and one biased by power and authority. And he thus criticizes ethnomethodologists and social constructivists for not being aware of this distinction:

> "Garfinkel behandelt die Geltungsansprüche, auf deren intersubjektiver Anerkennung jedes kommunikativ erzielte Einverständnis, und sei die Konsensbildung noch so okkasionell, hinfällig und fragmentarisch, doch beruht, *als bloße Phänomene*. Er unterscheidet nicht zwischen einem gültigen Konsensus, für den die Teilnehmer erforderlichenfalls Gründe angeben könnten, und einer geltungsfrei, d. h. de facto herbeigeführten, sei es auf Sanktionsdrohung, rhetorischer Überrumpelung, Kalkül, Verzweiflung oder Resignation beruhenden Zustimmung." (Habermas 1981)

There are two different implications of this critique. On the one hand, he criticizes the failure to distinguish free, rational debate from other processes. On the other hand, he argues that the critical researcher needs another *method* than hermeneutic understanding (which is in fact no method) to reveal a false consensus.

2.4.4.2. Excurse – organisational parallels

A similar critique can be summoned against Weick's theory of enactment and sensemaking. It does not make a distinction between different forms of consensus, between dogmatic accept and true consensus, and it is not aware of the potential (even systematic) blindfolds of an established consensus or frame of interpretation. With the concept of groupthink, on the contrary, Sproull & Kiesler preserves a suspicion against consensus similar to Habermas'. Groupthink is an example of a suspicious *origin* of consensus, a consensus that was formed under biased conditions: The critical – and thus rational – potential of the process was inhibited by (attention to) authorities.

Psychology vs. sociology/philosophy

This comparison begs the question which of the two approaches is most universal or fundamental. Is ideology merely an example of socio-psychological processes or vice-versa? I find the last option most acceptable: to regard the groupthink as an example of suspicious hermeneutic consensus. It would be problematic to see understanding merely as groupthink on 'higher' levels (organisation, society), because the implied psychological explanation of such phenomena – suggesting some inborn tendency to conformism – is unsatisfactory. Groupthink may be analysed as a low-level example of understanding, rather than due to some eternal laws about group processes.

Repression or inefficiency – functionality or dysfunctional

While both March and Sproull & Kiesler, as well as Adorno and Habermas maintain a suspicion against consensus, the cores (and basis) of their critiques is very different.

Critical theory focuses on repression and power, based on the ideal of autonomy and emancipation, while the former criticize inefficiency and sub-optimal solutions. In fact, having just read the previous section about organisational theory, the very mention of repression, power and emancipation may ring odd and incommensurable. March and Sproull & Kiesler are not interested in emancipation, but in organizational efficiency.

Nevertheless I find the comparison reasonable, because they are all – in each their way – inheritors of the enlightenment with their emphasis on rationality as an ideal (Habermas more wholeheartedly than Adorno). And Sproull & Kiesler do imply an ideal of intellectual autonomy, which they think should and could (and will, with computer networks) be realized within modern organisations – an optimism that on the other hand distinguishes them more clearly from critical theory. This question of social 'level' is obviously a major difference: Sproull & Kiesler focuses on *groups*, and extend their analysis to *organisations*, while critical theory 'focus' on society, history and civilisation – well, just about everything. Still, both Adorno and Habermas also treat the lower levels: in the US Adorno has participated in group studies that continue to influence the field of social psychology; and Habermas bases his very ideal of rationality on a 'micro level' of communicative action.

One obvious conflict must be admitted however: are groups to be regarded as functional or dysfunctional? On the one hand, Adorno argues that groups are deeply socialized and thus determined by their 'functionality' in the 'administered world', bound to act and think in terms of instrumental rationality – they are *functional*. *Ideology* is *functional* by definition. Sproull & Kiesler, on the other hand, suggest that groups may – in some situations – be myopic and *dysfunctional* (when discarding or even ignoring alternatives, and accepting faulty reasoning), which would appear to undermine the (instrumental) rationality of the institution. It is thus be difficult to maintain, with March and Sproull & Kiesler, the idea of irrational and sub-optimal organisational processes within a fundamentally – albeit myopic and 'biased' – rationalized society as described by critical theory. I shall return to this dilemma later[18].

[18] Power vs. rationality. Sproull & Kiesler seem to assume a fundamental contradiction between power and rationality: status and hierarchy blurs the rationality of decision-making. But critical theory basically takes the opposite view: rationality and power are deeply integrated; rationality is not merely the fierce enemy of power assumed by enlightenment philosophers. Nevertheless, the contradiction may not be so irreconcilable: the power associated with rationality is not subjective – in the sense of belonging to an individual – or charismatic. It is instrumental also in the positive sense that it is de-personalized and even offers protection against random use of power. And Habermas even more whole-heartedly declares, that rationality is generally a threat to authorities, rather than their base.

	Organisational theories	Critical theory, critique of ideology
Theories	March, Sproull & Kiesler, Argyris & Schön	Adorno, Habermas
Labels	Myths, fiction, legends, illusions, theories-in-use	Ideology
Emphasis	Sub-optimal, inefficient, dysfunctional	Repression, inequality
Implicit ideal	Rationality, efficiency, functionality (of system)	Emancipation, autonomy, rationality

Table 1. Two critical approaches to interpretation.

Interpretations – local (enacted) or inherited?

Despite the parallels there is an obvious conflict between the thesis that we are all fundamentally socialized into a common ideology, horizon or culture, and theories emphasizing local, 'community' cultures etc. It is problematic to assume that a social group on the micro- or meso-level (community-of-practice; organisation) can maintain its own interpretation, if it *contradicts* the 'higher-level' horizon or ideology. Heidegger says 'language is already ahead of us', and 'language speaks', thus emphasizing that meaning is *predefined* and independent of the individual language user, and must *also* be independent of a collective subject, a group or a community. 'Communities' are not free to 'invent', enact or establish its own meaning. Language is not open to multiple individual interpretations.

And on the other hand, if contradicting interpretations exist within a larger social constellation, then the higher-level interpretation cannot be as fundamental and generally shared as assumed in hermeneutics or theories of ideology. A high level of ambiguity would undermine shared horizons or ideologies.

This problem suggests that local, low-level interpretations must somehow be 'sub-interpretations' *within* the larger horizon[19]. It would be problematic to exaggerate the 'closedness' of a group in an organisational setting. Such groups will often have to meet (external) criteria of success, which, despite problems of ambiguity, gives some measurement of their performance. A group or a team will often have to justify its suggestion or solution 'externally', i.e. to management.

Habermas seems to suggest a 'hierarchic' ordering by acknowledging the role of ongoing (ethnomethodological) understanding – a vulnerable and occasional

[19] Similarly Collin argues that subcultures may exist if the 'meta'-culture is 'tolerant' and not total and exclusive (Collin 1987).

'interpretation of the situation' and 'maintenance of consensus' –*within* a more stable interpretation and context.

> "Die Ethnomethodologie ... befaßt sich mit der Interpretation als einer *Dauerleistung* von Interaktionsteilnehmern, also mit den Mikrovorgängen der Situationsdeutung und Konsenssicherung, die selbst dann hochkomplex sind, wenn die Beteiligten an ein eingewöhntes Situationsverständnis in stabilen Handlungskontexten mühelos anknüpfen können. Unter dem Mikroskop erweist sich *jede* Verständigung als okkasionell und zerbrechlich. Die philosophische Hermeneutik hingegen untersucht die Interpretationskompetenz erwachsener Sprecher unter dem Gesichtspunkt, wie sich ein sprach- und handlungsfähiges Subjekt in einer fremden Umgebung unverständliche Äußerungen verständlich macht. Die Hermeneutik befaßt sich mit Interpretationen als einer *Ausnahmeleistung*, die erst dann erforderlich wird, wenn relevante Ausschnitte der Lebenswelt problematisch werden, wenn Gewißheiten kulturell eingespielten Hintergrundes zerbrechen und die normalen Mittel der Verständigung versagen." (Habermas 1981)

Thus, he clearly distinguishes between the two levels: hermeneutic understanding through 'merge of horizons' is *not* about everyday understanding and bargaining (resolution of equivocality); yet he also recognizes the micro-level understanding – and sees no contradiction.

It is dubious, however, whether ethnomethodologists would recognize this adaptation of 'their' processes as a micro-level phenomenon within a more 'holistic' culture: Garfinkel's presented his methods as an alternative to large-scale sociological theories such as Parsons', rejecting the idea of a 'cultural dope' submitted to pre-established rules and norms. And Powell & DiMaggio argue that neo-institutionalist theories are incompatible with functionalist or Marxist macro-theories of societies – an argument I shall discuss in the next chapter (see p.109).

Nevertheless, it is often worth asking whether a local interpretation is really enacted, or whether it is inherited and accepted from the 'outside'.

2.4.4.3. End of excurse

The question is not whether an ideology is false but whether the 'language potential for critique' was somehow repressed or otherwise put out of function, while consensus was formed.

2.4.4.4. The limitations of hermeneutic understanding

The possibility of false consensus, characterized by 'systematically reproduced misunderstandings' (ideology), constitutes a problem for the hermeneutic understanding as a 'method', because it is affirmative or 'charitable' by nature and makes no distinction between one or the other. There is apparently no way out of the

blindfolded consensus: there is no external (transcendental) reference (i.e. objective reality) from which this agreement can be criticized or questioned[20].

> ”Nun hat uns Hermeneutik darüber belehrt, dass wir, solange wir uns in einer natürlichen Sprache bewegen, stets beteiligt sind und hinter die Rolle des reflektierten Mitspielers nicht zurücktreten können. Wir verfügen deshalb über kein allgemeines Kriterium, das uns festzustellen erlaubte, wann wir im falschen Bewusstsein einer pseudonormalen Verständigung befangen sind und etwas, das in Wahrheit der systematischen Erklärung bedürfte, bloß für hermeneutisch aufzuklärende Schwierigkeiten halten” (Habermas 1971a).

This is a problem for every ‘real-life’ process of understanding, and, in particular, for a social scientist. Therefore, critical sociology cannot be satisfied with merely ‘understanding’ its object. The challenge is to identify a method that can tell the difference and recover from a deceptive consensus. The methodological question is essential to Habermas, who basically struggles with the critique raised by Popper.

2.4.4.5. Potential for negation (critique)

According to Habermas, this limitation characteristic of hermeneutic understanding – being spellbound by an existing consensus – does not hold for language in general. We have, within the universal structures of communication, other means of acquiring knowledge. In his *Theorie des kommunikativen Handelns*, Habermas argues that even though the researcher does *not* ’rise above’ the language games or communicative structures that he studies, even though the researcher has to become a virtual *participant* of this particular language game, there still remains possibility for avoiding, or rather: for *modifying* and *countering* the ’particular’ (myopic) framework

[20] McIntyre argues, in his critique of Winch – who was inspired by Wittgenstein – that the very concept of ideology is based on the idea of ‘revealing’ something about society, of which the members are not aware and do not speak. "Clearly if the citing of reasons by an agent, with the concomitant appeal to rules, is not necessarily the citing of those reasons which are causally effective, a distinction may be made between those rules which agents in a given society sincerely profess to follow and to which their actions may in fact conform, but which do not in fact direct their actions, and those rules which, whether they profess to follow them or not, do in fact guide their acts by providing them with reasons and motives for acting in one way rather than another. The making of this distinction is essential of ideology and of false consciousness, notions which are extremely important to some non-Marxist as well as to Marxist social scientists... But to allow that these notions could have application is to find oneself at odds with Winch's argument at yet another point. For it seems quite clear that the concept of ideology can find application in a society where the concept is not available to the members of the society, and furthermore that the application this concept implies that criteria beyond those available in the society may be invoked to judge its rationality; and as such it would fall under Winch's ban as a concept unsuitable for social science." (MacIntyre 1970)

of the local language game ("den Bannkreis des bloß partikularen"), basically because any language always holds the potential for internal critique and correction:

> "Die allgemeinsten Kommunikationsstrukturen, die sprach- und handlungsfähige Subjekte zu beherrschen gelernt haben, öffnen nun aber nicht nur den *Zugang* zu bestimmten Kontexten; sie ermöglichen nicht nur den *Anschluss* and und die Fortbildung von Kontexten, welche die Teilnehmer, wie es zunächst scheinen möchte, in den Bannkreis des bloß Partikularen hineinziehen. Diese selben Strukturen bieten zugleich die kritischen Mittel, um einen gegebenen Kontext zu durchdringen, von innen aufzusprengen und zu transzendieren, um nötigenfalls durch einen faktisch eingespielten Konsensus *hindurchzugreifen*, Irrtümer zu revidieren, Missverständnisse zu korrigieren usw. *Dieselben Strukturen, die Verständigung ermöglichen, sorgen auch für die Möglichkeiten einer reflexiven Selbstkontrolle des Verständigungsvorgangs*. Es ist dieses im kommunikativen Handeln selbst angelegte Potential der Kritik, das der Sozialwissenschaftler, indem er sich als virtueller Teilnehmer auf die Kontexte des Alltagshandelns einlässt, systematisch nutzen und aus den Kontexten heraus gegen deren Partikularität zur Geltung bringen kann" (Habermas 1981).

This argument recalls the asymmetrical character of critique, Poppers argument that critique is not based on a 'framework'. The basic argument is that language is more than 'meaning', that it has a capacity for reaching beyond cultural systems of meaning.

2.4.4.6. Alternative to hermeneutic understanding – explanation

This method corresponds to the first step in the critique of ideology: to *explain* the social *function* of an ideology. And we recall that this step was related 'dialectically' to the second: to understand (and criticize on its own conditions) the *content*.

'Scientific' method – systematic, monological, object-oriented

To deal with suspicious consensus (an ideology, or theory-in-use, or organisational culture) another approach based on *systematic explanation*, which he labels 'deep hermeneutics', and which is similar to the scientific mode of 'explanation' (thus updating the classical distinction between understanding and explaining), is necessary. The critical researcher must apply the methods developed for *Nature* to the social world: a monological science based on a *method* (as opposed to the '*art'* of hermeneutic understanding) and oriented towards an *object* (as opposed the *intersubjective* 'mirror of human speech') towards something *external* that can be controlled (and manipulated) for observation.

> "... offensichtlich kann die moderne Wissenschaft legitim den Anspruch erheben, dadurch zu wahren Aussagen über 'die Dinge' zu gelangen, dass sie monologisch verfährt, statt auf den Spiegel der menschlichen Rede zu achten: indem sie nämlich monologisch aufgebaute und durch kontrollierte Beobachtung gestützte Theorien aufstellt." (Habermas 1971a)

Methodologically he thus counters the argument that hermeneutic understanding is a necessary and adequate approach to the social world. The aim is to demonstrate how the consensus was *produced* in order to break its spell. He focuses on demonstrating that an ideology is (re-) *produced* (how it is accepted) .

To some extent, this 'method' can be compared to 'reduction of uncertainty' in Weick's definition. At least the very distinction between uncertainty and ambiguity corresponds to Habermas' distinction between object-oriented and subject-oriented processes.

There is also a parallel to Sproull & Kiesler's demand for observation of group behaviour rather than accepting the account provided by a group member. Like Habermas, they argue that the participant is in no position to evaluate the process he is part of. Contrary to Habermas, however, Sproull & Kiesler do not seem aware of the potential logical and philosophical problems: in principle, one cannot simply transcend the consensus by 'observation' – as an *understanding* researcher one does not have an objective, external position and objective criteria on which the 'performance' of the group can be estimated. Habermas does not emphasize mere (external) *observation*, but the application of a particular *method*.

Translating results into natural language

Now this 'retreat' or excurse to a monological method poses a new problem to hermeneutics. The researcher has moved beyond the realm of hermeneutic understanding, and now has to return, and to 'import' the results acquired. If he thinks he has revealed an 'ideology' (or a mismatch between espoused theory and theory-in-use), this revelation must be stated in the language of the participants. Thus, while the critical researcher cannot initially be limited by 'participant language' (horizon, language game) – as required by Winch, to give an example – he is obliged eventually to translate the results to the language of his research 'object', by exploiting the 'potential for negation'. He cannot content with preserving the results in a scientific language, both because he has a 'knowledge interest' in emancipating people from repressive social structures by 'opening their eyes' and thus (potentially) breaking the spell; but also because the results must face a critical test in natural language.

Yet this 'translation' is difficult exactly because the monological method (language game) of science is separated from that of intersubjective hermeneutic understanding. Knowledge acquired by this scientific method is not part of everyday language, because it is not dialogical:

> "Weil die hypothetisch-deduktiven Aussagensysteme der Wissenschaft kein Element der Rede sind, entfernen sich die Informationen, die aus ihnen abgeleitet werden können, von der in natürlicher Sprache artikulierten Lebenswelt." (Habermas 1971a)

This argument corresponds somewhat to the one made by Benjamin about the incommensurability or incompatibility between information and experience (see p.17). Nevertheless, Habermas insists that this 'incommensurability' cannot be absolute, because natural language is not hermetically closed and does have a potential for negation.

> "Wohl verlangt die Umsetzung des technisch verwertbaren Wissens in den Kontext der Lebenswelt ein Verständlichmachen monologisch erzeugten Sinnes in der Dimension der Rede, also des alltagssprachlichen Dialogs; und gewiss stellt uns diese Übersetzung vor ein hermeneutisches Problem – aber eben vor ein für die Hermeneutik selbst neues Problem. Das hermeneutische Bewusstsein entspringt ja der Reflexion auf unsere Bewegung *innerhalb* natürlicher Sprachen, während die Interpretation der Wissenschaften für die Lebenswelt die Vermittlung *zwischen* natürlicher Sprache *und* monologischen Sprachsystemen leisten muss. Dieser Übersetzungsprozess überschreitet die Grenzen der rhetorisch-hermeneutischen Kunst, die es mit der umgangssprachlich konstituierten und überlieferten Kultur allein zu tun hatte. Über das hermeneutische Bewusstsein, das sich an der reflektierten Übung jener Kunst gebildet hat, hinausgehend, müsste Hermeneutik nun die Bedingungen klären, die es ermöglichen, aus der Dialogstruktur der Umgangssprache gleichsam herauszutreten und Sprache für strenge Theorienbildung und für die Organisation zweckrationalen Handelns monologisch zu verwenden." (Habermas 1971a)

I think this requirement – of translating results – is essential also to organisational studies. There is here a parallel to the emphasis on 'action research' in some organisational literature, and the tradition in Scandinavian research in *Information Systems* was strongly inspired by critical theory (Thommesen 1997). It is necessary, however, to maintain a distinction between two very different types of 'action research': the *critical* approach aiming at emancipation from repressive social structure; and the more *practical* approach aiming at changing and improving organisational performance.

2.5. Experience

The purpose of this section is to discuss the role of experience in relation to interpretation. To what extent is an interpretation based on experience, and what does this imply? This question will be relevant for understanding the conditions for reduction of ambiguity in organisations.

I shall contrast a popular and positive notion of experience ('experiential learning') with more critical conceptions, starting with Levitt & March, supplemented with some arguments from Benjamin. Basically, two 'affirmative' assumptions about experience flourishing in literature on organisational learning and knowledge management will be challenged, one regarding experience as the actual foundation of all knowledge, another regarding experience as superior to (instrumental) rationality. These

assumptions do not seem to be logically linked and may even appear to be mutually exclusive.

Experience as the foundation

The first is the assumption that *experience* is the actual *foundation* of all (practical) knowledge, of which rational (or prepositional) knowledge is just a faint and impotent afterglow. This assumption is implied in ethnomethodological and social constructivist theories of *situated learning* (Brown & Duguid 1996;Lave & Wenger 1991) and *situated action* (Suchman 1990). These theories integrate an interpretivist approach with the focus on experience. On the one hand they emphasize that knowledge is *social* and shared by some community. On the other hand they differ from cultural or symbolic interpretivist approaches by the functionalist assumption that this knowledge is *competent* and based on the situated experience with a domain, a successful to adaptation to the environment[21]. They emphasize *situation* and *context* in a local and physical sense – rather than context in a literary or cultural sense.

The emphasis on *indexicality* and the *situated* character of language (Suchman 1990) differs from the focus on prejudice or horizon in the *hermeneutic* perception of language. For Gadamer, prejudice – in its tolerable form – refers to 'heritage' ('Überlieferung') and tradition: we shall modify or specify our critique of prejudice in order to be perceptive to the knowledge that comes to us from tradition. For Suchman and ethnomethodologists in general, the 'unspoken' refers to concreteness and actuality – rather than 'abstract' knowledge as well as tradition. They emphasize how practical experience compensates for inadequacy of language, not unlike the early Heidegger's phenomenological view of everyday practice as the actual foundation, primary to language (and language as an articulation of practice) (Seel 1992)[22].

---

[21] Originally, the concept of learning was developed within psychology as a (behaviourist) alternative to any cognitivist assumptions about (human) behaviour. The concept of learning should thus avoid the problematic assumptions about intentions and knowledge 'inside people heads'. Argyris & Schön actually use the concept of (organizational) learning quite differently, in that it includes rational analysis etc. March' definition is somewhere in between: experiential learning is an alternative to 'rational calculus', but it does not exclude rational processes.

22 Collin compares phenomenology with hermeneutics and criticizes the former for (methodologically) problematic assumptions about pre-linguistic mental processes, and for disregarding the important constitutive role of language: "En vigtig kritik imod det fænomenologiske standpunkt går ud på, at det fuldstændigt overser sprogets centrale rolle i konstitutionen af handling." "Forskellen ... ligger især i to omstændigheder: For det første implicerer det hermeneutiske argument ingen speciel ontologi for det mentale... For det andet, og mere vigtigt, anerkender det hermeneutiske argument, at den konstituerende kraft, som skaber menneskelig handling og dermed den sociale virkelighed, ikke udelukkende rummes i

As another example, the theory of *situated learning*, on which the concept of *communities-of-practice* is based (Brown & Duguid 1996), was originally intended to conceive the particular form of learning associated with *apprenticeship* into a craft, but the authors found the same principle was much more universal. In short, they extended the ideal of craft-based learning to a fundamental theory of human cognition (Lave & Wenger 1991).

Experience superior

The functionalist character of the theories implies the second assumption about experience: that experiential knowledge is a *superior alternative* to anticipatory rational calculation. The potential conflict between the two assumptions is evident in the very comparison in the latter: if rational calculation is regarded as a viable – albeit inferior – *alternative*, then it cannot simply be regarded as secondary and *based* on experience.

Recapitulation: two alternatives to instrumental rationality

Recalling the previous distinction between hermeneutic understanding and monological science, we may now recapitulate: one should distinguish between two different alternatives to 'instrumental rationality' as a way of learning or acquiring knowledge, *hermeneutic understanding* vs. *experiential learning*.

	Character	**Orientation**	**Discipline**	**Material**	**Emphasis**
Instrumental rationality (method)	Method, systematic, critical, monological	Object: Nature, social structure	Science of Nature, social sciences	Data	Domain isolated from context; (or a systems or functionalist approach)
Hermeneutic understanding	'Art', dialogical	Subject: people, culture, historical period	Arts, social sciences	Text, cultural objects	*Social* context
Experiential learning	Trial by error	Object (?)	(Practice)	Routines	*Physical* context (situated)

Table 2. Two alternatives to instrumental rationality: *hermeneutic understanding* vs. *experiential learning.*

---

det enkelte handlende individ, men derimod i det sociale fællesskab som helhed i kraft af det fælles sproglige medium, som forbinder dem." (Collin 1998)

2.5.1. March: the fallibility of experiential learning

March and various co-authors[23] react to a popular tendency to see learning from experience as a superior and infallible method, compared to the countless inadequacies of rational action. Against this affirmative approach, he argues that experiential learning shares some of the problems – i.e. of ambiguity – faced by the latter, and that it produces a number of shortfalls or 'traps' of its own, problems that are characteristic of this particular 'logic of action': "The same processes that yield experiential wisdom produce superstitious learning, competency traps, and erroneous inferences" (Levitt & March 1988).

> "students of policy making have come to appreciate the advantages of trial-and-error intelligence. It is an appreciation that has merit and would certainly have pleased some classical students of politics, but it may be somewhat ill-formed." (March & Olsen 1976b)

The same critique applies to optimistic and uncritical assumptions about the adaptability of *organizational learning*, which is based on experiential learning

> "the literature on organizational learning is rarely uncoupled from the idea that learning is adaptive. Experience is viewed as producing wisdom and improved behavior. For purposes of studying experiential learning under ambiguity it is necessary to relax such an assumption. Modern organizations develop myths, fictions, legends, folklore, and illusions. They develop conflict over myths. The connection between environmental response to organizational action and individual and organizational interpretation of that response is often weak." (March & Olsen 1976b)

2.5.1.1. Experiential learning: testing of routines

March distinguishes between *learning from experience* ('experiential learning') and 'analysis and choice' or rational calculation[24]. These two 'forms of intelligence'

---

[23] In the following, I shall primarily refer to March without duly mentioning his various coauthors. This may be unjust, but easier for readability.

[24] Argyris & Schön do not agree on this distinction between learning and 'rationality'. In fact, they see organizational learning as a very rational process. One reason for the disagreement is that Argyris & Schön have a normative approach, and that they see organizational learning as an all-encompassing category (and a particular method), whereas March already has a number of well-defined concepts capable of describing processes of change. One could argue that March' definition is more narrow and precise, and that it owes to more to the 'original' behavioural sense of the word 'learning'.

('logics of action', or *methods*) are regarded as fundamental processes – in individuals as well as organisations[25]:

> "Organizational intelligence, like individual intelligence, is built on two fundamental processes. The first of these is rational calculation… The second process is learning from experience." (March & Olsen 1976b)

Experiential learning is based on a process of trial and error. A mode of action, a *routine*, whether a new one or picked from a 'stock of routines', is tested in a particular situation. The result is evaluated in terms of success or failure – if it proves (is regarded as) successful, the same routine will be applied (or *evoked*) in a similar situation in the future.

> "if a particular goal has been achieved on previous occasions by execution of a particular course of action, then evocation of that goal will be likely to evoke that course of action again. Habitual responses are extreme instances of this in which the connecting links between stimulus and response may be suppressed from consciousness." (March & Simon 1958)

It is necessary here to emphasize two distinctions. First, we must distinguish 'frozen' routine behaviour from processes that changes and modifies the (stock of) routines. Second, we also distinguish between different such modifying or *innovative* processes, in particular between experiential learning and rational choice. Thus, although experiential learning is based on routines, it differs from actual routine *behaviour* by the emphasis on *testing* alternatives.

As already mentioned, this process differs from the anticipatory calculation characteristic of rational action. Experiential learning is characterized as a ‚logic of appropriateness' as opposed to ‚a logic of consequentiality or intention', and it "involves matching procedures to situations more than it does calculating choices" (Levitt & March) – it is 'retrospective' and based on *history* rather than anticipating the future.

> "Routines are based on interpretations of the past more than anticipations of the future. They adapt to experience incrementally in response to feedback about outcomes." (Levitt & March)

Rational calculation depends on a model of the world that allows for *predictions* and requires that the 'actor' interpret causal relations in the environment. Experiential

[25] There may be a change in March' writings, away from the individual, towards organizational interpretations ('cognitive institutions'). In March & Olsen's discussion of ambiguity in the mid-70s, the individual has a clear and crucial role in the learning cycle. With their introduction of neo-institutionalism a decade later, however, they explicitly de-emphasize the individual. And Levitt & March treats the same material as the early March & Olsen, but have a stronger focus on interpretations – although they still refer to psychological 'attributes', i.e. 'attributes of individuals as historians' and 'features of individual inference and judgment'.

learning 'shoots first and asks the questions afterwards'. Nevertheless, March argues that learning from experience, too, is based on interpretation of outcomes, in terms of *observation*, *explanation* and *evaluation*: what happened? Why did it happen? Was it a success? The crucial distinction between success and failure thus requires interpretation of history: i.e. was the application of the routine a success (*evaluation, preferences*)? Was this result – success or failure – in fact a product of the applied routine, or of some external factors?

By this emphasis on interpretation, March' concept of experience obviously differs significantly from those that emphasize a more fundamental structural difference between rationality and experience. It is often argued that experience is something *prior* to the 'filter' provided the Kantian 'subjective' categories such as *causality* and *objects*. As an example Benjamin characterizes experience as holistic and integrated, without specification of individual events (corresponding to 'facts', see also previous discussion, p.17). Benjamin distinguishes *memory*[26] ('Gedächtnis') from *recollection* ('Erinnerung') – where the latter focuses on individual occurrences, and the former – which he associates with experience – is 'accumulative' and related to tradition.

> "In der Tat ist die Erfahrung eine Sache der Tradition, im kollektiven wie im privaten Leben. Sie bildet sich weniger aus einzelnen in der Erinnerung streng fixierten Gegebenheiten denn aus gehäuften, oft nicht bewussten Daten, die im Gedächtnis zusammenfließen." (Benjamin 1992)

Benjamin is inspired by Bergson, who regarded *mémoire pure* – pure memory – as unmediated/immediate memory characterized by 'wholes' and 'duration' (*la durée*) and saw *intuition* as a method capable of regaining this memory – as opposed to the methods employed by modern science[27].

---

[26] The translation of 'Gedächtnis' (in Benjamin's sense) into 'memory' is problematic because this word rarely has the connotations implied by Benjamin.

[27] Adorno criticizes Bergson for defending a division of labour between science and philosophy, and thus accepting the split between science and true experience, and thereby accepting the general isolation of the 'subjective' (Adorno 1970b). He criticizes the attempt to hypostasise 'intuition' as an independent and self-reliant method, isolated from scientific knowledge. I.e. "In den Intuitionen besinnt sich die ratio auf das, was sie verga , und in diesem von ihm freilich kaum intendierten Sinn hat Freud recht, wenn er dem Unbewu ten eine eigene Art von Rationalität zuschreibt. Die Intuition ist kein einfacher Gegensatz zur Logik: sie gehört dieser an und mahnt sie zugleich an das Moment ihrer Unwahrheit. Als blinde Fleche im Proze der Erkenntnis, aus dem sie doch nicht herauszubrechen sind, verhalten die Intuitionen die Vernunft dazu, auf sich selbst als blo e Reflexionsform von Willkür zu reflektieren, um der Willkür ein Ende zu berieten. In der unwillkürlichen Erinnerung versucht wie immer auch vergeblich der willkürliche Gedanke etwas von dem zu heilen, was er gleichwohl verüben mu ..." (Adorno 1970b)

The definition offered by March does not seem capture this aspect of experience[28]. Neither does he define experiential learning as a simple contrast to 'rationality'. March & Olsen define the method as *adaptive rationality*, and they seem to characterize 'rational choice' and 'experiential learning' as two different types of *rationality*, which both depend on interpretation of causality. Nevertheless their definition does imply that this interpretation of causality is different in the two approaches. While 'rational choice' is based on prepositional knowledge, an objectified and causal description of the environment (including those parameters that can be affected by the 'agent'), 'experiential learning' instead focuses on the possible causal relations between the actions (routines) carried out by the agent and 'changes in the environment' (Outcome? Results?), and is therefore required to distinguish between 1) actions taken and 2) external factors as different factors producing the result. This distinction (interpretation) thus also requires emphasis on causality, but the focal point is different[29].

Despite the differences in the definition of experience, I find March's arguments about the fallibility of experiential learning to have a general relevance and capable of inspiring a critique against those apparently 'incommensurable' theories.

2.5.1.2. The weaknesses of experiential learning

March argues that experiential learning faces some of the same problems as rational choice, such as ambiguity and complexity, without faring much better in these situations.

> "what would happen if a learning style appropriate to a world in which preferences are clear and outcomes unambiguous were extended to a world

[28] Weber (who is inspired by Kant) rejects the very idea that the individual should have access to a 'whole' memory. The individual is dependent on rational (mediated, filtered) 'recollection' – which has the advantage over the hypothetical (but impossible) 'photographic' memory, of including new aspects, new contexts (new understandings?): "Nie und nirgends ist eine gedankliche Erkenntnis selbst eines eigenen Erlebnisses ein wirkliches 'Wiedererleben' oder eine einfache 'Photographie' des Erlebten, stets gewinnt das 'Erlebnis', zum 'Objekt' gemacht, Perspektiven und Zusammenhänge, die im 'Erleben' eben nicht 'gewusst' werden." (Weber 1988)

[29] March' definition of experiential learning also differs from the more philosophical concept of experience (Bergson, Benjamin) at another point: March & Olsen and Levitt & March also treat experiential learning as a deliberate strategy to be applied in organisations, and imply that this strategy could be based on formal routines (written rules) as well as informal ones. I would argue that experiential learning is basically associated with informal routines, but March' definition formalizes the process and converts it to a method (a conversion that has probably already been done by some of the proponents of (organisational) learning that March aim to criticize).

> in which it is hard to determine what happened yesterday, why it happened, whether we liked it, or whether yesterday is comparable to today?" (March & Olsen 1976b)

With this argument they challenge the widespread (and functionalist) assumption that 'experiential learning' – in some reasonably similar definition – is more adaptive, more efficient in 'rapidly changing environments' than rational choice. An example of this assumption can be found in *contingency theory*(Burns & Stalker 1961), according to which *organic organizations* "like other living things… adapt flexibly to changing circumstances"(Hatch 1997).

One problem associated with *learning from experience* is the *competency trap*, where people (or an organisation) have become so experienced with one routine that any new routine will appear inferior, simply because it is not yet supported by a similar level of experience.

> "a competency trap can occur when favorable performance with an inferior procedure leads an organization to accumulate more experience with it, thus keeping experience with a superior procedure inadequate to make it rewarding to use." (Levitt & March 1988)

One might say that experience (with a routine) is an extra asset, but also a (sunk) cost making the switch to a new routine – a procedure, or new technology – extra difficult.

Another example of the fallibility of experience is the risk of *superstitious learning*, a misinterpretation of *causality*, which "occurs when the subjective experience of learning is compelling but the connections between actions and outcomes are misspecified", and it "often involves situations in which subjective evaluations of success are insensitive to the actions taken" (Levitt & March 1988). Thus, in periods of success there is a tendency to see the organisational actions as successful, where the success may actually stem from the environment rather than individual behaviour. But the opposite is also the case: in periods of decline every action appears to be a failure and the cause of the misery. March & Olsen also describes superstitious learning as a situation, where the organisation changes and sees this process as one of learning, but results are lacking, there is no connection between action and outcome: "The critical feature is that the connection between organizational action and environmental response is severed" (March & Olsen 1976b)[30].

[30] Most literature about scientific methodology will contrast its merits with a critical account of everyday experience. Thus, Andersen emphasizes the characteristics and pitfalls of 'natural' knowledge production: "I hovedtrækkene foregår denne kundskabsproces på følgende made: Vi gør os almindeligvis temmelig tilfældige iaggtagelser om de forhold, som berører os. Visse fænomener dukker ofte op, andre sjældent. Visse hændelser optræder i sammenhæng, andre isoleret. Vor hjerne bearbejder og lagrer de synsindtryk, følelser og hændelser, som optræder. Efterhånden opbygger vi vort lager af erfaringer. Vi har kendskab til dele af vor omverden, og

2.5.1.3. Epistemological pessimism or inadequacy of history?

March offers – at least – two different explanations for the fallibility of experiential learning. Part of the explanation seems to be psychological, corresponding somewhat to the *epistemological pessimism* denounced by Popper. The other explanation focuses on logical problems in using (local) history to modify interpretations.

Psychological explanation

To some extent, Levitt & March offer a (individual) *psychological* explanation of misinterpretations. They argue that individuals are inclined to interpret their own results as successful (and disregard shortfalls):

> ”individual decision makers often seem to be able to reinterpret their objectives or the outcomes in such a way as to make themselves successful even when the shortfall seems quite large.” (Levitt & March 1988)

Similar tendencies characterize some cases of *organisational* learning, “particularly where the leadership is stable and the organization is tightly integrated” (Levitt & March 1988), as opposed to organisations characterized by conflicting fractions etc. Furthermore experiential learning suffers from certain (unflattering) ‘features of individual inference and judgment’

> “individual human beings are not perfect statisticians… They make systematic errors in recording the events of history and in making inferences from them. They overestimate the probability of events that actually occur and of events that are available to attention because of their recency or saliency. They are insensitive to sample size. They tend to overattribute events to the intentional actions of individuals. They use simple linear and functional rules, associate causality with spatial and temporal contiguity, and assume that big effects must have big causes. These attributes of individuals as historians are important to the present topic because they lead to systematic biases in interpretation.” (Levitt & March 1988)

There is in this psychological explanation a striking parallel to Bacon’s critique of the idols of the tribe, and those of the cave. Bacon argues that an ‘experimental method’ (not to be confused with ‘experiential learning’) is a necessary remedy against various fundamental human tendencies to erroneous inferences and prejudice. And the very

---

vi har også grundlag for at tolke den og drage slutninger om den. En sådan vidensproduktion kan naturligvis i mange tilfælde lede til gode slutninger og fornuftig viden, som vi ofte kan anvende til at løse vore problemer med. Men måske giver denne type af viden os – lige så hyppigt – et dårligt billede af vor omverden. Den måde, hvorpå vi i vor hverdag tilegner os erfaringer, kan resultere i, at vi sammenkæder begivenheder, som i virkeligheden ikke hører sammen. Vore konklusioner kan således være forkerte. De er ikke i overensstemmelse med den virkelighed, som vi studerer.” (Andersen 1997)

category of superstitious learning can be compared with Bacon's notion of a 'tendency to over-generalize':

> "The human understanding on account of its own nature readily supposes a greater order and uniformity in things than it finds. And though there are many things in Nature which are unique and quite unlike anything else, it devises parallels and correspondences and relations which are not there." (Bacon 1994)

On the one hand, the implied epistemological pessimism is problematic and unsatisfactory as an explanation. On the other hand it may be read as a critique of the intuitive, immediate judgment – emphasizing the need for (rational) critique and distance or mediation. Even though individual (mis-)judgment is the source of knowledge, it can still be criticized and modified by critical rationality.

Structural problems of experience

Besides the psychological explanation, however, March also emphasizes *structural* problems in learning from experience. "The past is not a perfect predictor of the future, and the experimental designs generated by ordinary life are far from ideal for causal inference" (Levitt & March 1988). On the one hand the question is to what extent the interpretation actually learns from experience. It is, to some degree, immune to experience. On the other hand, history – on which experience is based – is often insufficient for selection between interpretations. "[T]he difficulties in using history to discriminate intelligently among alternative paradigms are profound" (Levitt & March 1988). In their analysis, Levitt & March specifies problems with the *paucity*, *redundancy* and *complexity* of experience.

The first problem concerns the *paucity* of experience. March argues that "history is not generous with experience" (March *et al.* 1999), and that "nature provides inadequate experience relative to the complexities and instabilities of history" (Levitt & March 1988). This should probably be compared to the *scientific* methods for establishing causal relationships. Although in principle science faces the same basic problem in the philosophical argument that universal laws cannot be derived from any number of observations – i.e. Hume's argument that the past can never serve to predict the future (i.e. sunrise) – scientific research is required to assemble numerous empirical results, whereas a single agent – organisation, individual or other – can only make a few experiments. The isolated experience of one agent is too limited for reasonable interpretation of events – also because the actual risks involved in real-life experimentations are greater, compared to the laboratory. On the one hand, experience is thus more vulnerable to the rigidity of interpretations, because there is insufficient material – 'data' – to *rationally* challenge such frames. On the other hand the inability to discriminate *rationally* between interpretations may also lead to 'random drift'. Levitt & March proceed to emphasize that this problem is aggravated under particular circumstances: "when the environment is changing rapidly or involves many dangers or opportunities, each of which is very unlikely" (Levitt & March 1988). It thus seems

that ‘experiential learning’ fares no better than the bureaucratic or rational organisation, which is often regarded as inferior in that type of environment.

The second problem concerns the *redundancy* of experience:

> “Ordinary learning tends to lead to stability in routines, to extinguish the experimentation that is required to make a learning process effective." (Levitt & March 1988)

This argument repeats the emphasis on *routines*, and the tension between routines and experimentation (and thus experiential learning). Routines exclude experimentation almost by definition. Acting according to a routine is an alternative to experimentation.

The third problem concerns the *complexity* of experience. Again they argue that the (objective) environment of an organisation is particularly complex.

> ”Organizational environments involve complicated causal systems as well as interactions among learning organizations. The various parts of the ecology fit together to produce learning outcomes that are hard to interpret." (Levitt & March 1988)

The authors suggest different strategies to improve the performance of experiential learning. Notably, they advice *against* ‘incremental development’, which “is likely to lead to random drift rather than improvement". Instead, they recommend less frequent but more abrupt changes[31].

The conservative nature of experience

There are parallels between March’s critique of experiential learning as based on a limited horizon and insufficient empirical material and Benjamin’s critique of

[31] Andersen offers this explanation for the inadequacy of experience, and the advantages of scientific method: “fejlslutninger begår vi alle, og det hænger bl.a. sammen med: at vor forestillingsverden er farvet af de erfaringer, vi har gjort os; at de informationer, vi har indsamlet, ikke er tilstrækkelige, relevante eller gode nok til det formal, vi ønsker at anvende dem; at vi mangler evnerne til at sammenstykke informationerne på en fornuftig made, dvs. mangler logisk sans, analytisk evne og evnen til at sammenfatte informationerne til en helhed. Det, der almindeligvis adskiller dagligdags tænkning og egentlige forskningsaktiviteter, er, at de sidste er underlagt mere systematiske fremgangsmåder end de første. Der stilles større krav til argumentation, begrundelse og dokumentation for fremgangsmåder og information i forbindelse med forskningsarbejde end ved dagligdags refleksion. Det tvinger (eller bør tvinge) os til at arbejde meget mere med egne forestillinger og fordomme og systematisk sætte os ind i eksisterende viden på området. Derfnæst til stadighed at reflektere over kvaliteten og relevansen af de informationer, vi anvender, og ydermere reflektere over holdbarheden og grænserne for holdbarheden af de slutninger, vi drager.” (Andersen 1997)

experience as bound by conservative retrospection. The critique offered by a young Benjamin is thus worth bearing in mind, to avoid a more nostalgic reading of his concept of experience.

According to Benjamin, experience in itself is conservative and discouraging – it is the evangelism of the philistines, for it cannot give us ideals or hope:

> "Haben [die Erwachsenen] uns je schon zum Grossen ermutigt, zum Neuen, Zukünftigen? O nein, denn das kann man ja nicht erfahren. Aller Sinn, das Wahre, Gute, Schöne ist in sich selbst gegründet; was soll uns da die Erfahrung? – Und hier liegt das Geheimnis: weil er niemals zum Grossen und Sinnvollen emporblickt, darum wurde die Erfahrung zum Evangelium des Philisters."
>
> „Warum also ist für den Philister das Leben trost- und sinnlos? Weil er nur die Erfahrung kennt, nichts weiter."
>
> „Wir kennen aber Andres, was keine Erfahrung uns gibt oder nimmt: dass es Wahrheit gibt, auch wenn alles bisher Gedachte Irrtum war. Oder: dass Treue gehalten werden soll, auch wenn bisher niemand sie hielt. Solchen Willen kann uns Erfahrung nicht nehmen. Dennoch – in *einem* sollten die Ältern Recht behalten mit ihren müden Gesten und ihrer überlegenen Hoffnungslosigkeit? Was wir *erfahren*, das wird traurig sein und nur im Unerfahrbaren werden wir Mut und Sinn gründen können." (Benjamin 1991b)

Although he is less dismissive in his later writing, he maintains a fundamental critique of experience as a mode of 'living'. Though richer and fuller, it is also a heavy burden that encloses the subject in the past – a large-scale 'competency trap', if one is allowed a far-fetched and dubious analogy[32]. Benjamin's concept of *aura* has a similar meaning: a sense of belonging that disables us of imagining a new and different world, of facing a new historical situation, where experience would be misleading[33].

---

[32] Of course there are fundamental differences in scope: Benjamin talks about the possibility of an adequate perception of the modern world; March about problematic decision-making on insufficient basis. And we cannot overcome that historical 'competency trap' by gathering a larger amount of data. It is a fundamental problem of modern science that it remains 'tied' to the existing world and incapable of relating to the new. In this perspective, there are also positive aspects of the fact that interpretations are resistant to experience (March): Some part of 'interpretations', one that represents hopes and ideals, must survive preserve the potential for progress. Yet this is not an argument for preserving 'values' and protecting them against critique: the very separation between objective description and subjective values is misleading.

[33]"Perceptionsformen (dvs. oplevelsesmåden) forandres fra erindrende fordybelse, til adspredt oplevelse. Herved taber perceptionen i intensitet, men samtidig frigør den sig fra erindringens konservative overlevering... Frigørelsen fra auraen betyder derfor samtidig menneskets frigørelse til at begribe sin samtid, og til at fantasere sin fremtid." (Lübcke 1982)

Experience – in decline, or in abundance?

Besides numerous other problems with the analogy, one difference between March and Benjamin must be emphasized. While Benjamin writes about the general and fundamental *decline* of experience, March the neo-institutionalist concluded that the 'logic of appropriateness' is the norm rather the exception in modern organisations. To Benjamin and others, experience is a 'form of knowledge' that is inadequate and incompatible with the modern world, both because of a 'revolutionary' technological development that constantly changes work processes and renders previous experience superfluous, and because the very structure of modern media (and knowledge) disables communication with personal experience.

March's conclusion, on the other hand, does not agree with this historical view and seems to support the thesis that I set out to criticize: the idea of experience as *the* fundamental form of knowledge. Still, March's approach is 'ambiguous': experiential learning is not fundamental in the sense that it is the basis of all knowledge, it is one of two alternatives, which, alas, happens to be the norm. It is not functional or superior.

2.6. Summary[34]

There are two different elements of interpretivist theories. The basic element could be labelled as static ('product'): the notion of an (frame of) interpretation shared by a group, a 'culture' or a historical period etc. The other element is the idea of 'understanding' as a process triggered by ambiguity: two (or more) different, even conflicting interpretations. Thus, either there is one dominating interpretation, and thus no ambiguity. Or there is ambiguity due to two or more contradicting interpretations.

2.6.1.1. <u>One interpretation – no ambiguity</u>

On the one hand (rationalist critique) any interpretation must 'claim to be true', and truth must be universal. Interpretations are not merely symbolic. They contain more than obviously subjective elements such as values and goals. To the extent that an interpretation deals with cause-effect relations in the environment or other types of statements about reality, they contain assumptions about an 'objective' world. Thus,

[34] When I refer to (frames of) interpretation in the following discussion, I generally imply elements such as causality and evaluation – those that were presented in the beginning of this chapter. This definition is mostly useful, because it is also used by students of interpretation in organisation. It may be somewhat problematic, however, to assume this basic structure – which is fundamentally rational. When Gadamer talks of prejudice, he does not seem to assume these elements. Critical theory has often criticized that this structure, this superimposed split between objective, thingly causality and subjective values is a problematic straitjacket for critical and emancipatory thinking that must be countered (but cannot be avoided). And the next chapter will present some arguments for the idea that experience may have a very different structure.

an interpretation can be wrong (false). Interpretations 'based' on experience – in a complex environment – are dubious due to their limited basis in (local or personal) history.

It may be argued that it is irrelevant to talk about the truth or falsity of an interpretation, if one acknowledges that the observer-outsider (the researcher) is in no better position to make final judgements about the 'truth of the matter'. Nevertheless, renunciation on absolute truth and objectivity is no excuse for relativism. The ideal of truth is still based on that of universality – the idea of a *universal* interpretation, one that is 'shared' by all communities, groups etc. Rationality – including both modern science and critical theory – is based on the ideal of such a *universal* interpretation. The critique is directed against local or *particular*[35] interpretations, based on particularity as opposed to universality. And the critique is based on the assumption that such *particular* interpretations can often be distinguished from 'healthy' interpretations by: their lack of universality, and their closed nature, the lack of exposure to rational critique.

Another problem with the idea of a local, 'enacted' community-based interpretation is that this isolated view on an individual group or organisation seems to disregard that the organisation and its members exist within a modern world ripe with 'interpretation' – and a 'social body of knowledge' of a certain structure. It is unrealistic to assume that people locally to any large degree 'invent' a private or local interpretation (meaning). It seems more likely that most of 'their' interpretations are in fact inherited (or learned) from ideas and theories already in circulation. To a large extent we are (innocent) victims of the interpretations we employ – as illustrated by Heidegger's argument that language is always ahead of us. This critique could be termed the *structuralist* argument.

Yet the structuralist argument should not be exaggerated to exclude any form of local interpretation. Under the microscope any consensus is vulnerable, as Habermas admits. But the argument emphasizes that local interpretations is based on a more fundamental background.

2.6.1.2. Reduction of ambiguity – enactment, war or rational decision

Ambiguity arises when two conflicting interpretations confront each other, and ambiguity can be reduced by very different processes. There is a potential for rationality in the process of understanding and reduction of ambiguity (Argyris & Schön, Sproull & Kiesler), as opposed to *war* (Kuhn) or *negotiations*. In the ideal process people are required to 'understand' each other, and that this process provokes

[35] The word particular is used in the same sense as by Gadamer or Habermas: particular as opposed to universal. This meaning may be somewhat unfamiliar in English.

the exposure of tacit or implicit interpretations. *Particular* interpretations are brought to light and exposed to critique, whereby both (all) parties in such 'confrontation' learn more, both about the 'alien' interpretation and their own. This process requires a rich language, because people are 'forced' to shift attention from the issue 'outside' and turn 'inwards' to clarify and question implicit assumptions. This process can reasonably be characterized as rational, because emphasizes arguments and justification.

However, as already mentioned there is also in face of ambiguity a potential for less rational 'political' processes emphasising bargaining, negotiation, mere strategic behaviour or 'warfare' over understanding.

The question is how to identify factors that encourage a rational debate and inhibit warfare. Sproull & Kiesler's suggestion of the *number of alternatives considered* as a neutral indicator of rationality implies that decision-making processes may be improved by 'techniques' that increase the number of alternatives. They also – implicitly – recommend techniques that dissolve consensus and encourage critique.

The critical dilemma

While individual interpretations suffer from lack of critique, processes characterized by ambiguity may suffer from too much – destructive – critique.

Critique is – ambiguous: it is crucial to rational analysis and the progress of thought, but it may also be impotent and potentially destructive in practical situations. Critique means (further) postponement of action, and organisations are action-oriented. In practical situations, where action must be taken, and decisions be made – people cannot retreat to disengaged critical positions. It is tempting to conclude that critique is basically 'impractical' – and that the potential for critique is the advantage of theory over practice (experience). *Dis*-engagement – as opposed to commitment and 'engagement'– opens up for a critical distance.

The problem for organisations is how to deal with critique. Critical voices are often disliked and 'repressed', not only to protect 'powers that be', but also because they may threaten stability and may fail to provide alternative courses of action. Compare Sproull & Kiesler's example emphasizing the contradiction between 'pleasantness' and 'efficiency' of groups. A common reaction to this problem is the well-known requirement that critical voices are invalid as long as they do not provide alternatives. Yet this requirement is inhibitive to the debate and – as argued by Popper - logically untenable. Nevertheless, Gadamer seems to imply that hermeneutic understanding does take the most radical sharpness off critique, because understanding is fundamentally compliant: the understanding subject wants to understand and cannot simply reject statements 'that he or she cannot verify'.

2.6.1.3. Two levels of application

It is worth emphasizing that the principle of hermeneutic understanding etc. applies to two, even three different levels. First, it sets an ideal for processes of understanding *within* the object of research. Second, the social researcher must attempt to communicate with his 'object': to understand organisational action and actors by 'interpretation'. The problems of understanding are also methodological ones. At a third level interpretation is the very basis of this chapter, the conviction that different theories are *not* incommensurable, that it is possible to make them 'meet on common ground' in order to achieve a critical dialogue.

2.6.1.4. The 'usefulness' of critical theory?

I take inspiration from discussion of rationality and other forms of knowledge in critical theory, with the intention of building a 'model' for analysis of (individual) organisations. This use corresponds to an 'instrumentalisation' of critical theory, often using it 'by analogy', like in the somewhat problematic analogy between critique of ideology and 'deuterial learning'. Other critical researchers may denounce this instrumentalisation as abuse. Yet I think that some degree of 'instrumentalisation' is the price one might pay for testing the above fundamental assumptions about rationalization. It may seem paradoxical to see critical theory as a defender of rationality, but such defence is required today, because there is a strong tendency to discard the issue as irrelevant.

---

[i] Galilei plays a significant role in the history of thought. Haugeland sees Galilei as an important step towards the formalization of thought (Derrida: the development of non-phonetic writing), eventually the very idea of AI. His achievement was to apply mathematics and geometry to physical problems of velocity etc. by abstraction. He believed that his method corresponded to the true structure of the world and saw the university as a book, written in the language of mathematics. "What matters historically … is not just that Galileo used geometry, but how he used it. Traditionally, geometry was the study of figures and relations in space. But Galileo conceived of it more abstractly. So, for example, lines in his diagrams wouldn't always represent lines or even distances in space, but might just as well represent times, speeds, or any other interesting physical variable… [Example: comparing the time spent an accelerating body covering a distance, to the time spent by a body of constant rate of speed]. Obviously Galileo's main contribution is not the proof itself but the abstract representation in which such a proof could be given. Discovering and validating this strange way of representing instantaneous velocity, uniform acceleration, total distance, and so on cost Galileo many years of struggle. It looks so simple or even clumsy now; but it is one of the great achievements of the human intellect. What made it really significant, though, was not any particular result but rather the fact that now all the familiar techniques of geometry could be used to establish all kinds of results. Euclid's whole deductive system could be abstracted away from geometric shapes and applied instead to motions" (Haugeland 1987). He also introduced the influential – and infamous – distinction between what may be termed objective and subjective (Locke: primary and secondary) qualities: "I believe that for external bodies to excite in us tastes, odors, and sounds, nothing is required in those bodies themselves except size, shape, and a lot of slow or fast motions [namely, of countless 'tiny particles']. I think that if ears, tongues, and nose were

taken away, then shapes, numbers, and motions would well remain, but not odors, tastes, or sounds. The latter are, I believe, nothing but names, outside of the living animal – just as tickling and titillation are nothing but names, apart from the armpit and the skin around the nose" (cited by Haugeland). Husserl, the founder of phenomenology, criticized Galileo for confusing idealized mathematical shapes with the 'real world'. Geometrical shapes are idealizations of things perceived in the real world, shapes that we shall never meet in the sensible world: "Under udviklingen af stadig finere måleprocedurer, opstår da tanken om en helt plan flade, en ren cirkel, en fuldstændig lige linie. Sådanne genstande vil vi aldrig møde i vor sansbare omverden: De udgør et nyt genstandsområde af idealtypiske grænsetilfælde kun tilgængelige for en rent geometrisk og matematisk tankevirksomhed. For Galilei forelå der allerede en højtudviklet, ren geometri, og han behøvede derfor ikke spørge om, hvorledes det geometriske genstandsområde og den geometriske metodik viser tilbage til den førvidenskabelige, sansbare verden og den måleteknik, der benyttes i denne verden. I stedet kunne han på naiv måde tage geometrien for givet og endog gå et skridt videre, idet han erklærede den geometriske verden for den 'egentlige', 'objektive' verden, således at den verden, vi erfarer gennem vore dagligdags målinger, kun er at betragte som en tilnærmelse til den 'virkelige' verden. Efter at have foretaget denne 'objektivering' ('hypostasering') af den geometriske verden lå det næste skridt lige for: Jo mere forfinede målinger, vi kan foretage, desto mere 'objektive' resultater når vi frem til; da farver, lyde og lugte kun i begrænset omfang kan underkastes strenge målinger, er de følgelig mindre 'objektive' end tidslig og rumlig udstrækning; ergo er kun den i tid og rum udstrakte virkelighed 'objektiv', mens farver, lyde og lugte er noget blot 'subjektivt'. For Husserl er denne måde at se tingene på ikke holdbar. Den i tid og rum udstrakte, rent geometriske verden må ses som det, den er: Et grænsetilfælde. Dette grænsetilfælde udgør et konstitueret genstandsområde, idet de akter, i hvilke de geometriske genstande kan erfares på mest direkte måde, nødvendigvis forudsætter en række akter, i hvilke en sansbar verden af farver, lyde, lugte og former giver sig til kende. Denne verden – eller dette genstandsområde – omtaler Husserl som vor livsverden ('Lebenswelt')... Enhver genstand viser i sidste instans tilbage til denne livsverden forstået som en sansbar verden med en bestemt eidetisk struktur. Da livsverdenen på denne måde må siges at være en nødvendig betingelse for enhver erfaring, kan den med rette siges at være en transcendental betingelse" (Lübcke 1994). Heidegger sees Galileo as a demi-god or Poet, whose mathematical 'disclosure' – frame of interpretation – of the world has laid the ground for modern science (Heidegger 1962).

[ii] Compare Adorno's critique of common sense, indeed in the very definition of critical thought. Common sense is to be distrusted as stubbornly obedient to a 'reality' that is unjust and repressive, and it is the crucial task of critical thought to oppose it. "Common sense, die Einschätzung der richtigen Verhältnisse, der am Markt geschulte, weltläufig geübte Blick, hat mit der Dialektik die Freiheit von Dogma, Beschränkung und Verranntheit gemein. Seine Nüchterneit gibt ein unabdingbares Moment von kritischen Denken ab. Aber der Verzicht auf verblendeten Eigensinn ist doch auch wiederum dessen geschworener Feind. Die Allgemeinheit der Meinung, umittelbar angenommen als eine in der Gesellschaft, wie sie ist, hat zum konkreten Inhalt notwendig das Einverständis. Es ist kein Zufall, daß im neunzehnten Jahrhundert gerade der abgestandene und durch die Aufklärung mit schlechtem Gewissen versetzte Dogmatismus auf den gesunden Menschenverstand sich berief, so daß ein Erzpositivist wie Mill gezwungen war, gegen diesen zu polemisieren. Der sense of proportions

vollends bezieht sich darauf, daß man in den Maßverhältnissen und Größenordnungen des Lebens denken solle, die feststehen. Man muß nur einmal einen hartgesottenen Repräsentanten einer herrschenden Clique haben sagen hören: 'Das ist nich so wichtig', muß nur beobachten, wann die Bürger vor Übertreibung, Hysterie, Narretei reden, um zu wissen, daß es gerade an der Stelle, and der die Berufung auf Vernunft am promptesten eintritt, unweigerlich um die Apologie der Unvernunft geht. Den gesunden Widerspruchsgeist hat Hegel mit der Dickköpfigkeit des Bauern hervorgehoben, der jahrhundertelang lernte, Jagd und Zins der mächtigen Feudalherren zu überstehen. Das Anliegen der Dialektik ist es, den gesunden Ansichten, die spätere Gewalthaber von der Unabänderlichkeit des Weltlaufs hegen, ein Schnippchen zu schlagen und in ihren 'proportions' das treue und reduzierte Spiegelbild der unmäßig vergrößerten Mißverhältnisse zu entziffern. Die dialektische Vernunft ist gegen die herrschende die Unvernunft: erst indem sie jene überführt und aufhebt, wird sie selber vernünftig. Wie verrannt und talmudistisch war schon, mitten in der funktionierenden Tauschwirtschaft, die Insistenz auf dem Unterschied der vom Arbeiter verausgabten Arbeitszeit und der zur reproduktion seines Lebens notwendigen. wie hat nich Nietzsche alle Pferden am Schwanz aufgezäumt, auf denen er seine Attacken ritt, wie haben nicht Karl Kraus, Kafka, selbst Proust, jeder auf seine Weise, das Bild der Welt befangen verfälscht, um Falschheit und Befangenheit abzuschütteln. Vor den Begriffen des Gesunden und Kranken, ja den mit ihnen verschwisterten des Vernünftigen und Unvernünftigen selber vermag Dialektik nicht Halt zu machen. Hat sie einmal das herrschende Allgemeine und seine Proportionen als krank - und im wörtlichsten Sinn, gezeichnet mit der Paranoia, der 'pathischen Projektion' - erkannt, so sird ihr zur Zelle der Genesung einzig, was nach dem Maß jener Ordnung selber als krank, abwegig, paranoid - ja als 'verrückt' sich darstellt, und es gilt heute wie im Mittelalter, daß einzig die Narren der Herrschaft die Wahrheit sagen. Unter diesem Aspekt wäre es Pflicht des Dialektikers, solcher Wahrheit des Narren zum Bewußtsein ihrer eigenen Vernunft zu verhelfen, ohne welches sie freilich untergehen müßte im Abgrund jener Krankheit, welche der gesunde Menschenverstand der anderen mitleidslos diktiert" (Adorno 1951). The comparison of ideology and common sense is also problematic, however. The philosophy of common sense assumes a practical ‘hands-on’ approach that is independent from, and uninfected by ideology (or idola theatri). Adorno does not simply identify common sense with ideology, but he argues that common sense is mostly conservative and conformistic – rather an (albeit not deliberate) ally than a threat to ideology and the powers that be. Nevertheless, he also seems to identify Being with the idols of the market place, and label these idols as ideology.

3. Ambiguity in organisations

The primary purpose of this chapter is to identify *organisational* processes involving ambiguity. I shall present a theoretical framework that answers a number of questions. Why are there different interpretations in an organisation? Where do these interpretations come from – have they emerged locally, or are they 'inherited' from elsewhere? Having identified the nature of the interpretations will make it easier to discuss the conditions for 'reduction of ambiguity' and the potential for a rational resolution.

3.1.1.1. Four arguments against the theory of rationalisation

The discussion is based on theories (Weber, critical theory) that regard modern organisations as basically characterized by (instrumental) rationality, as the result of a historical process of *rationalisation* that has replaced experience as the 'knowledge base' of society. This theory will be confronted with – and qualified by – a number of arguments that seem to challenge the basic assumption of rationality. These critiques are roughly based on one – or a combination – of the following concepts: *experience*; *interpretation*; *bounded rationality* or fallibility. The emphasis on interpretation inspires a number of different critiques of the rational model, but it is worth recapitulating from the previous chapter that there may not be any conflict: the bureaucratic organisation results from an interpretation, but an interpretation of a particular form, and based on universal knowledge (rather than local interpretation).

One critique against the theory of rationalisation argues that the cognitive interpretation (or culture) applied by an organisation is more relevant than, and prior to, organisational structure (Weick, Schultz, Schein). Organisational action should be understood in terms of symbol and meaning rather than rational calculation.

Another critique, which is essential to this thesis, argues that an organisation is not based on a single unified 'culture', but hosts a variety of conflicting interpretations – "different and contradictory rationalities" in Weick's words – implying an ambiguity that undermines rational decision-making (Weick, March).

A third critique combines interpretation with an affirmative concept of experience emphasizing that local or 'professional' communities-of-practice are competent beyond the superficial canonical formal procedures (Brown & Duguid, Lave & Wenger, Powell). Rational action is an illusion, and experiential learning is the actual basic 'form of knowledge' in organisations.

A fourth critique combines March's *disenchanted* concept of experience (presented in the previous chapter) with that of bounded rationality, seeing institutional routines as sub-optimal and the haphazard product of processes that are generally 'all-too-human' and all but rational. This argument is found in *neo-institutionalist* theories and regards

organisations as a manifestation of a 'logic of appropriateness' rather than rational choice and design.

3.1.1.2. Outline of the chapter

The discussion in this chapter will generally be based on a comparison of the tradition from Weber to critical theory with neo-institutional theory. This comparison will evolve along two dimensions.

On the one hand the two traditions disagree on the *origin* of organisational rules, as neo-institutionalists tend to emphasize the role of irrational processes, regarding them as based on *habits* and 'logic of appropriateness'. Thus the first section of this chapter will confront Weberian and critical theory with that critique of rationalisation that regards institutions as all-too-human rather than rational, based on retrospective experiential learning rather than rational calculation.

On the other hand the two traditions agree in their emphasis on organisational *rules* (or routines) rather than individual – and collective – actors. In the next section I thus proceed to discuss their *common* focus on rules and routines by contrasting it with opposing views: on the one hand the emphasis on individual action, on the other hand the emphasis on a collective subject or community.

Eventually, I shall arrive at the subject that is at the core of this thesis: the question of differentiation, networking and ambiguity in organisations.

3.2. Routines and reification

There is some parallel between the theory of reified behaviour and the theory of *organisational* action being governed by routines (or rules)[36] (Argyris & Schön 1996;Levitt & March 1988;March & Simon 1958;March *et al.* 2000;March & Simon 1958;March *et al.* 2000). On the one hand, Adorno and March both observe the reification of organisational behaviour, as opposed to ideas of a collective subject 'behind' the organisation, or of the organisation as a product of the cognitive efforts of its members. On the other hand, they offer quite different explanations for this reification.

March' institutionalism sees reification as the result of a fundamental characteristics of human nature, and this reference to behavioural assumptions is regarded as an improvement compared to the old institutionalists who merely analysed institutions as a *fact*, without any theoretical interest in their origin and genesis (Powell & DiMaggio

[36] As pointed out previously, the terms rules and routines will generally be used as synonyms, except in situations where distinction is essential.

1991). Basically, new institutionalism may be seen as an attempt to preserve a 'disenchanted' theory of bureaucracy, separated from the assumption of rationality and from the 'grand theory' of modernity and rationalization. In this respect, new institutionalism is offered as a new chapter in a classical sociological debate, i.e. between Durkheim and Weber.

Adorno and other critical theorists, however, see reification as the very product of instrumental rationality. Powell & DiMaggio are both right and wrong in saying that: "Marxian analysts [treat] processes that institutionalists view as nearly universal as pathological departures from rationality ('false consciousness')" (Powell & Dimaggio 1991). They are wrong, because reified processes are not simply *departures* from, but (also) a logical product of, rationality – and this is where critical theory differs from i.e. 'labour process Marxists' such as Braverman; *right* because this reification is basically a result of instrumental or subjective rationalization within an irrational whole.

The next two sections will present the two theories: first the theory of rationalisation, and then the neo-institutionalist 'disenchanted' theory of bureaucracy and fossilization.

3.3. Weber and critical theory: bureaucracy and rationalisation

Weber and Adorno see reification in modern organisations as the result of a *historical* process of *rationalization* and *capitalism*, characteristic of our own particular historical period more than others. Whereas large organisations have existed in previous periods, such as the Roman Empire, the organisations of the 'administered world' of today are historically unique in their *extension* into all areas of everyday life – what Habermas calls 'colonisation of the Lifeworld' – and by their application of refined modern *technology*:

> "Ihre neue und bestürzende Qualität hat die Organisation einzig durch den Grad ihrer Ausdehnung und Verfügungsgewalt gewonnen: die des Allumfassenden, die Gesellschaft durch und durch Strukturierenden. Die Tendenz auch dazu fehlte den großen Organisationen der Vergangenheit keineswegs; nur ist sie offenbar erst mit den Mitteln der modernen Technik ganz zu verwirklichen." (Adorno 1979a)

3.3.1. The organisation as means to an end

This emphasis on techniques draws attention to a basic characteristic of the organisation: Adorno defines organisations as consciously designed (means) to an end and fundamentally characterized by instrumental rationality (*Zweckrationalität*).

> "Organisation [ist] ein bewußt geschaffener und gesteuerter Zweckverband... Als solcher unterscheidet er sich ebenso von naturwüchsigen Gruppen, etwa dem Stamm oder der Familie, wie umgekehrt von dem ungeplanten Ganzen

> des Gesellschaftlichen Prozesses. Wesentlich ist die Zweckrationalität. Eine Gruppe also, die auf den Namen Organisation Anspruch hat, ist so geartet, daß *der Zweck, um dessentwillen sie existiert*, sich möglichst vollkommen und mit dem relativ geringsten Kräfteaufwand erreichen läß. Die Beschaffenheit derjenigen, aus denen die Organisation sich bildet, tritt in deren Anlage zurück *hinter der Zweckdienlichkeit des Ganzen*. Der Name Organisation erinnert an Organe, Werkzeuge. Darin klingt an, daß die von der Organisation Erfaßten ihr primär nicht um ihrer selbst willen, sondern eben *als Werkzeuge zur Realisierung des Zweckes* angehören, dem die Organisation dient und der erst mittelbar - abermals, wenn Sie wolle, als 'Werkzeug' - ihnen wiederum nutzt. Mit anderen Worten, *in der Organisation sind die menschlichen Beziehungen durch den Zweck vermittelt, nicht unmittelbar*. Nach der amerikanischen Terminologie wäre jede Organisation eine sekundäre Gruppe. Solche Mittelbarkeit, der Werkzeugcharakter des Einzelnen für die Organisation und der Organisation für den einzelnen, setzt Momente von Starrheit, Kälte, Äußerlichkeit, Gewaltsamkeit. In der Sprache der deutschen philosophischen Tradition wird das von den Worten Entfremdung und Verdinglichung umrissen." (Adorno 1979a) (*My italicisation*)

This predefined goal and instrumentalism distinguishes the human relations within an organisation from 'primary groups' or communities – corresponding somewhat to Tönnies' classical distinction between 'Gemeinschaft' and 'Gesellschaft' (Tönnies 1963), which inspired Weber. The organisation is a system of means, and the organisational members are themselves 'tools', means to the organisational end. It is illustrative that in Adorno's definition organisations are not *systems*, because systems have no rationality. This may seem strange, because the idea of a rationally designed organisation is quite similar to the so-called *systems approach*(Churchman 1981). Yet, the difference is that Adorno's concept of system is *functionalist* and resembles Luhmann's in referring to something that is not designed: the society as a whole as unintended product of capitalist enterprise (Brunkhorst 1999).

In principle, the definition of organisations as means is not controversial. March, too, defines organisations as "oriented to targets" (Levitt & March 1988).

Instrumentality – the dialectics of means

Rationality is instrumental, and as an *instrument* it is neutral, and although it originally serves the powers that be, it also gains independence from these.

> "Tænkningen ... er en slave, som herren ikke kan standse, når det passer ham. I og med, at herredømmet, da menneskene var blevet fastboende, tingsliggjorde sig selv til lov og organisation, måtte det indskrænke sig selv. Instrumentet opnår selvstændighed: åndens formidlende instans mildner uafhængigt af de styrendes vilje den økonomiske urets umiddelbarhed. Herredømmets instrumenter, som skal kontrollere alle: sprog, våben, sluttelig maskiner, tvinges til at lade sig kontrollere af alle. Således sætter rationalitetsmomentet sig igennem i herredømmet som et moment, der også

> er forskelligt fra dette. Midlets karakter af objekt, som stiller det universelt til rådighed, dets 'objektivitet' for alle, implicerer allerede kritikken af herredømmet, som hvis middel tænkningen voksede frem." (Horkheimer & Adorno 1993)

In the bureaucratic organisation, the oral command of the employer-capitalist over the employee-worker is mediated through rationality (written rules), which restricts the 'subjectivity' on both sides, or at all levels of the hierarchy: it reduces the autonomy of the lower-echelon employee, but it also restricts random exercise of power by the manager. March *et al* make a similar point: written rules substitute for direct supervision:

> "it is often argued that written rules are used as substitutes for direct managerial supervision. The substitution, it is argued, has advantages of saving managerial effort, minimizing the dysfunctional consequences of making differences in status overt, and avoiding direct confrontations involving conflicts of interest." (March *et al.* 2000)

This aspect of rationality and instrumentalisation modifies the arguments made by Braverman and labour process researchers who emphasize that management is basically 'control over labour'. By regarding 'rationalization' merely as a means of control over labour, and by regarding 'rationality' as pure ideology, designed to conceal power structures, they fail to grasp the 'ambiguity' or dialectics of the *tool*: that the tool gains independence of its user. It is true that rationalization is (also) 'control over labour', but at the same time it is less direct control *by* management (leadership, capitalists). Control is reified – procedures etc. are not simply the 'tools of management'.

3.3.2. Three 'sources' of rules

According to critical theory and the Weberian tradition, three different 'factors' explain the emphasis on rules in organisations. One factor is the principle of *universality* of modern law and administration, requiring that all people should be treated equal – 'without personal regard'. The two other factors emphasize that the *internal* rules of an organisation reflect *external* laws determining phenomena of the environment: the laws of Nature, and those of the market. These three factors are mediated through Reason, which perceives and treats its material in terms of rules. In the following I shall elaborate on each of these factor: 1) the principle of universality; 2) scientific knowledge of nature; 3) the social environment – market economy.

3.3.2.1. Universality and justice

The very concept of a rule contains the ideal – and potential – of universality. Modern law is founded on the identification of justice with universality, as expressed in the principles of 'equality before justice' and 'ohne Ansehung der Person': the requirement that every person should be treated equally, without any regard of

personal characteristics. Adorno thus recognizes that a bureaucratic rule (a form) may actually represent an element of justice. An abstract procedure is a guarantee against being the victim of chance, bad luck and nepotism:

> "Der Einzelne, der etwa zu einer Behörde geht und von dieser sich Hilfe verspricht, wird, indem er auf den Unterschied seines individuellen Interesses von dem immerhin allgemeineren trifft, das die Behörde vertritt, geneigt sein, den Beamten, der ihm weniger gewährt, als er erwartet, vorzuwerfen, er verfahre nach Schema F. Der Klagende hat dabei oft genug nach dem Maß der heute möglichen Befriedigung von Bedürfnissen recht. Aber das Schema F, nach dem er behandelt wird, also die abstrakte Verfahrungsweise, die es den Bürokratien erlaubt, einen jeden Fall automatisch und 'ohne Ansehung der Person' zu erledigen, ist zugleich, wie im formalen Recht, auch ein Element von Gerechtigkeit, ein Stück Garantie dafür, dass dank solcher Beziehung aufs Allgemeine nicht Willkür, Zufall, Nepotismus das Schicksal eines Menschen beherrschen." (Adorno 1979a)

In this sense, the alienation characteristic of modern organisations is, paradox, a precondition for happiness:

> "Adorno affirms alienation as a precondition of all human forms of happiness and he views fragmentation as the great chance for potential freedom from all repressions of the ethical life, the insidious tyranny of neighbourhood opinion and the danger of totalitarianism associated with any notion of totality… From this point of view Adorno would reject the for-and-against positions of the current conflict in political theory, both liberalism and communitarianism." (Brunkhorst 1999)

The principles of universality and alienation constitute the (ideal) basis of the depersonalized bureaucracy of 'public institutions'. Organisational processes are 'removed' from the realm of 'local judgement by community/charismatic leaders' and 'leveraged' into the structure/system.

> "Die Entpersönlichung und Verdinglichung, die dem Einzelnen im Bürokraten greifbar werden, mit dem er zu verkehren hat, sind sowohl Ausdruck der Entfremdung des Ganzen von seinem menschlichen Zweck und insofern negativ, wie umgekehrt auch Zeugnis jener Vernunft, die allen zugute kommen könnte und die allein das Schlimme verhindert." (Adorno 1979a)

Adorno's emphasis on the positive aspects of universality and reification can be compared to an argument by March *et al*:

> "both written and unwritten rules create standards of appropriateness that balance the tendency of the consequential calculations made by an individual to be myopic with respect to the distant future, to the interests of distant others, and to the interests of collectivities." (March *et al.* 2000)

This observation emphasizes the tensions between individual (or subjective) rationality and the 'interests of collectivities' – a tension that also plays a significant role in 'transaction cost' literature, which emphasizes the benefits of institutions in balancing the opportunistic behavior of individual actors[37].

3.3.2.2. Scientific basis - intellectualisation

Organisations generally interact with Nature, and Nature is characterized by the 'rule of (natural) law'. Man is able to control Nature because of his knowledge about these laws. In the modern world, production is more and more based on scientific knowledge replacing mythology, experience and tradition – as argued in the previous chapter – and the organized behaviour necessarily reflects this rule-based structure.

The emphasis on rationalization corresponds to Marx' observation of how craft-based knowledge was replaced with rational planning and 'technological sciences'. For those who are used to see Marx as a defender of craft production, his critique of craft-based knowledge as conservative and blinded by specialization and secrecy may be surprising. He clearly characterizes the focus on the production process itself – completely disregarding the human hand – as a progress, which might be labeled as universalisation and 'objectification'.

> "Es ist charakteristisch, daß bis ins 18. Jahrhundert hinein die besondren Gewerke mysteries (mystères) hießen, in deren Dunkel nur der empirisch und professionell Eingeweihte eindringen konnte. Die große Industrie zerriß den Schleier, der den Menschen ihren eignen gesellschaftlichen Produktionsprozeß versteckte und die verschiedenen naturwüchsig besonderten Produktionszweige gegeneinander und sogar dem in jedem Zweig Eingeweihten zu Rätseln machte. Ihr Prinzip, jeden Produktionsprozeß, an und für sich und zunächst ohne alle Rücksicht auf die menschliche Hand, in seine konstituierenden Elemente aufzulösen, schuf die ganz moderne Wissenschaft der Technologie. Die buntscheckigen, scheinbar zusammenhangslosen und verknöcherten Gestalten des gesellschaftlichen Produktionsprozesses lösten sich auf in bewußt planmäßige und je nach dem bezweckten Nutzeffekt systematisch besonderte Anwendungen der Naturwissenschaft." (Marx 1890)

[37] However, despite similarities with Adorno's defense of universality, March et al's emphasis on the necessity of repressing the individual, and the reference to myopic and egoistic individuals, is problematic in Adorno's view – and also exposed to Poppers critique against epistemological pessimism, an image of human beings that has served as an excuse for totalitarian systems. On the other hand, if the citation above can be read as a critique, not of individuals, but of 'subjective rationality', then the parallels to critical theory are even stronger.

Yet his emphasis on sciences of *technology* as concerned with the *tools* and the production process seems too narrow for my purpose. The increasing role of science is not only associated with tools and machinery, but also with the *material* being manufactured. Chemical industry and biotechnology are obvious examples of this tendency. In the following I shall elaborate on the implications of this thesis by comparing with more contemporary writers.

Thus, on the one hand, theories of rationalization correspond to Bell's thesis that production is more and more based on theoretical knowledge, emphasizing "the strategic role of theoretical knowledge as the new basis of technological innovation." (Bell 1976). On the other hand, this development does *not* imply a sharp distinction between machine technology and intellectual technology, between industrial society and information or post-industrial society, as Bell would have it: "if industrial society is based on machine technology, postindustrial society is shaped by an intellectual technology" (Bell 1976). According to critical theory it's rather a question of a general change – or development – in the total knowledge base of machines and industry (through rationalization, or intellectualisation). And in fact Marx' comments on the scientific dissolution of craft mysteries is not restricted to tools and machines, and he therefore already includes the same development that Bell exaggerates into a shift away from industrial society[38].

Scientific knowledge – public good, not private property

Bell further argues that market-oriented production is more and more dependent on knowledge produced in scientific institutions, and thus on public investments in 'basic research'. Such research is by definition a 'public good', which cannot be 'owned' and thus will not receive private funding[i] (Bell 1976). This emphasis on public good can be compared with Marx' remark about the 'unveiling' of the trade mysteries and the emphasis on universalisation and a social body of knowledge, and it implies a critique of Drucker's argument about the knowledge worker. Drucker argues that modern companies are increasingly dependent on knowledge work (an argument in itself similar to Bell or Weber), and that *knowledge workers* thus differ from the manual workers of the past (who were subjected to taylorisation) by the fact that they 'own their own means of production' (their knowledge) (Drucker 1999).

[38] Comparison is not straightforward because it involves different, 'incommensurable' – in a non-radical sense – theoretical traditions. While Marxists – in the sixties – characterized society as late capitalism, other sociologists downplayed the focus on capitalism and preferred the term industrial society, which implied another mode of analysis and a different focus (Adorno 1968).

However, if ‘knowledge work’ is associated with a more scientific base of production (as stated by Bell), then ‘knowledge workers’ cannot "own the means of production": Science is *not* the individual property of those educated at the universities. On the contrary: scientific knowledge is universalised and ‘codified’ to a large extent – it is ‘objective’ rather than ‘subjective knowledge’ (in Popper’s terminology). Organisations will sooner or later be able acquire relevant scientific knowledge, and to code this knowledge into organisational routines - although scientific knowledge cannot be acquired by simple taylorisation defined as: ‘careful study of motions’.

Intellectualisation vs. Taylorisation

It is thus useful to emphasize the distinction between the rationalization or intellectualisation described by Weber, and processes of taylorisation. Taylor’s ‘scientific management’ did not have much to do with science in this sense. Taylorisation is *transformation* of the existing knowledge base, but does not in itself imply a change towards a scientific knowledge base. Taylor’s ‘scientific management’ is only ‘scientific’ in its method, which is applied to *practical* knowledge – by formalizing, measuring, splitting a process into its parts – but it does not replace the traditional, craft-based knowledge of the object of work with a scientific descriptive and *prepositional* knowledge (although this process may indirectly reveal new aspects of the material – and serve as input for scientific analysis).

I must also object to another remark by Drucker, which implies either a peculiar definition of knowledge, or a misinterpretation of history:

> “Taylor showed that in manual work there is no such thing [as ‘skill’]. There are only simple, repetitive motions. What makes them productive is *knowledge*, that is, the way simple, unskilled motions are put together, organized and executed. In fact, Taylor was the first person to apply knowledge to work… This also earned Taylor the undying enmity of the labor unions of his time, all of which were craft unions and based on the *mystique* of craft skill and their monopoly on it… Taylor destroyed the romance of work. Instead of a ‘noble skill’ it becomes a series of simple motions.” (Drucker 1999)

On the one hand, he is illustrative in emphasizing the change in the knowledge base of work and organisations, a change characterized by a separation between plan and execution, and between subject and object. And again the reference to the *mystique* of craft skill echoes Marx. It emphasizes the ambiguous ‘motivation’ for the *tacit* nature of craft knowledge: partly because skills are physical and context-dependent, partly as a strategic measure to secure trade monopoly.

On the other hand, Drucker is overdoing his point with the confusing and misleading remarks that there was ‘no such thing’ as skill, and that Taylor was ‘the first to apply knowledge to work’. Taylor did not reject some ‘illusion of skill’ – his project was to

acquire knowledge from the workers and 'systematize' this knowledge. Craft skills are based on the form of knowledge characterized as 'experience' in this thesis – although it also includes inheritance or tradition.

3.3.2.3. The *social* environment of organisations – market economy

A third foundation for rationalization and rules, emphasized both by Marx and Weber, is the market economy, which both presumes and nurtures rule-governed behaviour. Weber argues that the expansion of market and the availability or free labour constitutes a necessary foundation for rational calculation: "En eksakt kalkulation, som er grundlaget for alt andet, er netop kun mulig på basis af *frit* arbejde" (Weber 1995)[39]. Lukács and critical theory emphasize the fundamental role of the exchange relation and the 'rates of equivalence' (or 'exchange value') in providing the numerical values necessary for calculation.

Deceptive rates of equivalence

This argument deserves some elaboration. In Adorno's theory, the role of the 'equivalence' – exchange – is central. This in itself is not unconventional, and economists generally agree on the importance of 'rates of equivalence'. The difference is that Adorno regards the 'artificial' equivalences between incommensurable objects and negligence of individual differences as problematic, and thus as a *deceptive foundation* for 'modern' societies, whereas a liberal economist such as von Hayek regards the 'rates of equivalence' as a 'harmless' necessity. Hayek argues that capitalist economy, based on a 'bounded' rationality within capitalist enterprises, as an alternative to large-scale plan economy, provides a necessary and convenient 'reduction of complexity' (without using that concept, however):

> "Even the single controlling mind, in possession of all the data for some small, self-contained economic system, would not - every time some small adjustment in the allocation of resources had to be made - go explicitly through all the relations between ends and means which might possibly be affected. It is indeed the great contribution of the pure logic of choice that it has demonstrated conclusively that even such a single mind could solve this kind of problem *only by constructing and constantly using rates of equivalence* (or 'values', or 'marginal rates of substitution'), i.e., by attaching to each kind of scarce resource a numerical index which cannot be derived from any property possessed by that particular thing, but *which reflects, or in which is condensed, its significance in view of the whole means-end structure*." (Hayek 1986) (*my italicisation*)

[39] "An exact calculation, which is the precondition for everything else, is only possible on the basis of free labour."

The root of the disagreement goes back to Marx' 'labour theory of value': Marx argued that the exchange relation was a mystification, and that it disguised the true source of value. According to Marx, all value is in fact created by labour, and capitalist profits are basically 'stolen' from the workers. Non-Marxist economic theory regards Marx' theory of value as refuted: their basic argument being that any objective theory of value is an illusion.

This raises a number of problems: if one accepts the critique against the labour theory of value raised by economic theory, how much damage will this do to Adorno's theory? Must his critique of the 'equivalence' be rejected, because it is falsified? Does Adorno's argument depend on the full validity of the 'labour theory of value'? Not necessarily. I think that Lukács or Adorno accept that 'the labour theory of value' is problematic in its original form. Yet they argue that Marx was struggling with a relevant problem: how to establish a law of the whole, and how to identify the origin of values; while current economic theory have chosen to ignore this problem by focusing on individual capitalist subjects.

Rationalization in the detail – irrationality of the whole

Lukács, who integrated Marx' and Weber's theory and strongly influenced critical theory, argues that capitalism is based on thorough rationalization in the detail (inside the capitalist enterprise), and relative irrationality in the 'whole': the environment of the organisation, the market as the 'unintended' product of subjective capitalist activity[40]. This *relative* irrationality of the whole deserves further explanation. On the one hand, the market must be stable enough to allow for calculative estimation of profits. On the other hand, this calculation can only be based on probabilities. If there is an exact law of the whole – which there is, according to Lukács – then this law *by definition* must be 'concealed', it cannot be revealed to any of the capitalist 'entrepreneurs': if any single capitalist knew the 'law of the whole', then he would gain monopoly, and the market regulation would break down:

> "es ist ja klar, dass der ganze Aufbau der kapitalistischen Produktion auf dieser *Wechselwirkung von streng gesetzlicher Notwendigkeit in allen Einzelerscheinungen und vor relativer Irrationalität des Gesamtprozesses* beruht... Denn die kapitalistische, auf privatwirtschaftlicher Kalkulation beruhende Rationalisierung erfordert in jeder Lebensäußerung dieses Wechselverhältnis von *gesetzmäßigem Detail und zufälligem Ganzen*; sie setzt einen solchen Aufbau der Gesellschaft voraus; sie produziert und reproduziert diese Struktur in dem Masse, als sie sich der Gesellschaft

[40] Observe that Lukács' theory is based on a fundamental distinction between organization and environment/market quite similar to the market/hierarchy distinction characteristic of the *transaction cost* school in economic theory.

> bemächtigt. Dies liegt schon im Wesen der spekulativen Kalkulation, der Wirtschaftsweise der Warenbesitzer auf der Stufe der Allgemeinheit des Warenaustausches begründet. Die Konkurrenz der verschiedenen Warenbesitzer wäre unmöglich, wenn der Rationalität der Einzelerscheinungen auch eine genaue, rationelle, gesetzmäßig funktionierende Gestalt der ganzen Gesellschaft entsprechen würde. Die Gesetzmäßigkeiten aller Einzelheiten seiner Produktion müssen vom Warenbesitzer vollständig beherrscht sein, wenn eine rationelle Kalkulation möglich werden soll. Die Chancen der Verwertung, die Gesetze des 'Marktes' müssen zwar ebenfalls rationell im Sinne einer Berechenbarkeit, einer Wahrscheinlichkeitsrechnung sein. Sie dürfen aber nicht in demselben Sinn wie die Einzelerscheinungen von einem 'Gesetze' beherrscht, sie dürfen unter keinen Umständen rationell durchorganisiert sein. Dies allein schließt freilich keineswegs das Herrschen eines 'Gesetzes' für das Ganze aus. Nur müsste dieses 'Gesetz' einerseits das *'unbewusste' Produkt der selbständigen Tätigkeit der voneinander unabhängigen einzelnen Warenbesitzer* sein, also ein Gesetz der aufeinander wirkenden 'Zufälligkeiten' und nicht das der wirklich rationellen Organisation. Andererseits muss aber diese Gesetzmäßigkeit sich nicht nur über die Köpfe der Einzelnen hinweg durchsetzen, sondern sie darf auch *niemals vollständig und adäquat erkennbar* sein. Denn die vollständige Erkenntnis des Ganzen würde dem Subjekt dieser Kenntnis eine derartige Monopolstellung sichern, die gleichbedeutend mit der Aufhebung der kapitalistischen Wirtschaft wäre." (Lukács 1970) (*my italicisation*)

The basic argument is that the 'values' of capitalist calculation and exchange are not just helpful 'approximations', but that the law of the whole is concealed by necessity. Not by evil conspiracy, but due to the inherent logic of the market. Deception is the nature of the market. Economists seem to find this argumentation peculiar, and it might be criticized for assuming a 'concealed order behind appearances' – an assumption merely based on airy postulates that can be neither verified nor falsified. Nevertheless the thesis corresponds to the classical liberal argument about the 'invisible hand' (Adam Smith) that transforms 'private vice' into 'public virtue'.

By the emphasis on the organisation's relation to the whole, to totality, Adorno's approach to organisations has a good deal in common with functionalistic approaches (Parsons) and systems theory (Luhmann). To pick up on a previous discussion, Adorno regards society as a whole as 'system', but a system without reason:

> "For Adorno modern societies tend to be closed systems. And a system has, as the German sociologist Niklas Luhmann today says, 'no reason' (*keine Vernunft*). In this respect Adorno's analysis of modern society comes close to coherence with functionalistic approaches and systems theory. However, just that loss of reason which sociologists like Parsons or Luhmann would describe in a 'neutral', eventually affirmative way, becomes for Adorno the

> object of a critique of 'the system' as an 'administered world' (*verwaltete Welt*)." (Brunkhorst 1999)[41]

Insufficient vs. bounded rationality

Despite all his critique of rationality, Adorno sees the fundamental problem of late capitalism not as too much, but too little rationality: bourgeois society suffers from *insufficient* rationality – a critique that implies an ideal of plan economy. It is a fundamental Marxist argument that capitalist rationality is limited and insufficient ('borniert'), because it is constrained to the single capitalist enterprise – perhaps enhanced to trusts, monopolies etc. – but incapable of society as a whole. This irrationality or boundedness is *structural*, derived from social structures rather than 'human nature' or 'behavioural characteristics'. This of course does not mean that capitalist enterprises are rational, while society as a whole is irrational – the 'local' rationality of capitalist enterprises is so to speak 'infected' by the irrationality of the whole.

Adorno's critique of 'insufficient rationality' can be contrasted with from the concepts of 'bounded rationality', fallibility etc. emphasized by neo-institutionalists (see later) and others. As argued previously, the liberal economist Hayek defends the capitalist model against the socialist ideal of a fully planned economy, which would depend on an illusory ideal of a single omniscient individual. The capitalist rational planner, however, does not need detailed information about 'external processes', but can instead base his calculations on the filtered, 'satisficing' information of market prices (Hayek 1986). Basically, the fallibility and limited capacity of the (single) human mind is offered as a defence and legitimisation of the market system[42], and Hayek defends the barter principle as a merciful veil over relations and connections that the individual reason cannot possibly apprehend. While Adorno's and Lukács' critique of capitalism is based on the ideal of a rational 'whole', liberal thinkers regard this idea as both illusory and totalitarian.

---

[41] See also (Breuer 1987).

[42] "the doctrine of fallibility has been made the basis of a theory of political freedom," Popper says, referring to (Hayek 2001), (Popper 1963). Hayek is one example of a liberal defence against the socialist idea of a rational planning of society. Also Polanyi's elaborate emphasis on *tacit* knowledge was partly motivated as an argument against societal, top-down planning (by the State) of research –according to Polanyi decisions concerning research policy should be left to the superior judgment by researchers based on their tacit knowledge (Kragh & Pedersen 1991).

Organisational purpose suffocating in instrumental rationality

Adorno's critique of the irrational whole is not restricted to capitalist enterprises. He raises a similar critique against 'organisations' in general, apparently referring to public institutions. Whereas organisations are 'designed' as instruments for a purpose, and thus based on a separation between means and ends, they tend to forget their fundamental purpose in society – *their function in the whole* – and regard themselves as 'ends in themselves'. There is a tendency to focus on *operational* ends while forgetting the long-term goals of the organisation, to use another and more contemporary terminology. Organisations are on the one hand expanding, imperialist and totalitarian, as also emphasized in Habermas' thesis of the colonisation of the Lifeworld, and on the other hand *exclusive*:

> "Dieser Expansionsdrang jedoch verläuft bis heute einzig in der Bahn des Funktionierens. Immer neue Sektoren werden in den Mechanismus hineingezogen und beherrschbar. Die Organisation, die, was immer ihr erreichbar ist, verschlingt, verfolgt dabei technische Vereinheitlichung, wohl auch die eigene Macht. Kaum jedoch erwägt sie den Sinn ihres Daseins und seiner Erweiterung im gesellschaftlichen Ganzen. Die Trennung von Werkzeug und Ziel, die das Organisationsprinzip ursprünglich definiert, gefährdet mehr als je in der modernen Gesellschaft das Verhältnis der Organisation zu ihrem Rechtsgrund. Losgelöst vom Zweck außerhalb ihrer selbst wird sie zum Selbstzweck. Je weiter sie zur Totalität fortgetrieben wird, um so mehr befestigt sich der Schein, sie, das System der Werkzeuge, sei die Sache selbst. Sie dichtet sich ab gegen das, was ihr nicht gleich." (Adorno 1979a)

One may say that Adorno thus emphasizes the pathology of a bounded, insufficient rationality.

Again, the reference to the whole is crucial, and he does not criticize organisations as such. In fact, this speech was provocative in its particular historical context, because Adorno countered a general tendency among critical thinkers to worry about the effect of expanding organisations: in accordance with the critique against insufficient rationality, Adorno maintains that *organisation* and *rationalization* in principle is a progress.

3.4. March and new institutionalism–bureaucracy as fossilization and inertia

The theories of rationalisation will now be contrasted with *new institutionalism*, which is strongly influenced by March (in cooperation with Olsen), and which offers a different definition and explanation of the same phenomenon: 'reified' behaviour in organisations. Before presenting their alternative explanation, which emphasizes 1) *experiential learning* and a tendency to 2) *imitation* and *isomorphism*, I shall discuss a few selected aspects of this traditions.

3.4.1.1. Socialisation and routines – organisational vs. individual action

Theories of organisational routines draw a clear distinction between *organisational* and *individual* action (Argyris & Schön 1996). Routines thus restrict opportunistic individual behaviour (March *et al.* 2000), and guarantee organisational stability when individual members leave or enter the organisation:

> "Routines are independent of the individual actors who execute them and are capable of surviving considerable turnover in individual actors." (Levitt & March 1988)

Powell & DiMaggio emphasize that organisations are not a product of choices made by individuals: 'new institutionalism' is based on a rejection of 'behavioralism' "which interpreted collective political and economic behavior as the aggregate consequence of individual choice" and regarded "institutions as epiphenomenal, merely the sum of individual-level properties". Weber's 'methodological individualism' is rejected in favour of Durkheim's *faits sociaux*: routines and institutions seem to describe the very 'collective' behaviour that Weber banned as illusory[43].

In fact, new institutionalists emphasize a very strong degree of socialization of individuals, regarding "actors as themselves constituted by institutions" (Powell & Dimaggio 1991), or thoroughly 'over-socialized' as argued by Thomsen in his critique of March & Olsen's *Rediscovering Institutions*:

> "March & Olsen afviser at analysere den institutionelle virkelighed på et metodisk individualistisk grundlag, og afviser også blankt at behandle præferencer og interesser som eksogene størrelser… [D]et [er] magtpålæggende for March & Olsen at ophæve ethvert skel imellem institutioner og de hermed sammenhørende individer og aktører... Næppe overraskende bliver slutresultatet, at de politiske aktører ikke alene er sociale væsner, men oversocialiserede helt ned til sokkeholderne." (Thomsen 1994)[44]

---

[43] This may illustrate that they exaggerate their critique of Weber – whose discussion of the 'iron cage' (Weber 1995) is not based on the idea of 'collective behaviour' as the 'aggregate consequence of individual choice'. March & Olsen might agree on one of Weber's argument for 'methodological individualism': he wants to avoid referring to '*collective* actors or subjects', i.e. treating a class or a people (or an organisation?) as an intentional acting subject. Nor does March & Olsen's 'collectivism' treat their institutions as 'collective subjects'.

[44] "March & Olsen refuse to analyse institutional reality on a methodologically individualist basis, and they also refuse to treat preferences and interests as exogenous phenomena… It is essential to March & Olsen to remove any distinction between institutions and associated individuals and agents… It is hardly surprising that political agents end up being not merely social, but thoroughly over-socialised."

The implication of this strong degree of socialisation may be illustrated by comparing with an older text by March & Olsen. They appear to have changed their focus away from the individual, to a stronger emphasis on social structure. In their *earlier* work on ambiguity they thus emphasized the *distinction* between individual and organisation ('any complex social structure'), defined as a distinction – or 'weakening of the connection' – between individual *behaviour* within the organisation and individual *beliefs* and *preferences*:

> "Any complex social structure has considerable capability for weakening the connection between individual behavior and individual beliefs and preferences… People attend to decisions not only because they have an interest at stake, but because they are expected to or obliged to. They act according to rules." (March & Olsen 1976a)

The individual may *think* as it pleases, but is obliged to *act* according to organisational rules and roles. This is a fairly mild degree of socialization: even though the organisation and its routines determine individual behaviour – and thus is more than an epiphenomenon – individuals are still regarded as separate entities with their own minds. Individuals are only socialized in terms of behaviour rather than thoughts, thus not by *commitment* to organisational goals or by incorporation of scripts and routines.

Since this argument, March & Olsen – and neo-institutionalism in general – have clearly strengthened their emphasis on socialization by no longer recognizing the distinction between individual and organisation.

Compared with Adorno – differs in degree, form and scope

Obviously, this emphasis on socialisation can be compared with Adorno's emphasis on reification: he would agree in the sense that the individual is always largely a product of social structure. Adorno also argues that organisational members and social relations between them are *mediated* through and thus secondary to organisational purpose, and that organisational actions should be understood in terms of formal procedures rather than personal judgment. Adorno and new institutionalism thus agree against alternative theories that regard organisational action as a product of individual or collective decisions.

At this point, by the way, it is worth emphasizing a distinction between different strands of *social constructivism*. One may thus draw two very different implications from the refusal to distinguish between individual and institution: 1) the 'humanist' approach concludes that there is neither alienation nor reification, that institutions are the living manifestation of their members and can be regarded as a collective subject

or community – as in the theory of *communities-of-practice*[45]; 2) while the 'anti-humanist' emphasize that individuals are fully subsumed under social structure.

> "Socialkonstruktivismen udgør således ikke en teori, men den rummer et stort antal indbyrdes modstridende teoretiske indfaldsvinkler. Spaltningen mellem aktør og struktur er også synlig inden for socialkonstruktivismen: Michel Foucaults og Niklas Luhmann's 'antihumanisme' lader sig således ikke så let forene med de aktør- og handlingsteoretiske retninger, som emanerer fra den anglo-amerikanske 'interpretative' sociologi." (Järvinen & Bertilsson 1998)[46]

It seems to me that March rather belongs to the latter category – despite Powell's attempt to emphasize the 'humanizing' aspects.

Despite the similarities between new institutionalism and Adorno's theory of reification, a number of differences between the two positions must be emphasized. *First*, they differ in what could be called the *degree* of socialisation, as illustrated in Adorno's critique of Parson's assumption of a 'perfect fit' between sociology and psychology, between the individual and the social level (Adorno 1979e) – as illustrated in Parson's suggestion that the super-ego represents social structure:

> "From the psychological point of view, institutionalized roles seem to have two primary functions. The first is the structuring of the reality situation for action of the individual... Second, they structure the 'superego content' for the individual." (Parsons 1950)

---

[45] "Learners do not receive or even construct abstract, 'objective,' individual knowledge; rather, they learn to function in a community... They acquire that particular community's subjective viewpoint and learn to speak its language." (Brown & Duguid 1996). It may seem paradoxical that Garfinkel's critique of Parsons' view of the individual as a 'cultural dope' has led to the ethnomethodological and social constructivist dissolution of the individual – perhaps neo-institutionalism is the unintended (and unwelcome) conclusion to social constructivism? Compare also Elkjær's critique (of Lave & Wenger): "I find that Lave and Wenger focus too much on context and too little on individual experience. I simply find it hard to envision an interactional context that somehow is not based on the actions, interactions, experiences, emotions and thoughts of individuals - but socially shaped and shaping individuals... I believe that within the LPP framework the conceptual distinction between learning and practice and between the individual and the organization has 'dissolved'." (Elkjær 1999)

[46] "Social construction is thus not one theory, but denotes a large number of mutually conflicting theoretical perspectives. The split between agent and structure can be observed within social constructivism, too: the 'anti-humanism' of Michel Foucault and Niklas Luhmann is not easily reconciled with the agent- and action-theoretical schools emanating from Anglo-American 'interpretive' sociology."

Although Adorno obviously shares Parsons' interest in the connections between psychology and sociology, he does not accept the full functionalist description of the modern society as a well-oiled clockwork. The individual can never merely be a 'social product' (or 'cultural dope') – there will always be a 'core' of individuality and uniqueness, which is more or less suppressed or subsumed by social structure. Adorno criticizes theories emphasizing 'full' socialisation – eliminating the distinction between individual and institution – as neglecting the inherent conflicts and contradictions in modern society. By focusing on *order*, social theory maintains an affirmative approach to its object – thus, *explanation* turns ideological.

Second, Adorno and new institutionalism seem to assume different *forms* of socialisation, the latter emphasizing 'logic of appropriateness' and a psychological disposition for 'routines' of any kind – an argument that I shall return to shortly.

Third, they obviously differ in scope: new institutionalism focusing on 'isolated' institutions, whereas Adorno emphasizes totality – this difference, too, will be elaborated below.

3.4.1.2. Routines – a restriction to rationality

Despite March *et al*'s recognition of the virtues of routines and institutions (see p.86), these are basically regarded as restrictions to rationality, even *irrational*. This definition corresponds to the common sense connotations of the word 'bureaucracy': ridicule, awkward, rigid, fossilization – void of the rationality imagined by Weber. In this perspective, repeating existing procedures means avoiding considering alternatives, and "institutionalisation constrains organizational rationality" (Powell & Dimaggio 1991). Cohen & Bacdayan argue that "the concept of routine has been applied to mop up the 'residuals' of rationality" (Cohen & Bacdayan 1996)[47].

There appears to a fundamental *methodological* focus on irrationality, which is illustrated by March & Olsen's earlier writings on ambiguity. They set out to explain the apparent mismatch between theoretical models of decision-making and organisational practice as observed in empirical studies and practical experience. In this case, ambiguity is basically defined, by March & Olsen, as a *limitation* (boundary) on rationality – as an *explanation* of the apparent 'pathological' irrationality of organisational decision-making, as compared with the ideal:

---

[47] Yet Powell & DiMaggio refer Simon for arguing that habits (routines) are *not* simply irrational, but have the function of reducing complexity: "We learned from Simon's … early work that habit must not be seen as a purely passive element in behavior, but rather as a means by which attention is directed to selected aspects of a situation, to the exclusion of competing aspects that might turn choice in another direction." (Powell & Dimaggio 1991)

> "Organizational choice often involves a curious paradox. The process is both surprising and not surprising. It is familiar to ordinary experiences; it is puzzling for many interpretations of that experience. Very few reports of organizational decision-making strike experienced participants in organizations as unusual. At the same time, many common observations about organizations are pathological from the point of view of theories of organizations. What is mundane to experience frequently becomes unexplained variance in the theories. What is standard in the interpretation of organizations frequently becomes irrelevant to experience… Despite their familiarity, the observations are theoretically curious. They appear to be partly inconsistent with several fundamental ideas implicit in ordinary conversations about organizations and decisions in them, as well as several conventional, and highly useful, theoretical treatments of organizations; rational models of individual choice, micro-economic theory, social welfare theory, interest group theories of politics and bureaucracy, theories of power, democratic theories of politics, theories of negotiation and bargaining, theories of planning, management theory." (March & Olsen 1976a)

I find this citation illustrative, because it expresses the approach not only to ambiguity, but also to many of those phenomena that have occupied March: signal & symbol, routines, experiential learning, and bounded rationality. The citation says explicitly, what elsewhere remains implicit in similar studies: the researcher is almost 'obsessed' with irrationality, and hence rationality remains a point of measure for other types of 'information processing' and is essential in identifying those phenomena.

One may here compare Adorno's remark that the institutions observed by Durkheim – often regarded as the sociological ancestor of new institutionalism – are primarily characterized by their irrationality.

> "Bei Durkheim … wird zum eigentlich Sozialen und von der Psychologie Abgegrenzten gerade die Irrationalität der spezifischen faits sociaux, das, was ihre Übersetzung in subjektives Denken, schließlich auch ihre vernünftigemässe Zueignung verwehrt. An den Phänomenen, auf die seine Aufmerksamkeit sich konzentriert, etwa der Konstanz der Selbstmordziffern über gewisse Perioden hin, haftet ein eigentümlich Blindes, Opakes, insofern 'Irrationales'." (Adorno 1979d)

One may say that this emphasis on irrationality corresponds to the duality between the two elements of 'critique of ideology', as evident in Lukes' argument: in face of an phenomenon without apparent reason, an alien (or alienated) phenomenon – 'irrational' beliefs included – one proceeds to *explain* the phenomenon (see p.49).

3.4.1.3. Overcoming the descriptive attitude: a psychological explanation

New Institutionalists argue that their own approach constitutes an improvement compared with the old institutionalism, namely by offering a theoretical explanation –

based on behavioural assumptions (a psychological or micro-sociological explanation).

> ”Ifølge Williamson selv er ambitionen i den nye skole, og det der adskiller den fra den ’gamle’, at etablere en økonomisk teori, der ikke kun har *eksistensen* af institutioner indbygget, men også en teori der, baseret på veldefinerede adfærdsantagelser, kan *forklare* institutionernes dannelse, udvikling og evt. afvikling. Nyinstitutionalisterne er således ikke ateoretiske som dele af den gamle institutionelle skole og den tyske historiske skole.” (Thomsen 1994)[48]

The descriptive attitude of the old institutionalism was regarded as unsatisfactory. This problem refers to a classical dilemma between theoretical-explanatory and historical-empirical-descriptive approaches characteristic of many social (and historical) sciences. Thus, within the new science of economy of the late 19th century there was a conflict between those who build abstract theoretical models – the so-called *classical* economy, and the empirically oriented *institutional* economy (Boserup 1976;Weber 1904). The institutional economists, i.e. the American Veblen, and the Germans Menger and to some extent Weber, criticized the classical economists of idealism and inattentiveness to empirical reality, a critique today repeated by new institutional economists (including evolutionary economy etc.) against neo-classical ditto. On the other hand, the institutional economists were criticized of lack of theoretical explanations.

Factuality as mystification

Before looking at the claimed theoretical improvement offered by new institutionalism, I shall shortly elaborate on another problem associated with the ‘descriptive attitude’, a problem illustrated in Durkheim’s concept of ‘*faits sociaux*’ (social facts) (Durkheim 1972). It may seem a curious example, as the French sociologist does not really belong to the ‘classical institutionalism’, yet he did argue that institutions be described as ‘facts’, and he is a stronger inspiration to the new institutionalism than Weber and his methodological individualism (Thomsen 1994). Adorno argues against Durkheim that the wish to demonstrate the regularity in human behaviour, and to approach these institutions as *facts*, does in itself constitute a mystification and ‘enchantment’ of the social:

---

[48] “According to Williamson, the ambition of the new school, and what distinguishes it from the ‘old’ one, is to establish an economic theory that not merely incorporates the *existence* of institutions, but also a theory that – based on well-defined behavioural assumptions – should *explain* the genesis, development and possible demise of institutions. New institutionalists are thus not atheoretical as parts of the old institutional school and the German historical school.”

> "Der Kollektivgeist musste ihm, wider Hegel, zum fait social, zu tatsächlichem Geist werden, zu einem Subjekt sui generis... Paradox hat er ihn dadurch verdinglicht und jener magischen Ansicht sich selbst angenähert, deren Studium in seinen Schriften mehr und mehr dominiert". "[Webers] Soziologie war darin aufgeklärter als die positivistische Durkheims, dass sie methodisch wie inhaltlich die Entzauberung der Welt bezeugte, während Durkheim und seine Schule mit den Mitteln einer nach ihrem Telos zurechtgestutzten Tatsachenforschung am Zauber wiederholend mitweben." (Adorno 1979d)

Factuality as ideology

Analysis stops short after having detected regularity, and by labelling it as a fact any considerations as to its genesis are cancelled out. Adorno further argues that this factuality – and 'irrationality' – by Durkheim is turned into an affirmative and ideological argument. Durkheim's theory of a 'collective soul' as the cohesive force across the division of labour in society is an obvious example. Adorno also refers an early Durkheim for the deliberate intention of saving younger generations from radical and rebellious thoughts by demonstrating the objective reality and inevitability of 'social facts':

> "Wieder muß der Professor der Philosophie ihnen (den Menschen) begreiflich machen, daß die psychischen und sozialen Phänomene Tatsachen sind wie andren auch, Gesetzen unterworfen, daβ der menschliche Wille sie nicht nach Belieben stören kann und daβ folglich Revolutionen im strengen Sinn ebenso unmöglich sind wie Wunder." cited in (Adorno 1979d)

One may say that Durkheim thus makes what the positivist philosophers Moore and Hare characterized as a *naturalistic fallacy*: converting a statement about facts into a moral judgment (so to speak looking for 'moral facts').

3.4.2. Two sources of organisational routines

Two elements of the theoretical improvement of the new institutionalism – compared to the old – and of this theory's distinction from a Weberian theory of rationalization and modernity will be emphasized. The first element is a micro-sociological or psychological explanation based on 'behavioural assumptions' regarding organisational actors – individuals – as 'less than rational', in some cases even arguing that the very concept of rationality is irrelevant. To some extent, this argument regards ('disenchanted') experiential learning, or logic of appropriateness, to be the most dominant mode of action in organisations. This element explains how reification, or bureaucratisation defined as increasingly routine-based behaviour, is produced 'from within' (the individual organisation) or 'bottom-up'. The second element balances the narrow-eyed 'local' focus of the first by explaining why organisations are increasingly similar – how they 'learn' from others by mere imitation rather than efficient adaptation:

> "bureaucratization and other forms of organizational change occur as the result of processes that make organizations more similar without necessarily making them more efficient." (Powell & DiMaggio)[49]

This element requires an ontological step beyond the individual organisation, emphasizing organisational fields or *institutions*; yet the ambitions do not reach as 'far' society as a whole, such as critical theory – on the contrary, such ambitious 'holistic' theories are rejected by neo-institutionalists for not acknowledging the limitations of the human mind.

3.4.2.1. *Psychological* explanation: irrational slaves of habits

Basically, neo-institutionalists offer the micro-sociological or psychological assumptions presented in the previous chapter as explanation of institutions and routines: that routine behaviour is based in human psychology, and that logic of appropriateness or experiential learning is the more dominant mode of knowledge. Before I elaborate on these argument, I shall emphasize that at this point, new institutionalism thus differs from theories of modernization that emphasize rationalization as a radical break with traditional forms of knowledge.

Routines – a psychological concept

Neo-institutionalists argue that the tendency of organisational behaviour to be based on routines (or rules) reflect a fundamental psychological predisposition for routine behaviour (in private life). This also explains why individuals are easily socialised into organisational routines. Individuals are not driven by goals; they do not calculate

[49] This distinction between two elements may seem misleading. On the one hand the distinction between external and internal factors seems reasonable. On the other hand, it is – within this tradition – mainly a question of applying the same mode of explanation/analysis at different levels: namely how a particular social system or field 'freezes over', or *institutionalises* into a fixed pattern. The first 'element' focuses at institutionalisation *within* an organization (caution: some argue a fundamental difference between organization and institution, apparently implying that institutionalisation is generally *external* to the organization). The second 'element' focuses on institutionalisation at a higher level, a broader social system, i.e. an 'organizational field' (Dimaggio & Powell 1991). It seems that March himself has shifted the emphasis *away* from the individual organization, *to* larger fields. Thus, Levitt & March distance themselves from March & Olsen's earlier work on organizational learning under ambiguity (Levitt & March 1988), presumably after having subsequently developed ideas about institutions (March & Olsen 1989). "In particular, both the emphasis on routines and the emphasis on ecologies of learning distinguish the present formulation from treatments that deal primarily with individual learning within single organizations (Argyris & Schön, 1978; March & Olsen, 1975) and place this paper closer to the traditions of behavioural theories of organizational decision making (House & Singh, 1987; Winter, 1986), and to population level theories of organizational change (Astley, 1985; Carroll, 1984)." (Levitt & March 1988)

various means to achieve some premeditated, value-based purpose, but act according to scripts etc:

> "the neoinstitutionalist rejection of intentionality is founded on an alternative theory of individual action, which stresses the unreflective, routine, taken-for-granted nature of most human behavior and views interests and actors as themselves constituted by institutions." (Powell & Dimaggio 1991)

This psychological explanation obviously differs from the argument that organisational procedures have been rationally adapted to an environment characterised by rules.

The very concept of routines, applied by March since his first writings with Herbert Simon, seems to illustrate the (information) psychological explanation. This concept is very broad and spans phenomena that are often treated separately. As already emphasized, the concept of routines covers both *psychological* and *organisational* phenomena, a 'confusion' or integration of different ontological levels that others would find controversial and problematic. For comparison, Cohen prefers different concepts although he makes a similar psychological explanation when arguing that *routines* (defined as a purely organisational phenomenon) reflect individual *skills* or '*procedural memory'* (Cohen & Bacdayan 1996)[50].

March' concept of routines also spans distinctions at another dimension, because it includes both *informal* and *formal routines*. Others may prefer more distinct concepts based on the argument that the dynamics of informal routines differs significantly from that of formal routines. Simply using the concept of routines makes it difficult to maintain and respect that distinction. One may again compare with Cohen, who reserves the concept of routines for informal phenomena, which are them distinguished from *formal procedures*. (Others again may distinguish between rules and routines).

My purpose with this short discussion was not to scorn March or others for impure definitions of concepts, but to illustrate the implications of their psychological definition, and to prepare the reader for the difficulties in comparing different

---

[50] "The properties of organizational routines arise from the way individuals store and enact their parts in those routines. As individuals become skilled in their portions of a routine the actions become stored as procedural memories and can later be triggered as substantial chunks of behavior. The routine of a group can be viewed as the concatenation of such procedurally stored actions, each primed by and priming the actions of others" (Cohen & Bacdayan 1996). Cohen also refers information psychologists – Stinchcombe – for arguing that organizational routines arise from individual *skills*. He also says that organisational routines enter into individual procedural memory

theoretical traditions. While theories of rationalisation focus on (the extension and refinement of) *formal procedures* as characteristic of modernity, March seem to regard these merely as a special case of a more fundamental category of routines.

Experience and bounded rationality

Generally, *inertia* seems to be the basic explanation for new institutionalist, as in related theoretical traditions, such as *evolutionary economy*. Nevertheless, as evident from the previous discussion of experiential learning, new institutionalists do not simply regard people (and organisations) as subsumed to routines. Routines can be changed and modified, and new routines can be incorporated. Yet they argue that this process of change or learning differs fundamentally from the ideal of rational choice.

Again it is worth emphasizing a difference between different 'interpretations' of new institutionalism. Powell thus seems to argue a more radical break with the rationalist (intentionalist) theory of action) when emphasizing the 'shift in theoretical focus' "from discursive to practical reason" (Powell & Dimaggio 1991) and referring to more philosophical literature such as Bourdieu and phenomenology for inspiration, whereas March explicitly preserves the 'ideal' of rational action ('rational choice' or 'logic of consequentiality'). This ideal has survived both with his early definition of *bounded rationality* and his more recent emphasis on *logic of appropriateness*.

To start with the latter, March preserves the concept of rationality by emphasizing the view of organisational participants as 'intendedly rational' "problem solvers and decision makers"[51] and seems to recognize it as a *possible* – however rare – strategy. Although logic of appropriateness may be the dominant mode of knowledge, when routines can in principle also result from 'analysis and choice' (rationality) - besides *political processes* (bargaining and conflict – reduction of ambiguity), and *evolutionary processes* (Darwinian model) (Levitt & March 1988).

Obviously, also the classical concept of *bounded* rationality – which I already discussed shortly in relation to Adorno (p. 93) – is closely linked to that of rationality.

---

[51] "the literature is full of attempts to develop the major implications of limitations on the awareness of alternatives, on the precision of information about consequences, and on the clarity and consistency of goals... There is no longer general acceptance of a model of superhuman organizational omniscience in the service of rationality. Instead, there is an inclination to accept the proposition that while organizations are intendedly rational, they frequently act on incomplete or incorrect information and without being aware of all of their alternatives. Similarly, there is no longer general acceptance of a simple view of a well-defined organizational preference function. Instead, there is an effort to accomodate in the theory the frequent observations of inconsistent and conflicting organizational objectives." (March & Olsen 1976b)

The concept is difficult to reject, but I also find it worthwhile to point out that it is also 'ambiguous' in the attempt to encompass very different aspects, as evident in Hatch' presentation:

> "1) imperfect and incomplete information; 2) the complexity of problems; 3) human information-processing capacity; 4) the time available for decision-making processes; 5) the conflicting preferences decision makers have for organizational goals." (Hatch 1997)

While 5) *'conflicting preferences'* refers to ambiguity as the *social* dimension of organisational rationality (an issue that we shall return to in the last section (p. 112)); and 4) '*time available'* corresponds to Gadamer's emphasis on 'hastiness in judgment' (and shall play an essential role in the later discussion of media); 2) refer to *objective* characteristics of the environment, and 3) to *psychological* characteristics of the individual.

The latter emphasis on limited individual capacity was already illustrated in March & Simon's

> "picture of a choosing, decision-making, problem-solving organism that can do only one or a few things at a time, and that can attend to only a small part of the information recorded in its memory and presented by the environment." (March & Simon 1958)

The argument is compelling, yet it is not obvious that it provides a reason for modifying the concept of rationality. *First*, it is hardly possible to actually specify the individual capacity. *Second*, the alleged limited capacity can be enhanced by modern technology. And *third*, it is hardly *relevant* to focus on individual capacity, because processes of critical rationality as defined in the previous chapter are not merely psychological or individual.

As for the *objective* aspect, March & Olsen emphasized the complexity of the environment as a motivation for modifying idealist theories of decision-making in favour of a *realistic* and less heroic picture of organisational action:

> "We remain in the tradition of viewing organizational participants as problem solvers and decision makers. However, we assume that individuals find themselves in *a more complex, less stable, and less understood world* than that described by standard theories of organizational choice; they are placed in a world over which they often have only modest control. Nevertheless, we assume organizational participants will try to understand what is going on, to activate themselves and their resources in order to solve their problems and move the world in desired directions. These attempts will have a less heroic character than assumed in the perfect cycle theories, but they will be real." (March & Olsen 1976a) (*my italicisation*)

There is something odd about (part of) the concept of bounded rationality. For instance, this boundedness is characterized by ‘imperfect and incomplete information’. This definition seems to imply that ‘real’ or ‘unbounded’ rationality only deals with perfect and complete information. That is not how rationality has been defined in this thesis, or by Habermas or Popper. Rationality does certainly not presume perfect, complete, nor ‘full’ information. It is tempting to say that such an ‘absolute’ definition only thrives in classical economic theory. It seems that the concept of bounded rationality is defined by contrast, and that the ‘contrasting’ concept of rationality amounts to a caricature.

Socialization – by scripts rather than values

The emphasis on routines, scripts and logic of appropriateness implies a theory ‘socialization’ that differs from the old institutionalists’ explanations, but probably also from Parsons’. The old institutionalists emphasized the *value* aspect of institutions and thus defined socialization as internalisation of organisational values and preferences by individuals. In this definition, social action is based on individual (subjective) rationality, but the values and goals are given by the system. To new institutionalists, however, socialisation is imitation rather than internalisation and commitment, and it is not based on values, but on ‘taken-for-granted scripts, rules, and classifications’:

> "For the old institutionalists, the salient cognitive forms were values, norms, and attitudes. Organizations became institutionalized when they were 'infused with value,' as ends in themselves… Newcomers to an institution underwent 'socialization,' which led to 'internalization' of organizational values, experienced as 'commitment.' The new institutionalism departs markedly from this essentially moral frame of reference. 'Institutionalization is fundamentally a cognitive process' (Zucker 1983). 'Normative obligations … enter into social life primarily as facts' that actors must take into account. Not norms and values but taken-for-granted scripts, rules, and classifications are the stuff of which institutions are made. Rather than concrete organizations eliciting affective commitment, institutions are macrolevel abstractions, 'rationalized and impersonal prescriptions', shared 'typifications' independent of any particular entity to which moral allegiance might be owed. Neoinstitutionalists tend to reject socialization theory, with its affectively 'hot' imagery of identification and internalization." (Powell & Dimaggio 1991)

There are some parallels between this rejection of values as the deciding factor of institutions, and Adorno’s critique of the concept of values in the sociologies of Durkheim and Weber. While Powell & DiMaggio seem to criticize the old institutionalists for assuming ‘moral’ commitment by organisational members, Adorno criticize the concept of value as blindfolding, to a large extent defined as a residual to rationality, and by the unwillingness of the researcher to look for further justification. Furthermore, the rejection of a ‘hot’ imagery of identification and internalisation is

compatible with Adorno's general thesis of 'the loss of meaning' as a fundamental characteristic of contemporary 'modern' society.

Despite these parallels, however, the new institutionalist solution – to focus on scripts and rules instead of values – seems to display problems similar to those criticized by Adorno: the very definition is implicitly based on the concept of rationality. I shall return to this issue in the discussion below (p.110).

3.4.2.2. Similarity among organisations – *epidemic* rather than modern

The second element of new institutionalism is aimed at explaining a tendency to *isomorphism* among organisations. Organisations – at least those in the same industry, such as pharmaceutical companies – tend to be structurally *similar*, and this isomorphism cannot be easily explained by the psychological and *local* processes emphasized in the first element of new institutionalism. The tendency of individual organisation to fossilize or 'freeze over' as a result of (isolated) internal processes does not explain why one organisation resembles another. The first element emphasized 'structuration' of the organisation as a result of 'learning from experience' – albeit a very fallible experience – while the second element emphasizes *external* factors

In the Weberian tradition and critical theory, isomorphism was a logical consequence of the level of analysis: the focus is on rationalization and market expansion on societal and global levels. Organisational theory has generally retreated from this level, focusing instead on individual organisations, and on the *variety* among organisations. In this context, DiMaggio & Powell argue a step back in this development by insisting on general isomorphism rather than variety (Dimaggio & Powell 1991). They accept Weber's explanation as *historically* relevant, as true at the time of Weber's own writings. Today, however, other forces are driving bureaucratisation and isomorphism: i.e. imitation and legitimisation rather than efficiency and adaptation.

New institutionalism focuses on 'irrationality' at a higher level. They set out to explain why similar inefficient solutions are adopted in different organisations: why organisations imitate others rather than designing a careful "match between the procedures and the adopting organizations" (Levitt & March 1988); why imitation and isomorphism is preferred to experimentation and variety.

Instead of a general theory of bureaucratisation and rationalisation as a general tendency, it is suggested that routines or institutions (forms) spread – like a disease – among organisations. Organisations tend to imitate others rather than analyse and compare alternatives. DiMaggio & Powell suggest three 'mechanisms of isomorphism': *coercive*, where organisations are 'forced' to adopt certain routines (legislation, public regulation – such as the pharmaceutical industry); *mimetic*, where

an organisation imitates another; and *normative*, i.e. where a professional group spread to different organisations and impose their ideals on these. Levitt & March regard these processes as simply reflecting well-known epidemiological processes.

Organizations and institutions

How does one apply 'institutional analysis' to organisations? It is important to emphasize that neo-institutionalists (and Durkheim) use the term *institution* in a very broad sense. It simply describes 'reified social behaviour': fixed patterns of behaviour that cannot be explained at the individual level. It is thus much broader than the 'common sense' meaning of the term, which refers to (public) non-profit organisations (i.e. 'public institutions') as illustrated by Castells' definition of institutions as "organizations invested with the necessary authority to perform some specific tasks on behalf of society as a whole" (Castells 1998). Against this narrow definition, the broader meaning discussed here spans very different aspects of rule-like behaviour: rules (laws), norms and 'habits (or tradition)':

> "not only organizations, but actions, such as voting and shaking hands, can be conceptualized as institutions of the societies in which they are repeated and given similar meanings. This grounds the definition of institutions in repeated actions and shared conceptions of reality." (Hatch 1997)

In organisational analysis, there is a complex and ambiguous relation between the terms *organisation* and *institution*. It is problematic simply to describe an organisation as an institution (in this sense)[52]. One should not apply the sociological concept of institution – *fait social* – to an organisation without considering that the latter at least in principle has a larger potential for rationality, for being intentionally designed. For all their fallibility and ambiguity, organisational decision processes aim at designing or modifying organisational structure in terms of efficiency with respect to organisational goals. They are 'intendedly rational', and it is methodologically problematic to ignore the potential for intentionality.

---

[52] Scott appears to be making a similar point when criticizing most classical institutionalists – except Weber – for not making a distinction between organisations and institutions. "Theorists in the 1950s and 1960s began to recognize the existence and importance of particular collectivities - individual organizations - that were distinguishable from both broader social institutions, on the one hand, and the behavior of individuals, on the other… On reexamination, we observe much conflation of the concepts of institutions and organizations in the writings of Veblen and Commons, Burgess and Willoughby, Durkheim, Cooley, and Hughes. Perhaps Weber may be regarded as an exception to this generalization because, in much of his work, he was attentive to the effects of broader institutional forces in shaping and supporting differing administrative systems. But most of the early theorists folded together their notions of organizations and institutions. Only recently have theorists recognized the value of differentiating between these concepts" (Scott 1995).

Thus, institutionalisation is mostly defined in some complementary relation to organisations: i.e. as internal structures or processes that have somehow frozen and appear impossible to modify; as 'constraints to organisational rationality', or as external conditions, i.e. inter-organisational patterns: "Organizational forms, structural components, and rules, not specific organizations, are institutionalized" (Powell & Dimaggio 1991). In the perspective of the organisational decision maker, institutionalization comes from the 'outside'.

Macro-theories rejected

New institutionalism applies organisational and institutional theory at a higher level. It challenges classical theories of sociology by 'reducing' social phenomena to organisational (institutional) explanations. Thus, DiMaggio & Powell imply a critique of the 'grand theories' of sociology: Parsons' functionalist theory of society, as well as Marxist theories describing a society in the hands of rational, interest-seeking elites. DiMaggio & Powell argue that these theories assume a will to, and capacity for, rational adaptation, which is not confirmed in real-life, down-to-earth organisational studies.

> "Despite the findings of organizational research, the image of society as consisting of tightly and rationally coupled institutions persists throughout much of modern social theory… How can it be that the confused and contentious bumblers who populate the pages of organizational case studies and theories combine to construct the elaborate well-proportioned social edifice that macrotheories describe?" (Dimaggio & Powell 1991)

Interestingly, this neo-institutional critique against 'grand theories' seems to repeat the classical conflict between theoretical work and empirical research, including the old institutionalist critique against abstract economic theories. Is new institutionalism basically a dys-functionalist non-theory?

> "We argue that a theory of institutional isomorphism may help explain the observations that organizations are becoming more homogeneous and that elites often get their way, while at the same time enabling us to understand the irrationality, frustration of power, and the lack of innovation that are so commonplace in organizational life." (Dimaggio & Powell 1991)

Nevertheless, new institutionalism offers one point of critique against Adorno's approach as presented above (and critical theory in general): If one accepts that organisations are prone to ambiguity, mythomania and other forms of irrationality, how can one accept the thesis from critical theory and Weberian sociology etc. that there is a general tendency to *rationalization* in Western societies? Critical theory is based on the assumption – argument – that there is something 'worthy' of critique, as illustrated by Lukács' assumption about a 'law of the whole'. Adorno's critique is based on a quasi-functional theory of 'the whole', and he is closer to Parsons than to the 'Marxist theories of elites' mentioned by DiMaggio & Powell. As a critique of

Adorno, some modification is required, however, because he does not accept the full functionalist description of the modern society as a well-oiled clockwork

3.4.3. Discussion

In my critique of neo-institutionalism, I shall primarily argue that the psychological explanation is problematic, that the neo-institutionalist inevitably base their own research on the concept of rationality, and that this paradox results in a problematic asymmetry between the social researcher and his object of research. I further argue that the fatalist implications are incompatible the actual historical development in technology and scientific knowledge. Finally I raise the question whether it is possible to maintain a strong theory of socialisation with a narrow focus on institutions instead of society as a whole.

3.4.3.1. From fallibility and bounded rationality to epistemological pessimism

I find the argument about psychological disposition for inefficient routines and limited capacity for 'information processing' problematic. It almost implies that people are basically lazy, narrow-minded and stupid – if the reader can allow for some exaggeration in order to make my point clear. It seems that the recognition of human 'fallibility' – which Popper and others emphasized as essential to liberal freedom – has converged towards a form of *epistemological pessimism* – which he criticized as associated with authoritarianism. Perhaps March, Simon and others have started out with a concept of fallibility, yet ended up systematizing and refining it into something very different.

3.4.3.2. Implicit methodological commitment to rationality?

As already argued, neo-institutionalist researchers cannot escape the concept of rationality, which is forged into their own methods. If the new institutionalist avoids the question of the rationality of the institution, he will not have made his point against the 'rationalist' researcher. One may recall McIntyre's argument (p.38) that the researcher cannot carry out his analysis without an evaluation of the rationality of the institution, of his research 'object'.

This is true both for March and Powell, although in different ways. March explicitly focuses on sub-optimal processes and routines as the unfortunate product of 'intendedly rational' actors, whereas Powell seems to argue the opposite: people do not act rationally, but they still succeed in producing a *functional* or efficient outcome. March deliberately bases his research on the ideal of rationality and preserves the 'right' for the researcher to inquire into the rationality, causality and means-end structure of the organisation to be studied; yet Powell also seem to imply rationality as a (unwilling) point of measure.

First, Powell seems obliged to argue that people do *not* act rationally, that routines are *not* a result of deliberate premeditation – and he thus remains linked to the concept that he claims to reject. *Second*, he tends to imply that the informal routines developed in organisational networks – to offer one example – are functional and adaptive, that they are more competitive and 'liberated' from the rigid structure of bureaucracy (Powell *et al.* 1996;Powell 1990). But it requires a scientific and rational analysis to determine whether it is actually functional rather than dysfunctional. There is no running away from the concept of rationality.

3.4.3.3. Problematic asymmetry

As a theory of fallible human actors and imperfect institutions new institutionalism is compelling and difficult to contradict. This approach avoids grand theories and reference to 'the whole'. Yet as a theory of inevitable reification due to fundamental human conservatism and 'resistance to change', the theory turns fatalistic. There seems to be a problematic asymmetry in the argument. The researcher can see the 'inefficiency' of a particular institution/organisations, the actors involved cannot. Or if the 'inefficiency' can somehow be explained to the actors, they will apparently still be unable to improve. An example of this dilemma would be the researcher involved in a case study, in 'cooperation' with the case organisation. This situation is illustrative, but also an example of a more fundamental relationship between theory and practice, as required in the previous discussion (about critique of ideology). The researcher is able to demonstrate that the organisation is based on inefficient routines, cultures etc. Organisational actors will then answer (ideally): 'Gosh! Thank you! We never thought of that. How should we do to improve?' In this case, the basic neo-institutional answer seems to be (in caricature): 'don't you worry. It's human nature. And that's how organisations normally are'. This answer is less than satisfactory. The dilemma corresponds to the basic dilemma in *critique of ideology*: How can people continue to live under the spell of an ideology, after critical theorists have managed to reveal and expose it?

I argue that researchers' critical observations of sub-optimal solutions will somehow be part of the same 'system' as the organisation or institution – or with Habermas: being practitioners of the same ordinary language. If researchers can argue inefficiency while referring to the same criteria as the 'organisation', then their critique is ideally part of an overall process of rationalization, where the organisation can improve. Researchers cannot maintain a position as in principle 'smarter' than the organisation they observe – assuming an epistemological pessimism on the part of the organisational members rather than the researchers. While researchers may be able to reveal inefficiency by using a *method* not applied in the ordinary life of the organisation, there is no convincing argument that the organisational members should not be able to *understand* – and perhaps counter – the critique.

3.4.3.4. Change and progress excluded?

Thomsen argues that new institutional theory cannot explain significant structural changes in institutions (Thomsen 1994). A related question is whether new institutionalism excludes the idea of technological progress and improved productivity as significant factors in modern society. How can "the confused and contentious bumblers" have succeeded in producing modern science and technology? This perspective was essential to theories of rationalisation, which is one more reason not to reject them.

3.4.3.5. Socialization without grand theories?

In order to 'constitute' actors, institutions must be quite stable and coherent. This begs the question whether the critique against 'grand theories' of sociology does not in the end turn against new institutionalism itself: how can these "confused and contentious bumblers" be capable of socialization, or of (even unintendedly) maintaining stable institutions?

This introduces the question of the relevant level or scope of the system of institution. The idea of a thorough socialization – today, in a world characterized by globalisation and expanding markets – requires a large-scale scope. In agreement with new institutionalism, I find the idea of a strong organisational 'culture' little convincing. Yet the question is whether the level of *institutions* is sufficiently stable and self-contained to account for strong socialization ('constitution') of actors. I argue that there must be too many external impressions blurring the socializing effects of a single institution: local socialisation is weakened by globalisation. By renouncing on 'grand theory' and the higher levels of society, one must also renounce on ideas of strong socialization.

3.5. Ambiguity in organisations: differentiation and networks

I suggest a 'structuralist' theory of ambiguity in organisations resulting not from differences in ('exogenous') *individual* beliefs and interests, but largely reflecting complexities and 'loose coupling' in organisational structure. Daft & Lengel, Argyris & Schön, March & Olsen all emphasize 'frames of interpretation' that are somehow, if not determined by, then at least strongly dependent on organisational structure.

3.5.1.1. Ambiguity resulting from individual differences?

To emphasize this point I shall first present and criticize two examples of the opposite perspective, two different views that both seem to regard ambiguity as a result of individual differences, more or less implying that only single individual mind – or a very small group – is capable of rational action. The first example emphasizes organisational decision making as ongoing compromises and reduction of ambiguity; the other emphasizes political processes and conflicts of (individual) interests.

Weick criticizes the idea of regarding *organisations* as rational (see citation, p. 30). Larger groups such as organisations will be characterized by *ambiguity*, because all individuals cannot possibly share the same interpretation, they cannot muster the necessary fourfold agreement on purpose, means, action and evaluation. Daft & Lengel make a similar argument emphasizing *diversity*, thus apparently regarding organisations as 'a large group of individuals', a clash of individual minds:

> "Information processing at the organisational level must bridge disagreement and diversity quite distinct from the information activities of isolated individuals." (Daft & Lengel 1986)

Purpose – given or negotiated

The argument that organisational actors cannot agree on a purpose – to focus on one 'element' of interpretations – or on a well-defined preference function, seems to contradict Adorno's definition of an organisation as a means for a purpose characterized by instrumental rationality. While Adorno defines organisations as a means for a *given* purpose that defines the social relations 'within' the organisation, and while Habermas would characterize organisations as part of the economic or administrative (state) systems and thus dominated by *instrumental* (purposive) rationality – to the exclusion of communicative rationality (which corresponds to 'reduction of ambiguity'), Weick seems to argue the opposite: that organisational members must agree on, or establish compromises, regarding the purpose. This idea also contradicts the idea of total control over the capitalist enterprise (Lukács).

I recognize that Weick's theory is more complex and cannot generally be reduced to 'methodological individualism', but the argument as expressed in the citation is useful for critical discussion – and I find the it unacceptable, based on the arguments presented by Adorno and new institutionalists (at least in March' version). To regard the organisational purpose as the result of an ongoing compromise and negotiation by individuals is to underestimate the primacy and 'pre-given' character of the organisation and the degree of 'socialisation': the extent to which organisational members are subsumed under organisational goals. This critique of 'false personalisation' and illusory 'humanisation'[53] of organisations is relevant, even when I

[53] Compare Adornos critique of phenomenology: "Das quid pro quo des Personalen und Apersonalen im Jargon; die scheinhafte Vermenschlichung von Sachlichem; die reale Versachlichung von Menschlichem ist das leuchtende Abziehbild der Verwaltungssituation, in der abstraktes Recht und objective Verfahrensordnung jeweils in Entscheidungen von Angesicht zu Angesicht sich vermummen" (Adorno 1964). And his critique elsewhere of a tendency to focus on the 'human faces' of organisations: „[es geht darum], was sie im gesellschaftlichen Ganzen vollbringt, und nicht um die wie immer fehlbaren Personen, die sie vorschiebt. Falsche Personalisierung ist der Schatten der Enthumanisierung. Wer über Organisation und Gesellschaft nachdenkt, muβ sich hüten, das Schlechte der Organisation

must recognize that organisational goals are not clearly defined and *partly* open to interpretation and negotiation.

March and others seem to strike a more acceptable compromise between the emphasis on the 'pre-given' character of organisational goals, and the recognition that this goal may not be clearly specified: organisations are still defined as "oriented to targets" (Levitt & March 1988), but there may be ambiguity due to different *preferences*: "there is no longer general acceptance of a simple view of a well-defined organizational preference function" (March & Olsen 1976b).

Ambiguity vs. organisational politics

Another example of 'methodological individualism', emphasizes *organisational politics* and seeing organisations as battle fields on which individuals are struggling to secure their own (exogenous) interests:

> "By politics we mean the very stuff, the marrow of organisational process; by politics we mean managerial and staff concerns to secure careers, to avoid blame, to create success and to establish stable identities within competitive labour markets and organisational hierarchies where the resources that donate relative success are necessarily limited." (Knights & Murray 1994)

This example differs from the former by emphasizing conflict rather than the potential for agreement and mutual understanding, but it nevertheless regards the process as one involving *individuals*. Two arguments against this political view will serve to elaborate on the perspective offered in this thesis.

Again, I find it misleading to regard the organisational combatants as representing *individual* beliefs and preferences (interpretations), because it would ignore the degree of socialization: that organisational members to a large degree are socialised into interpretations already established in the organisation. I have to admit, though, that Knights & Murray not necessarily imply such (problematic) methodological individualism, but also encompass a more structuralist view: seeing organisational politics not merely as a clash between individuals, but as a structural disintegration of the organisation itself. Ambiguity is not primarily a 'struggle' between political actors in the organisations, but also a result of structural complexities. It would be foolish to deny that individuals are at play, but in this example the influence of the individual seems overrated. Seeing ambiguity/equivocality as a product of functional specialization etc. emphasizes the structural characteristics: it is not merely a Hobbesian *bellum omnium contra omnes* on an arbitrary battlefield, but a complex

---

unmittelbar aus Individuen abzuleiten, während die Individuen deren Anhängsel sind und bis in ihre innersten Reaktionsweisen nach ihr sich richten müssen." (Adorno 1979a)

organisational structure 'in conflict with itself', and the interests forfeited by the members are largely defined by their *roles*.

The other argument against this political view goes back to the (normative) ideal of hermeneutic understanding as the rational potential for resolution of ambiguity. The conflict should not merely be regarded as a (political) battlefield, because there is a potential for overcoming individual and particular (narrow) interpretations and reaching a common, more universal interpretation in which matters can be resolved and decisions be made. An example from Argyris & Schön illustrates the difference:

> "the members may treat the conflict as a fight in which choices among competing requirements are to be made, and weightings and priorities are to be set on the basis of dominance. The R&D faction, for example, may include the chief executive who is able to win out over the old guard because of his greater power, or the two factions may fight it out to a draw, settling their differences in the end by a compromise that reflects nothing more than the inability of either faction to prevail over the other. In both of these cases, the conflict is settled for the time being but not by a process that could be appropriately described as learning. If the conflict ends with a power play or a stalemate, neither side is likely to emerge with a new sense of the nature of the conflict, its causes and consequences, or its meaning for organizational theory-in-use." (Argyris & Schön 1996)

3.5.2. Three sources of ambiguity

After this critique of 'individualist' approaches to organisational ambiguity, I shall present a more 'structuralist' perspective, based three sources of ambiguity suggested by Daft & Lengel: interpretations in organisations may be a *product* of 1) organisational *structure*, 2) professional background, and 3) *environment*. The latter two are external to the organisation, but they are not based on *individual* beliefs and preferences.

3.5.2.1. Structural differentiation

In the first example, separate functional departments have developed their own interpretation[54]. This argument emphasizes the *local* or internal source of

[54] This source of ambiguity may derive from an inherent conflict between two basic elements of Weberian bureaucracy, between *division of labour* and *rationality*: division of labour and functional departmentalisation may inhibit rational planning across functions. This conflict seems to be the key to BPR-literature. What does Hammer & Champy imply with their demand of a 'clean slate': 1) that the existing system of routines – for some reason, or almost by definition – is conservative and irrational, and must be replaced by a new system, designed via rational analysis (classical anti-traditionalism discourse); or 2) that rule following and routine

organisational interpretations and corresponds somewhat to the theory of *communities-of-practice*(Brown & Duguid 1996). On the other hand it is misleading to speak of a community making sense of their environment, because this perspective tends to forget that this environment to a large extent is *given* and defined by organisational structure.

> "Each department develops its own functional specialization, time horizon, goals, frame of reference and jargon... Bridging wide differences is a problem of equivocality reduction. People come to a problem with different experience, cognitive elements, goals, values, and priorities. A person trained as a scientist may have a difficult time understanding the point of view of a lawyer. A common perspective does not exist. Coding schemes are dissimilar. Interdepartmental communications thus can be complex, ambiguous and difficult to interpret... Equivocality is high when differentiation is great." (Daft & Lengel 1986)

Thus, ambiguity is a result of the functional specialization (differentiation), which is largely based on a delegation of responsibility, where the complexity of the 'whole' – the totality of organisational processes – is reduced by allowing 'autonomy' to separate departments and subsystems. Complexity is reduced and ambiguity avoided by separating processes and applying and developing local interpretations within one unit or department, while keeping communication and coordination with the rest of the organisation at a minimum.

This disintegration of the organisation is a parallel to the logic of the market as defended by Hayek and others. Whereas the market reduces complexity in the *inter-organizational* relations, and thus in the organizations relation to its environment, functional specialization reduces complexity internally.

Interdependence as a frequent but 'loose' coupling

Differentiation in itself does not lead to ambiguity. As long as execution of tasks and processes can be kept within one department, and the interdependence is low or at least *standardized*, 'local' interpretations will not confront each other and result in ambiguity. Ambiguity only arises when for some reason communication across organisational barriers are increased. I thus see ambiguity as a consequence of increased *interdependence*, but this argument deserves further qualification, because it seems to contradict Daft & Lengel's theory: *they* argue that interdependence increases *uncertainty* rather than ambiguity:

---

action *as such* is inefficient and should be replaced by fulltime problem solving? But this argument would turn back on BPR, which basically results in new structures.

> "Interdependence increases uncertainty because action by one department can unexpectedly force adaptation by other departments in the production chain. Frequent adjustments are needed when interdependence is high, and hence more information must be processed... When interdependence is low, departments experience greater autonomy, stability and certainty with respect to coordination." (Daft & Lengel 1986)

To understand and resolve this contradiction it is necessary to distinguish between different degrees of interdependence, or between loose and strong coupling. High and constant interdependence – strong coupling – will require a standardized coordination (and shared interpretation), emphasizing problems of uncertainty. But there may also be a need for occasional, yet frequent coordination among loosely coupled units.

3.5.2.2. Academic and professional specialization

The second source of ambiguity is that different professions, i.e. scientific disciplines – lawyers, economists, biochemists – bring different interpretations into the organisation. In this case, 'incommensurability', conflicts and ambiguity are thus inherited from the differentiation of science – and of 'Geist' – into separate disciplines that can never be integrated in a unitary science. This source of ambiguity, and of organisational interpretations, emphasize that interpretations are not *local*, but derived from the 'social body of knowledge' characterised by fundamental processes of rationalisation, as argued previously[55].

When ambiguity reflects academic specialization, the conditions for a rational 'resolution' may differ from the situations implied in the previous chapter. Can lawyers and biochemists be expected to achieve a common interpretation when there is no 'hope' for integration of these disciplines?[56]

---

[55] The tendency to split scientific research into an ever-increasing number of separate disciplines contradicts a fundamental characteristic of Reason and rationalization: the *unity* of thought, the need to fit all knowledge into one coherent system (see Kant, Horkheimer & Adorno), often considered a *necessary* requirement in order to avoid contradictions etc. This was obviously a goal for the positivists; and it is also a basic characteristic in the critique of rationality (Horkheimer & Adorno). As long as the scientific disciplines operate in separate 'areas' without overlapping, the risk of contradiction is avoided.

[56] *Contradiction between scientific disciplines?* By defining ambiguity as *contradicting* interpretations one is in fact emphasizing *commensurability*. If two interpretations can be 'caught' in a contradiction, the road is opened for logical critique. Is it reasonable to say that there is ambiguity in this sense among scientific disciplines? Disciplines normally do not contradict each other – that would be unacceptable. Rather, they can remain indifferent to each other, because they focus on different fields/aspects of reality. Nevertheless, reality is not neatly partitioned into separated fields ('reality is cross-disciplinary!' as the cliché goes), and

3.5.2.3. Complexity, unanalysability of environments

The third source might be labelled as the 'objective' source of ambiguity. Daft & Lengel suggest that in some environments cause-effect relationships are difficult to analyse, and that such environmental conditions constitute an external factor causing ambiguity:

> "Equivocality is related to the analyzability of cause-effect relationships in the external environment ... When environmental relationships are clear and analyzable, equivocality is low, and managers can rely on the acquisition of explicit data to answer questions that arise. For example, research by Wilensky (1967) and Aguilar (1967) found significant differences among organizations in the extent the environment was seen as rationalized and objective data collected. When the cause-effect relationships are unclear, information processing must reduce equivocality. Managers must discuss, argue, and ultimately agree on a reasonable interpretation that makes action sensible and suggests some next steps." (Daft & Lengel 1986)

This argument is related to the idea of bounded rationality. March tends to argue that organisations in general face a more complex environment than individuals, and that organisational (subjective) ambiguity reflects this 'objective' complexity. Daft & Lengel, however, emphasize that environments differ in degree of complexity and analysability, and that some organisations are thus more exposed to complexity than others. A similar approach may proceed from this argument – differences in degree of complexity etc. – and categorize different types of organisations, corresponding to different types of environment; such categorisation is the basis of *contingency* theory, but is not necessary in the context of this thesis[57].

By emphasizing (reduction of) complexity I may have reached common ground shared by the two theoretical traditions discussed in this chapter. Habermas has borrowed the concept of systems from Luhmann's systems theory, and Luhmann was inspired by March and Simon's concept of bounded rationality (Luhmann 1975;Luhmann 1968).

---

disciplines tend to be imperialist, stretching their perspectives and theories beyond neatly isolated domains.

[57] Some may question the very idea that *complexity* and *analysability* should be regarded as *objective* categories (Hatch 1997). Weick seems to argue that by associating ambiguity with complexity (as an objective category), one fails to focus on the issue of conflicting interpretations – and, as mentioned previously, he chooses the term *equivocality* to exclude objective aspects and focus on interpretations.

3.5.3. Cross-barrier communication – virtuality and networking

Ambiguity is not a necessary consequence of differentiation. Differentiation explains the existence of different interpretations, but not why these should be confronted with each other. This thesis presents the argument that IT enables cross-barrier communication, coordination and cooperation[58]: so-called virtual or network processes. But first we must understand the organisational *need* for such cross-barrier communication – it is not simply a *result* of new technology. There must be a reason as to why organisations are interested in this opportunity (and accepting – not always consciously – the risks associated with increased ambiguity.

In the following I allow myself to expand the issue of organisational networking to cover two quite different forms of cross-barrier communication, namely those that span differentiated units and departments *internally*, within one organisation, and those that involve cooperation between different organisations.

3.5.3.1. Crisis in the bureaucratic organisation?

It is often argued that new forms of organisation is a reaction to a crisis – or at least inadequacies – in the classical bureaucratic organisation, which adapts only slowly to changes in the environment.

> "what emerges from the observation of major organizational changes in the last two decades of the century is not a new, 'one best way' of production, but the crisis of an old, powerful but excessively rigid model associated with the large, vertical corporation, and with oligopolistic control over markets." (Castells 1998)

Incapable of learning and innovation?

A recurring argument is that the bureaucratic structure is slow at 'learning' and incompatible with the processes of innovation and Research & Development, processes that have become crucial in a 'new economy', where the ability innovate and diversify products is crucial. "The canonical formal organization, with its bureaucratic rigidities, is a poor vehicle for learning" (Powell *et al.* 1996). "[L]arge firms cannot create a hospitable atmosphere for R&D". "In large corporate pharmaceutical R&D, the atmosphere of industry replaces that of science" (Powell & Brantley 1998). It is difficult to launch this discussion without being caught up in business literature clichés and self-maintaining

[58] The distinction between communication, coordination and cooperation is crucial for choosing between technologies: each process has particular requirements for the technology to be used. In the following I shall generally use the term cross-barrier communication to imply all aspects – although I do not imply, as some would, that all is basically about communication.

truisms about the mighty competitiveness of the new economy. If one is to accept any of these arguments, some critique and modification is highly required.

It is worth remembering that while today it is often accepted as a truism that R&D is a creative and uncontrollable process incompatible with large corporations, the American economist Schumpeter once made the opposite argument: that the R&D departments of large corporations are the most common source of innovation. And it should be emphasized that internal R&D research is seldom submitted to the same degree of formal routines as the rest of the organisation; in pharmaceutical companies, research is often separated from the remaining development phase, because the latter is heavily regulated by formal routines, partly due to public regulation of the market. Thus, in line with my previous line of reasoning, I cannot accept, at face value, the argument about the total inadequacy of the bureaucratic organisation.

Nevertheless some arguments about the need for networking should be emphasized. And it seems that organisational networks, internal as well as external, are most common in the early stages of the product life cycle, in relation to innovation, development of new products (and processes) etc.

3.5.3.2. Internally: functional specialisation vs. project organisation

Allen & Hauptman argue that organisational structure is often based on a choice between two different principles (Allen & Hauptman 1990). Normally, strong *interdependence* between tasks and short *duration* of projects will encourage project organisation over functional specialisation. By choosing this structure, however, the organisation must renounce on the advantages of functional specialisation: the link to scientific and professional knowledge. This argument emphasizes that there is a cost associated with the cross-disciplinary advantages of project organisation. But now, they argue, it-supported organisational networks allow a *combination* rather than a choice between two 'incompatible' strategies. Several departments can be involved in a development project, which will thus include a variety of relevant competencies, and be better able to make plans for production, marketing, testing etc.

3.5.3.3. Externally: technological development and dispersed sources

Externally, organisations may benefit from cooperation with other organisations. With an example relevant to the case study: pharmaceutical company may cooperate with other pharmaceutical companies, with small research-based companies, universities etc. Under certain conditions, cooperation is an attractive alternative to traditional 'market' and 'hierarchy' relations. Buying a drug candidate (market) or a take-over of another company and vertical integration (hierarchy) are typical examples of traditional solutions that may prove risky and inadequate. To elaborate on the latter example relevant new technologies emerge from several sources, and even a large pharmaceutical company cannot buy all promising companies. Furthermore, R&D is a

process that is hard to control: small research based firms and even the internal R&D department may produce drug candidates that the drug company is not capable of producing and marketing without heavy – and risky – investments, because they lie outside its 'core expertise'.

A number of conditions that encourage cooperation are listed in the literature.

Uncertainty

Uncertainty is often given as a motivating factor behind network organisation:

> "The reduction of uncertainty, fast access to information, reliability, and responsiveness are among the paramount concerns that motivate the participants in exchange networks." (Powell 1990)
>
> "the network could be considered as an efficient alternative in the context of high technological uncertainties." (Staropoli 1998)

This argument may seem somewhat confusing in the light of the distinction between uncertainty and ambiguity presented in this thesis. Accepting it here would imply that uncertainty leads to networking, which again implies ambiguity. Rather than fully disentangling this reasoning one should contend that uncertainty in this particular context seems to be used in a rather vague sense – with no regard for the logical distinction from ambiguity and equivocality. Yet Staropoli's reference to *technological* uncertainties suggests the next factor: the character of technological and scientific development.

Technological development and dispersed sources of knowledge

Cooperation is attractive when the industrial technology and knowledge base is complex and characterized by uncertainties and rapid development; and the sources for this knowledge are dispersed:

> "when the knowledge base of an industry is both complex and expanding and the sources of expertise are widely dispersed, the locus of innovation will be found in networks of learning, rather than in individual firms." (Powell *et al.* 1996).
>
> "Strategic alliances appear to be an attractive organizational form for an environment characterized by rapid innovation and geographical and organizational dispersion in the sources of know-how." (Teece 1992)

With the biotechnological revolution, new techniques and drug candidates emerged in universities and small research based companies rather than the big pharmaceutical companies. Cooperation is a means to share the risks involved in a development project, and to speed up development.

3.5.3.4. Neither alternative nor attachment

Yet network should not be regarded as an *alternative* that *replaces* bureaucracy, as it is often argued. It is better regarded as a complementary 'layer', which is added to – or superimposed on – traditional organisation. And it can thus be regarded also as a modification of the bureaucratic model, thus demonstrating some degree of 'flexibility'.

Yet network cannot simply be 'added' to hierarchic organisation. Internal networks contradict the hierarchical command structure of the 'original' organisation, and external networks are in conflict with the general objective of the large corporation to control its environment. There are frictions and inconsistencies to be balanced against the advantages of network organisation: ambiguity, lack of routines, and conflicts of authority. These problematic aspects – or 'challenges – must be emphasized in order to balance a common tendency to glorify organisational networks as superior alternative to the bureaucratic organisation. In this thesis I focus on the problems associated with the confrontation between different frames of interpretation: *ambiguity*.

3.6. Summary

I shall emphasize two elements in this chapter. *First*, I have argued that organisations should basically be regarded as rational and characterized by an ongoing process of rationalisation. This perspective may be modified, but cannot be *replaced* and rejected by alternative perspectives emphasizing *culture*, a fundamentally different form of *practical reason*, or a fatalistic theory of mere inertia and fossilization. *Second*, I have identified processes involving ambiguity emerging with increased coordination across the organisational and cognitive barriers that resulted from *differentiation* and *specialisation*. New conditions in the market and changes in the knowledge base require that different departments with different frames of interpretation – Marketing, Research & Development, Production – cooperate on development and innovation.

3.6.1. The relevance of rationalisation

I shall recapitulate a number of critiques against the rationalist concept of organisation, in order to discuss their relevance: whether they can be rejected, or if they are reasonable, whether the theory can be modified according to the critique, or whether it should be considered as falsified and thus rejected. I can already reveal that the latter consequence will not be regarded as justified.

	Based on	Examples	Relation between interpretation and reality	Role of language	Research attitude
Symbolic inter-pretivism	Interpretation (culture)	Weick, Schultz	Symbols – a separate, independent sphere of Meaning	Primary	Neutral
Competent practi-tioners	Experience (interpretation)	Lave & Wenger, Brown & Duguid (Powell?)	Functional, adaptive (nonverbal) 'interpretations'	Secondary	Affirmative
Bounded rationality	Experience (fallible)	March, Powell & DiMaggio	Dysfunctional, suboptimal	Secondary	Neutral (critical – based on rationality)
Ambiguity and differenti-ation	Interpretation	Weick, Powell, March, Knights & Murray	Focus on relations between different interpretations rather than reality itself	(primary)	Neutral

Table 3. Challenges to rationalist theories of organisations[59].

[59] This table illustrates the four basic approaches mentioned at the beginning of this chapter, which I shall summarize shortly in this footnote. The symbolic interpretivist approach argues that the cognitive interpretation (or culture) applied by an organisation is more relevant than, and prior to, organisational structure or environment – organisational action should be understood in terms of symbol and meaning rather than rational calculation. Another approach combines interpretation with an affirmative or functionalist concept of experience emphasizing that local or 'professional' communities-of-practice are competent beyond the superficial canonical formal procedures – experiential learning is regarded as the actual basic 'form of knowledge' in organisations. The third approach combines March's *disenchanted* concept of experience ('logic of appropriateness') with that of bounded rationality, seeing institutional routines as sub-optimal and the haphazard product of processes that are generally 'all-too-human' and all but rational. The fourth approach argues that an organisation is not based on a single unified 'culture', but hosts a variety of conflicting interpretations — implying an ambiguity (even political conflict) that undermines rational decision-making.

First I shall discuss shortly the two first counter-arguments presented in the introduction to the chapter: the 'symbolic-interpretivist' emphasis on meaning and 'culture' as a separate, independent sphere; and the more functionalist emphasis on competent, experienced practitioners. Then I shall treat the last two counter-arguments more extensively, by summarising the conclusions made in this chapter.

3.6.1.1. Symbolic interpretivism and competent practitioners

The emphasis on a separate – 'symbolic' – sphere of meaning is problematic, because it cuts off the relation to reality and thus disregards that all organisations operate in the same world, and to a large extent apply methods and theories developed by modern science. And Schein in *his* theory regards 'worldview' as an important element of organisational culture, which implies an orientation to reality and a potential for critique and falsification. Furthermore, the emphasis on the 'value' aspect of meaning (interpretation) characteristic to many of these theories (though not Schein) seems somewhat desperate and forced in modernity.

Theories emphasizing experience and competent practitioners, on the other hand, do not take into account the historical decline of experience, and the extensive reliance on modern science and rational calculation.

3.6.1.2. 'Real-life' organisations – an exception to the rule?

Comparing (and confronting) Weber and Adorno with March is difficult, because there is some degree of 'incommensurability' between a macro-level theory and a theory of organisations. On the one hand it is difficult to deny the neo-institutional argument about the shortcomings of all-too-human 'contentious bumblers' resulting in irrational or suboptimal solutions in the individual organisation. On the other hand the general theory of rationalisation as *the* central process driving the Western world is more compelling and relevant, and more convincing than the *dys*-functionalist and fatalistic image implied by neo-institutionalist theory. These two arguments are not 'easily' reconcilable. DiMaggio & Powell thus argue that functionalist theories at the macro-level do not rhyme with the organisational actors pictured by neo-institutional theory (and observed in organisational studies).

Exception to the rule?

One solution – reconciliation – would be to argue that irrational tendencies exist as an 'exception to the rule', and that (neo-) institutionalists 'for some reason' focus on – and over-generalise – irrational exceptions. This argument is unsatisfactory for (at least) two reasons. *First*, it seems to expand the notion of 'exceptions' to the extent that any universal theory is meaningless. *Second*, the empirical material has long since reached a quantity that cannot possibly justify the term 'exception'.

A step in the over-all process of rationalisation

Another tentative solution is offered here, which integrates methodological aspects. Organisational studies revealing inconsistencies and suboptimal solutions are not simply – in a long-term perspective – a neutral observation, but part of a process where problems are exposed, increasing the potential for modification and further rationalisation. Organisational studies thus constitute a 'critical voice' in the process of rationalisation – although this critique is obviously different from that practiced by critical theory. And researchers focus on irrationalities by necessity: it is the very *modus operandi* of (rationalist) research.

It could be argued against this attempt at reconciliation that it implies that there is a rich communication and interaction between researchers and organisations – an assumption that is difficult to recognize by both parties (perhaps more to be regarded as an 'exception to the rule'). Nevertheless, many organisational studies are carried out at Business Schools in some sort of cooperation with organisations and companies; and it can be argued that even when more theoretical studies are carried out separate from 'real-life' organisations, there must be a sort of 'communication' at a more abstract level, because it is fundamentally a subject-subject relation where theory implicitly must address the agents it describes.

3.6.2. Structural ambiguity

3.6.2.1. Complexity -> differentiation: variety of interpretations

Modern organisations are characterized by differentiation: an organisational Babel tower of different interpretations. One may distinguish between internal, local processes of differentiation, and organisation-external 'global' processes. On the one hand, local 'knowledge' and interpretations develop around specialized functions within the organisation, such as marketing, production and development. On the other hand interpretations in the organisation are imported from a variety of (scientific) disciplines and professions from outside of the organisation – and in this case the internal differentiation is inherited from a more universal tendency to partition knowledge into separate 'interpretations'. In both cases, differentiation can be regarded as a reaction to *complexity* in the environment: it is not necessarily based on the assumption that reality can be neatly partitioned into pure disciplinary domains, but on a more pragmatic will to focus on a limited set of 'parameters' in order to have a neat model (*ceteribus paribus*).

3.6.2.2. Differentiation: potential for ambiguity

This variety of interpretations within an organisation means that there is a great potential for ambiguity. This potential ambiguity can be regarded as a 'cognitive' cost associated with cross-barrier communication. The basic 'idea' behind differentiation as a means to reduce complexity is to avoid or minimize cross-barrier communication.

In principle, Development can 'take over' a product – or candidate – from Research without bothering about the internal processes and 'norms' of the researchers. Differentiation is characteristic of modernity – differentiation and (potential for) ambiguity cannot be nullified by enthusiastic praising of cooperating and communication.

3.6.2.3. Need for cross-barrier communication

The question is now why cross-barrier communication has become increasingly attractive *despite* the cost of ambiguity and other types of conflict. Three factors that seem to change the balance – between advantages and disadvantages – are emphasized here: need for innovation, development in industrial knowledge, and new technology.

The first argument thus presumes that companies are increasingly dependent on their ability to develop and market new products, because market conditions have changed: greater competition and demand for greater diversity in products. Internally, the development process can be sped up by ongoing coordination between involved departments, rather than separated in succeeding steps. While I generally accept the argument about increased emphasis on innovation, I remain suspicious about the implied rejoicing over the renewed infallibility of market economy and the alleged collapse of monopolies. It worries me that it is difficult to talk about 'need for innovation' without being reduced to a mouthpiece for ideologically infected clichés stumbling recklessly out of the keyboard.

The second argument emphasizes that the knowledge base of the industry is changing or developing rapidly, and that the sources of this knowledge are dispersed. New ideas, methods and technologies emerge outside the company's own R&D department: in other companies, in start-ups or universities unable to develop and market the product themselves. Or the internal R&D may develop ideas and candidates, which the company itself cannot market. Of course there is also the option of buying and selling ideas and technologies – thus maintaining typical market relations rather networks – but these early stages are often still quite uncertain, and cooperation is means to share the risks involved in development.

Finally, it is often argued that the development of information technology has changed the odds in favour of increased cross-barrier communication. It would be relevant to distinguish between two different versions of this argument. On the one hand, it is argued that computers have increased the capacity to deal with the complexity of organisational (production) processes, which makes it easier to coordinate across different functions, and to 'monitor business processes' as agued in BPR literature. This argument generally seems to suggest re-integration rather than networking (emphasizing the technology's capacity to reduce *uncertainty*). On the other hand, it is argued that communication technologies have now become sufficiently developed to support the more complicated organisational communication processes, such as those

involving ambiguity. This argument recognizes that cross-barrier communication is complicated by ambiguity and is a process of understanding, negotiation etc., and it is this perspective that is in focus in this thesis.

3.6.2.4. Network organisation: external vs. internal

In my focus on cross-barrier communication involving ambiguity between different interpretations I have generally collapsed two otherwise quite different phenomena. On the one hand the emphasis on communication across *internal* barriers within the organisation, between different departments and professions etc. On the other hand the question of organisational networks in the sense of communication and cooperation between different organisations. I maintain that there are common traits justifying this parallel, because in both cases there is often a 'clash' between different interpretations or cultures, and in both cases cross-barrier communication may support and speed up development. Nevertheless, some of the potential differences deserve mentioning:

Cooperation between different organisations may involve explicit conflicts of interest – potential competition, negotiation of conditions of the contract etc. – and the organisational framework is difficult to specify: there is no 'higher' authority corresponding to top management within an organisation. Of course, parallel problems may arise within an organisation: there are conflicts over resources, and internal relations may be 'market-like'; yet in this case, there is in principle a 'sovereign' level of authority.

Furthermore, there is an abundance of literature on the merits and disadvantages of (internal) project organisation, and it is problematic just to barge in on this domain referring only to a different strain of literature while claiming to have formed a new perspective. Yet I still find that the parallels justify that I span this phenomenon as well – although I recognize the need for further study of the domain literature.

3.6.2.5. Potential for universality and rational resolution of ambiguity

Given the nature of 'local' interpretations, what is the condition for resolution of ambiguity? Is there a potential for rational – understanding – resolution of ambiguity? Is this resolution of ambiguity, understood as a merger between different interpretations, 'permanent'? Have individual and particular interpretations been overcome?

One can imagine two ways of dealing with the increased ambiguity that has emerged with organisational networking. One scenario is a sort of vertical reintegration, where ambiguities are resolved by 'realignment' and tightening of the unitary, bureaucratic structure – this scenario corresponds to the view that organisational networks are temporary characteristics of industries undergoing a structural crisis, which will in due time be resolved by re-establishing traditional structures.

The other scenario emphasizes *ad hoc* resolution of ambiguity in individual projects. This does not seem to correspond with the idea of hermeneutic understanding as a merger and 'transcendence' of individual interpretations, because this result was not only ad hoc but implied a more profound change in interpretations – one that has implication beyond the actual project, even beyond the group of participants. On the other hand this dimension does explain why individual cooperation projects often develop into long-term 'network' relationships.

---

[i] One counter-argument to the emphasis on the role of (public) scientific knowledge is offered in the claim that today knowledge is no longer created in the 'ivory towers of academia', but by innovative, market oriented companies. Thus, Scarbrough et al. refers (Gibbons *et al.* 1994) for a theory of such a change in the 'mode of knowledge production' (Scarbrough *et al.* 1999). Gibbons et al. argue that the *conventional mode of knowledge production* – characterized by 'problems defined by academic community'; disciplinary knowledge'; 'homogeneity'; 'hierarchical and stable organizations'; 'quality control by the 'invisible college'' – is being replaced by a new model, characterized by 'knowledge produced in context of application'; 'transdisciplinary knowledge'; 'heterogeneity'; 'Heterarchical and transient organisations', that are 'socially accountable and reflexive'. Without knowing the full length of their argument (Gibbons et al.) I shall nevertheless offer a few remarks to problematize their thesis (and thus defend the thesis of scientification and rationalization). 1) Even if it may be true that innovations are fostered in profit-based companies rather than in universities, it may still be based on theoretical knowledge acquired by researchers educated at universities. 2) The contradiction *disciplinary* vs. *transdisciplinary* knowledge production does not suggest different, mutually exclusive 'modes of knowledge production'. On the contrary: transdisciplinary processes in organizations often depend on the specialized expertise supplied by disciplines or professions. (It is compelling to compare with Marx' argument, however: he argued that the new 'sciences of technology' would dissolve the specialization characteristic of craft production. Yet specialization persists, or rather: specialization has assumed a different form). 3) Finally, the historical thesis that knowledge was, 'conventionally', produced in the universities, is also problematic. Rather, there was a sharper distinction between theoretical and practical knowledge: theoretical knowledge had only limited practical implication.

4. The role and potential of intranets

The third chapter – the last theoretical chapter – examines the role and potential of intranet media. What is their capacity for resolution of, or dealing with, ambiguity (hermeneutic understanding)? To what extent do they support or inhibit processes of hermeneutic understanding? These questions will be explored via a cross-disciplinary approach. These arguments will then be related to classical discussions about the traditional medium of text, more or less corresponding to different levels in the richness hierarchy, in order both qualify the concept and theory of media richness by applying a different perspective on similar issues, and to identify new characteristics of electronic communication and computer networks compared with the traditional medium of text – how do these new media affect the status of writing and its relation to speech?.

4.1.1.1. Outline of the chapter

The chapter opens with a characteristic of intranet-based media, focusing on 1) *email* and to a lesser extent other text-based media for horizontal, inter-personal, interactive communication – media with a potential for 'colonising' new areas for written communication; and on 2) *hypertext*, a medium that may be regarded as complementary to email with emphasis on universalisation, 'capture' and sharing of information and knowledge rather than exchange of messages, besides its capacity for 'unrestricted' structuration and categorisation by links.

Next I look at the contemporary discussion of media richness. The richness of a medium is generally determined by its capacity for *feedback* (interactivity), variety of *cues* (or modality), degree of *personalisation* and variety of *languages*. However, while Daft & Lengel argue that richer media are better suited for resolution of ambiguity in a timely manner, I shall emphasize – with Sproull & Kiesler – the potential conflict between the need for an open, 'rational' process and the 'need for speed'. I admit that rich media offering a large variety of cues (sound, video) are convenient for conflict resolution and consensus making *in a timely manner*, but often at the cost of 'rationality', while the 'poor' text-based media (so far) characteristic of internet technology encourage critical verbalisation of frames of interpretation: in this case, communication mediated by 'poor' media is not impoverished, but emancipated.

I shall then look at more philosophical discussions of traditional media, oral vs. written communication and to some extent nonverbal communication (art). The purpose is on the one hand to compare these discussions to the previous one of media richness, and on the other hand to emphasize the particular characteristics of the new media. While text is traditionally *tangible* and *objectified* (orphaned), electronic text-based media are characterised by a high degree of interactivity (richer) and a paradoxical combination of *ephemerality* and potential for storage.

I suggest that organisations may be changed by three different changes associated with the new media:

Verbalisation: virtual communication requires people to 'put things in words'.

'Scripturisation': new areas of communication are being transferred from oral to written communication, as when people use a mail in stead of the telephone

Electrification: paper files are transferred to electronic files.

4.2. The affordances of Intranet media

An intranet is a local Internet with a firewall, where only a 'limited' number of people have access, usually the members of an organisation or company. While this restriction is a major difference from the principles of openness and universality characteristic of the 'real' Internet, an Intranet in a large, global organisation enables horizontal communication across internal organisational barriers in a degree that makes the Internet analogy quite relevant.

The technical foundation of the Internet is a set of protocols that enables communication between all computers irrespective of differences in hardware, software etc. The term *inter*net refers to the fact that these protocols provide a link between different (local) networks.

An intranet can be regarded as a platform that allows access to all local computer networks, and – in principle – to all information systems used in the organization. It can also be regarded as the *organisational* application of a technology, the Internet, the effects and potential of which has already been analysed in discussed in other areas.

4.2.1.1. Email and hypertext – two aspects of media

Internet technology provides a platform – whether the Internet or an intranet – that hosts a number of different applications. I shall begin with the two most prominent: email and hypertext, which represent two different aspects of media, either as a medium for communication between people (an interface), as a *subject-subject* relation, or as a medium for organisation of knowledge, for *representation*, a *subject-object* relation. These aspects correspond to different needs that the expected users have:

> "There are two major domains of concern for modern information workers: organizing the information with which they are dealing in ways that allow effective storage and access, and communicating and cooperating effectively with their colleagues about complex issues."(Conklin & Begeman 1989)

The objective is to clarify, how these media are affected by ambiguity, whether they can 'contain' ambiguity, and how well they support resolution of ambiguity.

4.2.2. Email – (interactive) communication

Email is one of the main applications of an Intranet. Obviously, emails are also used for communication outside the intranet, but the application is here regarded as part of the intranet to emphasize that there is more than web and hypertext to this technology, and also because email has significantly affected organisational communication. Email is a *new* medium, because it is text-based *and* highly interactive: the (potential) response time is much shorter than a postal letter; yet email is still more 'flexible' in response time than the telephone[60].

4.2.2.1. Linking across organisational barriers

Email is associated with an increase in communication and coordination across organisational barriers. As already argued in the previous chapter, cross-barrier communication cannot be regarded as a new *result* of new technology, but it has created a new *potential*, which corresponds to the organisational need for coordination across functional specialisation etc.

4.2.2.2. A new step in the scripturisation of communication

This new medium affects the traditional balance between oral and written communication. There is a relative increase in written communication, because communication is transferred from oral to written communication. The written word enters – or colonizes – new areas of communication.

Previous steps of scripturisation in organisational communication

As already suggested, the development is a new step in a historical tendency towards written communication[61]. A tendency that is essential to modern organisation. The formal procedures described in the previous chapter are preserved as *written* rules – there is a strong association between the *formal* and the *written*. The replacement of the oral command from the employer to the employee by written rules is characteristic

[60] Practical in communication across different time zones, i.e. between Denmark and U.S, and it enables callers to contact at any time. On the other hand, this feature provides a 'social buffer' (see p. 144): and email does not have the 'power' of a phone call, which automatically puts the caller in charge from the beginning (Emails can be stored and ignored).

[61] Although one might argue that the telephone was one step *away* from written communication: telephones allowed oral communication over long distances and thus *replaced* communication via written letters.

of rationalisation. Organizations archive 'communication' documents, intending to preserve communication as memory, and to document decisions. Litterer and others see communication, coordination and documentation as *the* central feature of the modern organisation (Litterer 1961).

The historical extension of (colonisation by) written communication has stopped at various barriers, as illustrated by the example of management information systems. MIS's were expected to support management by providing updated and integrated information. Yet it turned out that managers often prefer oral communication: "managers typically prefer shorter, oral reports to longer written ones" (O'Reilly *et al.* 1987). And the theory of media richness, presented in the following section, suggests that the poor medium of writing – characterised by low feedback and lack of nonverbal cues – is inadequate for dealing with ambiguity. Furthermore, informal communication in the organisation is traditionally oral.

New areas

The features ('affordances') of electronic media open up for the adoption of written communication in new areas. Because computer networks allow a form of written communication that is highly interactive, people feel encouraged to communicate in writing, where they would previously have preferred oral communication, i.e. by using email as an alternative to a phone call.

Fossilization of communication

As an important consequence of this 'extension' of written communication – a process that may be labelled the *sedimentation* or *'fossilization' of communication* – these acts of communication now remain available as a mechanical *memory*. Thus, an old email can in principle be used to document (informal) decisions and agreements. They may also be use to preserve arguments and rationales.

This potential, however, is weakened by the fact that email is still more ephemeral than traditional letters, as argued by Sproull & Kiesler (see p. 144). Emails disappear or a difficult to retrieve for other issues. And they tend to differ in style and composition from traditional written communication: emails are more context-dependent, grammatically more 'sloppy', and shorter than paper-based letters. But these difficulties emphasize the perspective on email as a 'trade-off' between the classical categories of oral and written communication: email is accepted in informal communication because of its (perceived) ephemeral character.

The distinction between communication and memory (archive), which was implied at the beginning of this section, is blurred or changed by computer media

4.2.2.3. Related technologies

The effect seems mostly due to email, but internet technology also offers two other interactive, text-based media. Like email, *discussion groups* (BBS) support asynchronous communication, but in this case the correspondence is open to other members of the group and not just an exchange between two people. Chat (IRC – internet relay chat) supports synchronous communication between a large number of participants.

Another example of the change from oral to written communication is the potential for *automatic* capture of oral communication (logs, tapes), which can then be preserved as transcripts (Culnan & Markus 1987). This aspect may be less significant and more hypothetical, however. When oral communication is *automatically* preserved, the resulting texts will suffer severely from the (loss of) contextuality characteristic of oral communication, which depends largely on 'situated' references to time ('now', 'yesterday') and place ('here', 'over there') that are easily understood by the participants during the discussion, but will be difficult to decode later (and for outsiders). The same problem is relevant for email communication, but probably less severe: when people *consciously* address/use a textual medium, they will have to solve or avoid problems of contextuality, by omitting or reducing temporal and spatial references – as we have already learned to avoid depending on index fingers and nods of the head in telephone conversation (spatial reference).

4.2.2.4. Further 'enrichment'?

Two arguments may be raised against the focus on email and written communication. *First*, it may be argued – based on the theory of media richness – that email is still a relatively poor medium that is insufficient in particular types of communication (and tasks) such as ambiguity, negotiation and consensus building, because it does not provide the necessary variety of cues, and because the response time is still too slow. By encouraging cross-barrier communication the medium has so-to-speak opened a Pandora's box of problems that it proves incapable of handling.

Second, it may be argued that the focus on email is 'historical' and simply lacks behind technological development. Internet technology in general has in many aspects moved beyond its dependence on *text*, changing the focus from hypertext to hypermedia, and supporting transmission (as email attachment) of 'rich' data: graphic, images, sound, movies. And even though it is still insufficient to support *interactive* video media via intranets, such as video meetings, that would certainly be the next step.

The subsequent sections of this chapter, after the presentation of hypertext, will cast more light on the question of the capability or 'affordances' and possible inadequacies of electronic communication.

4.2.3. Hypertext: universality and structure

The 'web' hypertext system as implemented in Berners-Lee's World Wide Web is the other main application of the intranet. Two aspects of the web should be emphasized. First, it is a static medium characterized by openness and universality rather than interactivity. Second, the hypertext links provides a particular means for structuring and organising the content.

4.2.3.1. Openness and universality

Intranet technologies are often embraced as a platform for 'corporate' information to be shared by various departments. This perspective emphasizes the 'universalising' aspects of the technology. While it may be used as support for hierarchical bureaucratic organisations, it is also embraced as a 'counterbalance' or focal point for a 'networked' or distributed organization.

> "Rather than the old inflexible hierarchical pyramid, network organizations demand a flexible, spherical structure that can rotate competent, self-managing teams and other resources around a common knowledge base." (Miles & Snow 1995)

I shall return to the inherent problems of this vision – although they are obvious in the light of the previous discussion of the ambiguous knowledge base of organizations.

'Distribution' replaced by archive, 'sharing'

Hypertext enthusiasts emphasize the potential for *capture* of knowledge (communication) – regarding the medium as a means for protection against a versatile memory, a countermeasure to the ephemerality of electronic communication.

> "in an exciting place like CERN... [y]ou have so many people coming in with great ideas, doing some work, and leaving with no trace of what it is they've done and why they did it the whole organisation really needed this. It needed some place to be able to *cement, to put down its organisational knowledge*." (Berners-Lee 1996) (*my italicisation*)

While text-based, interactive media such as email, chat, and discussion groups support 'capture' by transferring oral communication to text, hypertext converts vertical and horizontal communication – in the sense of physical transmission – to public files. Web technology changes the nature of *distribution*. 'Distribution' by email of documents, deadlines, decisions etc. is replaced by web publication. Instead of sending copies to readers/recipients, people (or departments, or other) publish and store information on the web. Correspondingly, readers must access such a site, be aware of changes, news etc., instead of receiving information. And this is one reason why the ability to navigate on the intranet is important.

This change in communication patterns is often described as one from 'push' to 'pull'. It is based on the potential for having only one copy of a document on the network, because 'access'[62] has become so easy: People don't have to arrive in person at the library of Alexandria to read the only exemplar of Plato's dialogues; and employees do not have to physically visit company headquarters in order to read the standard operating procedures.

The integration of distribution, publishing and storage also creates a dilemma, however. Using intranet for continuous and instant update of information and communication of news - *and* removal of outdated information – emphasizes the dynamic and ephemeral character of the electronic medium at the cost of the potential for archives and 'memory': 'old' information seems to vanish and may be difficult or impossible to retrieve.

Dislocation: texts are separated from their local (situated) context

When organisational documents developed for – and sometimes by – one department are made accessible on the intranet, they are potentially separated from their 'local' context. This ability of text to go beyond their context is of course not unique to intranets etc., but a basic characteristic of writing, which will be elaborated later in this chapter (p. 162). Historical texts survive the historical period in which they were written. The very concept of history is tied to writing: before writing, before someone wrote about it, there was only *pre*history. It is reasonable to assume that this process of dislocation and de-contextualisation is accentuated or magnified with the potential for publishing documents – 'sharing' information and knowledge – on the intranet.

When a text is taken out of context, it will cause a 'shock' of (hermeneutic) misunderstanding – ambiguity – in the mind of the 'foreign' reader, who will have to engage in a process of *understanding* by learning about the original context or frame of interpretation, and by becoming conscious about the reader's own frame (mostly that of his department etc.).

There seems to be two approaches to this problem. Either the organisation can try to avoid or at least reduce by establishing corporate standards and concepts. Or it may support the process of understanding by providing and emphasizing cues about the organisational context of the document.

---

[62] Of course the term 'access' is misleading, because web users do in fact receive an electronic copy on their own computer. But the possibility for exact copies of data changes the very meaning of *location*, creating the illusion of 'moving' around on the Internet or Intranet (in *cyberspace*).

4.2.3.2. Links: an unconstrained means of structure

The link is the basic feature of hypertext. Hypertext is primarily a tool for *organisation* of knowledge. The hypertext link is a meta-level sign; a 'tool' intended to capture a type of knowledge beyond words, sentences, and texts.

Hypertext and databases

> "I needed to be able to keep track of things, and nothing out there, none of the computer programs that you could get, the spreadsheets and the databases, would really let you make this random association between absolutely anything and absolutely anything, you are always constrained." (Berners-Lee 1996)

Berners-Lee, the inventor of WWW, thus emphasizes that hypertext allows a network without structure or standardization – unconstrained, for instance, by the type definition requirements of a database, which can be regarded as another technical solution to the problems that Vannevar Bush aimed to solve with his early, pre-computer idea for a hypertext system. Vannevar Bush envisioned a hypertext system based on *selection by association* as an alternative to the cumbersome retrieval process of *selection by indexing* characteristic of traditional hierarchical filing systems, but since his article in 1945, database technology was invented, providing another powerful alternative. Yet as Berners-Lee implies the advantage of databases comes at the cost of the difficulties in fitting all records into one set of types.

Private tool vs. shared file

Like Bush, Berners-Lee regarded hypertext as a *personal* tool, with the emphasis on subjective *associations*. But as illustrated by the above citation, Berners-Lee also emphasized the idea of moving beyond the personal sphere by linking different 'files' into one shared, universal hypertext, thus focusing stronger on the potential for intersubjectivity and universality – although it is true that Bush also envisioned inter-subjective knowledge sharing, namely as exchange of 'trails' (individual hypertexts). By implementing his technically simple hypertext system, WWW, on the worldwide computer network, Berners-Lee's gained the advantage of *universality* – the potential access to texts all over the world – over previous hypertext systems (and on a smaller scale, *intranets* offer hypertext – and hypermedia – beyond a limited working group).

In some respects, internet technology can be understood as characterised by a collapse or (con)fusion between different 'scopes': from the *personal* tool over the potential for *group*ware to the Internet ideal of *universality*. This triangular perspective corresponds to the different traditions in the history of hypertext research and design. Various authors thus envision hypertext at three levels: *individual* tool (Bush 1945); *group* knowledge (Engelbart *et al.* 1973;Engelbart & Lehtman 1988); *universally shared knowledge*/'docuverse' (Berners-Lee 1996;Berners-Lee *et al.* 1992;Nelson 1980).

> "... where Bush conceived his memex as chiefly a private desk for working with a personal microfilm collection, we see ours as a potentially universal system for both public and private use." (Nelson 1980)

These levels correspond to quite different, and sometimes contradicting needs.

Hypertext offers an alternative to the principle, inherent in database technology, of a logical structure as a common, unified 'point' of reference: a *network* of individual hypertexts, each organised and structured according to its own logic (framework). The personal associations underlying the links designed by one may be incomprehensible to others.

Intranet structure – chaotic or ambiguous

Intranets may expose a similar problem, though with a different scope. The individual sites of an intranet are seldom personal, but mostly belong to a particular unit and are structured according to its particular frame of reference or interpretation. This adds up to a total intranet that is chaotic or at least *ambiguous* in structure.

Hypertext has the *potential* for a more systematic intraweb, but the technology is basically more flexible – like Berners-Lee, authors often emphasize the lack of constraints: "hypertext eases the restrictions on the thinker and writer", Conklin thus observes (Conklin 1987), corresponding to Berners-Lee's argument above. The question is whether organisations should exploit the possibility for structure and hierarchy, or whether this would conflict with the 'nature' of the technology. Conklin discusses this dilemma of structure in relation to hypertext, and the considerations are relevant to intranets as well.

On the one hand he does recognize some need for unstructured *referential* links – corresponding to Bush' associative links – and admits that any hierarchy has the disadvantage of carrying an implicit assumption, which was implemented from the beginning and may have since lost its legitimacy:

> "the great disadvantage of any hierarchy is that its structure is a function of the few specific criteria that were used to create it... The creator of a hierarchical organization must anticipate the most important criteria for later access to the information." (Conklin 1987)

This problem is quite similar to the problems associated with interpretations and 'basic assumptions' in organisations. In an intranet, a hierarchical structure (local or not) may be regarded as the manifestation of such a frame of interpretation. The interpretation is embedded in the intranet structure.

On the other hand, Conklin basically emphasizes the advantages of implementing (hierarchical) tree structure in hypertext systems, based on what he calls *organizational* links: "Organizational links connect a parent node with its children and thus form

a strict tree subgraph within the hypertext network" (Conklin 1987). Corresponding to the principles of rationality presented in the first chapter, emphasizing a unitary system (p. 28), he argues that hierarchical structure supports abstract thinking:

> "abstraction is a fundamental cognitive process, and hierarchical structures are the most natural structures for organizing levels of abstraction." (Conklin 1987)

The network structure with its emphasis on a filing system that is easy, fast, convenient and without constraints conflicts with the ideal of logical thought as characterized by *hierarchy*, *coherence* and *constraints* – as a guarantee for progressive thinking by elimination of contradictions and inconsistency. Lack of constraints is 'liberating', but also a potential threat to the possibility for navigating the intranet, and to its usability in general.

In his recognition of the limitations of single hierarchy, however – and one may add that the idea of a universal organisational interpretation (and conceptual hierarchy) poses similar problems – he suggests implementation of different, orthogonal, structures imposed on the same material:

> "One solution to this dilemma is to allow the information elements to be structured into multiple hierarchies, thus allowing the world to be 'sliced up' into several orthogonal decompositions." (Conklin 1987)

This may be compared to the idea of establishing different portals on the intranet. *Portals* offer a guided access to the intranet based on a particular set of categories and can be tailored to different functions or departments (perhaps even personalised). The comparison is also somewhat misleading, however, because portals do not in principle affect the actual structure of the intranet (or *Inter*net).

Even when not based on a deliberate strategy, this perspective is probably the most adequate understanding of many intranets. Even if they lack a unitary hierarchical structure, intranets are not necessarily chaotic, but *ambiguous* in the sense that they reflect the ambiguities in the 'knowledge base' of the organisation. Different sections of the intranet are structured according to different principles – resulting in an 'ambiguous' intranet as a whole, making it difficult to navigate across different sections. This perspective emphasizes the problems of the idea of a *networked organisation with a common knowledge base* (see p. 134): Miles & Snow seem to disregard the fact that organizational 'networks' – or differentiation in general – are not only *structural*, but also cognitive: they do not have a common knowledge base, because they have different frames of interpretation, and the content would be highly ambiguous.

Embedded, unidirectional links

Further adding to the potential for chaos, the web is based on a particular type of hypertext links: *embedded*, *unidirectional* links, the advantages and inadequacies of which are emphasized by Grønbæk *et al*:

> "The biggest advantage of the embedded links in WWW is their simplicity: there is no need for a specialized link server, and the WWW only has to manipulate tagged ASCII files. This simplicity comes at a cost however, as only the owner of a document can create links from the document. At the same time links to specific parts of a document can only be made if there are already target tags at the desired point in the document. It is impossible to see which documents point to a document, and there can only be one set of links from a given document. If two users wish to have different links from the same document, they must maintain two copies of the document, identical apart from the different links. This requires extra maintenance, if the original document is later changed." (Grønbæk *et al.* 1997)

Thus, the web is virtually based on 'goto' commands (unidirectional links), a feature banished from structured programming languages. You can only move in one direction, not move back (not via the link, at least – it is possible thanks to the browser 'memory'): it is impossible to know, based on a web page itself, how many 'foreign' links point to a certain page – which makes it very difficult to maintain, if addresses or content is changed, because the 'linking' pages cannot be notified. Furthermore, the fact that WWW links are embedded restricts the potential as a *personal* tool: one person cannot link *from* a 'foreign' document on the Internet/intranet.

As mentioned above, focus now tends to move from hyper*text* to hyper*media*, because intranet increasingly supports 'richer' data. The question of media richness ('rich data') is somewhat different under this perspective.

4.3. Mediated communication – impoverished or emancipated?

In order to judge the potential of intranet media for supporting processes dealing with ambiguity it is relevant to look at the concept of media richness. Two different, almost conflicting views on media are prevalent in studies in organisational communication, as well as discussions about the Internet etc. To emphasize the extremes, electronic communication is regarded as either *impoverished* or *emancipated*. Essential in this discrepancy is a difference in view on nonverbal cues, seen as either useful for changing understanding, or as a distorting signal about status and hierarchy emphasizing social order at the cost of expertise etc.

4.3.1. The theory of media richness and media/task fit

Daft & Lengel argue that tasks or processes involving reduction of equivocality (or ambiguity) – "exchange of opinions in order to clarify opinions, defining problems and reaching

agreements" (Daft & Lengel 1986) – require rich media. While reducing *uncertainty* is primarily based on gathering of data, emphasizing the *amount* of information, reducing equivocality requires *richness* of information. This process operates on a meta-level and requires a meta-language.

Media richness is defined as *the mediums capacity to change understanding within a time interval*. This emphasis on time is crucial to organisational decision making, as one may recall from the definition of bounded rationality. (One may also recall that Gadamer characterized hastiness in judgment as a primary source of inhibiting prejudices). Rich media support 'communication transactions' that overcomes different frames of reference or clarifies ambiguous issues. Huber & Daft suggests a hierarchy of media according to richness:

> "According to this perspective, face-to-face interaction is the richest medium, followed by video-phone and video-conferencing, telephone, electronic mail, personally addressed documents such as memos and letters, and formal unaddressed documents such as bulletins and flyers." (Huber & Daft 1987)[63]

This list illustrates the four dimensions of the richness hierarchy. Email is richer than letters (snailmail) due to the capacity for *feedback*; videophone is richer than the telephone due to the *variety of cues* and channels; and memos and letters are richer than bulletins due to the degree of *personalization*. The fourth dimension, *language variety*, is not clearly represented, except perhaps implicitly in the more formal language of bulletins. These four dimensions require a more extended presentation and discussion. Unfortunately, Daft & Lengel themselves are not very specific about relating frames of interpretation and reduction of ambiguity to media capacity.

4.3.1.1. Capacity for immediate feedback (*time*)

This dimension emphasizes *interactivity*: i.e. email supports a higher degree of interactivity than *snailmail*, while face-to-face and telephone supports synchronous interactivity. Immediate feedback enables and supports a *dialogue* that allows communication partners to explore ambiguities and disagreements.

---

[63] Yates & Orlikowski criticize such categorisations for confusing genres with media. "Confusion arises when researchers compare genres of communication (e.g., memos or bulletins) with communication media (e.g., electronic mail or fax). Genres, however, may be physically created, transmitted, and stored in various media" (Yates & Orlikowski 1992). They thus introduce the term 'genre' to incorporate 'social' and non-IT aspects, and emphasize a distinction between genres on the one hand, and technology as *storage* and *channels* on the other. They may have a point, but I also think that they exaggerate the distinction between media and genre, thereby reducing 'media' to a narrow technical term.

4.3.1.2. Variety of cues and channels provided

In technical terms this concerns the 'bandwidth' of the medium. *Nonverbal cues* further supports dialogue by enabling use of illustrative gestures and voice intonation, and by providing rich feedback about the reaction from the listeners – i.e. agreement or disbelief – and support attentiveness to those elements of an argument, where other participants remain sceptical or unable to understand – and one can focus on explaining (or discussing, justifying) those elements.

Yet these examples also illustrate how 'nonverbal cues' support a rhetorical speaker – in his attempt at persuading rather than convincing – instead of a dialogue. They are useful indicators for the skilled speaker who may also employ techniques to manipulate his audience and avoid rational critique, as in the classical advice: 'in lack of argumentation, raise the voice!' In this emphasis on the potential on the potential of rich media for asymmetrical communication there is a parallel to Benjamin's argument that the movie actor has no 'control' over his audience and is exposed to the detached judgment of the viewers. Compared with the theatre stage, the 'poorer' medium of film deprives the actor of his usual means to affect and 'manipulate' the audience:

> "[D]er Filmdarsteller, da er nicht selbst seine Leistung dem Publikum präsentiert, die dem Bühnenschauspieler vorbehaltene Möglichkeit einbüßt, die Leistung währen der Darbietung dem Publikum anzupassen. Dieses kommt dadurch in die Haltung eines *durch keinerlei persönlichen Kontakt mit dem Darsteller gestörten Begutachters*. Das Publikum fühlt sich in den Darsteller nur ein, indem es sich in den Apparat einfühlt. Es übernimmt also dessen Haltung: es testet. Das ist keine Haltung, der Kulturwerte ausgesetzt werden können." (Benjamin 1998) (*my italicisation*)

Benjamin's example illustrates the aspects, not only of nonverbal cues, but also of personalization: The audience assumes a role of *testing* spectators, undisturbed by any personal contact with the actor.

I admit that nonverbal cues do not merely support the speaker, but also the listener: it is often emphasized that voice intonation may indicate lying. Yet Short *et al* add a curious twist to this argument by suggesting that this sound-based indicator may drown in *richer* media: "face-to-face communication ... distracts communicators from … vocal cues that might indicate lying" (Short *et al.* 1976) cited in (Culnan & Markus 1987) – implying that one lies better with the face than the voice.

In a critical review of literature focusing on the 'filtering' aspect of media – corresponding to media richness – Culnan & Markus observe that nonverbal cues have three main functions:

1) *Regulation of interaction*: eye gaze and shift in voice intonation are used to indicate turn-taking, and this theme is a major occupation for studies in the

Conversation Analysis-tradition(Culnan & Markus 1987;Hutchby 2001). It has been expected that mediated conversation should suffer from the lack of such cues, yet empirical studies have not confirmed this to be fatal. Conversation partners develop alternative means of regulation – although *chat* groups may experience some problems (Hutchby 2001).*Perception of communication partners*, as illustrated in the discussions above. Short *et al* have suggested a theory of social presence, according to which media differ in their "capacity to transmit information about facial expression, direction of looking, posture, dress and nonverbal, vocal cues." (Short *et al.* 1976)

3) *Awareness of social context* (Culnan & Markus 1987).

4.3.1.3. Degree of personalization

This dimension refers to potential for adapting the 'message' to the specific conditions and needs of a particular recipient, as emphasized by Sepstrup:

> "Effektiv information er så individuel og *selektiv* som mulig, fordi det giver størst mulig viden om modtagerne. Den mest effektive form for kommunikation er samtalen. Hvis det ikke var for *omkostningerne* per kontakt, ville den personlige samtale være den ideelle form for påvirkning." (Sepstrup 1999)[64]

Sepstrup perspective on media is somewhat different, however. He discusses various media from an explicit, asymmetrical 'view of the *sender'*, as a means for someone to 'get the message through' to the recipient, to *affect* the recipient.

4.3.1.4. Language variety

This refers to languages of different degrees of formalization, and the need to combine and shift between i.e. numerical text and natural language.

On the one hand there are significant advantages in formalized languages, i.e. mathematical processing of numerical data, standardized databases etc. 'Rich' representations can be useless and must be reduced in order to specify logical arguments and identify contradictions. Some degree of formalization is necessary, i.e. for logical expressions or models.

On the other hand, a formalized language can inhibit problem solving when dealing with equivocality. Language variety enables expression of frames of reference.

---

[64] "Efficient information is as individual and *selective* as possible, because it provides the most knowledge about the recipients. The most efficient form of communication is the dialogue. If it wasn't for the *costs* per contact, the personal dialogue would be the ideal form of influence."

Reduction of equivocality – *understanding* (‘*verstehen’*) – operates on a meta-level and requires natural language[65]. Sometimes, sentences in formalized language must be criticized and discussed in natural language, because it has become necessary to question the very framework in which formalised sentences are embedded.

It may now be possible to understand the somewhat paradoxical argument that rich media support clarification. One would assume that the result of clarification must be something *explicit* and largely independent of nonverbal cues. One may also recall Weick’s refusal to associate reduction of ambiguity (equivocality) with clarification. However, rich media – including nonverbal cues – support the intermediary *process* of clarification, and that clarity in some cases depends on natural rather than formalized language.

4.3.2. Communication emancipated

The theory about media richness and task/media fit has been subject to much critique. An influential critique is provided Sproull & Kiesler, who have tried to modify the theory, but to a large extent have also contradicted it.

As emphasized previously, Sproull & Kiesler distinguish between two main effects of computer networks: both *linking* and *buffering*. (These are also the essentials of *virtual teams*). While the technology enables communication across geographical and organisational barriers, the use of media (text) also prevents immediate development of strong social ties in a group – ties that bias rational criteria in information processes. This argument refers to a *social* dimension of buffering or intermediation: whereas media, including language, is defined by the fundamental intermediation between *subject* and *object*: mediation in relation to a task or an object, Sproull & Kiesler’s argument draw attention to the intermediation between *subject* and *subject* – something that is also essential to Adorno. It is this social aspect of *buffering* that implies a critique of the richness hierarchy.

---

[65] Proponents of the (positivist) *logical paradigm* of language argued that natural language is too broad a category that does not adhere to criteria of logic, but allows for meaningless or ‘ambiguous’ (not in the specific sense used in this thesis) sentences, contradictions etc. – and thus cannot be the judge over i.e. scientific knowledge. It is often argued that philosophy must respect science and restrict itself to exploring its foundation and ‘cleaning up’ inconsistencies etc. The history of science brings numerous examples of philosophers’ problematic attempts to speculate about matters that are better treated by scientists – generally, the development of science has ‘pushed back’ philosophy from most areas. (And Habermas critique of hermeneutic understanding insists that this ‘form of knowledge’ has its limitation, that its validity is restricted to certain areas).

4.3.2.1. Social buffering increases rationality

Basically Sproull & Kiesler argue that the tendencies to groupthink – which may distort the rational potential of problem solving processes, as argued in the first chapter – are strongest in face-to-face meetings, and that use of (relatively poor) text-based electronic media may neutralize or inhibit such irrational tendencies. This also implies a critique of rich media, because they provide some of the nonverbal cues on which group members rely extensively for 'social information' about status and hierarchy. This argument confirms the importance of nonverbal cues – referred above – for information about communication partners and social context, but with a 'power' twist: social information is *inhibitive* to critical rationality. Conversely, Sproull & Kiesler argue that attention to these factors decreases with 'poorer' media: *Text* – "the primary medium of electronic mail" – "removes dynamic personal information and feedback" (Sproull & Kiesler 1991) – to the benefit of rational debate. Sproull & Kiesler further argue that electronic group members are not only less attentive to status and hierarchy, but to social convention in general, and thus less polite and less eager to reach consensus.

Ephemerality

This is a result not only of the lack of cues (and feedback), but also of the perceived *ephemerality* of email communication:

> "Although computer-based communication systems may permanently archive all electronic messages, people perceive the experience of sending and receiving messages as an ephemeral one. The immediate experience is conveyed by fingers moving on a keyboard and phosphor flickering on a screen; messages appear and disappear with the touch of a button… When people perceive communication to be ephemeral, the stakes of communication seem smaller. People feel less committed to what they say, less concerned about it, and less worried about the social reception they will get." (Sproull & Kiesler 1991)

It may seem curious that email should be *more* ephemeral than verbal communication: text is generally more tangible than speech, one would object. One generally emphasizes the *tangibility* of text, along with it's potential as an aid to memory (individual or organisational) (Conklin & Begeman 1989). To some extent this paradox may be explained by the design of earlier mail programs, where storage, categorizing of, and access to old emails was less straightforward than today. Yet the paradox of 'ephemeral text' also illustrates the limitations of seeing a medium as a 'channel' with varying degrees of filtering: messages are not merely sent from sender to receiver, but also *stored*. Culnan & Markus emphasize this aspect when making a point in apparent contradiction with Sproull & Kiesler (although referring to transcripts and not email): "A transcript turns each utterance into a public stand to which others can easily refer at later points in time" (Culnan & Markus 1987).

Sproull & Kiesler's argument makes more sense, however, if one accepts that 'ephemerality' refers not only to the 'object' of communication, the text itself, but also to the context: one has only a vague perception of other participants and their surroundings, as further argued by Sproull & Kiesler:

> "There are no tangible artefacts like someone sitting across a desk or ever growing piles of paper or bulging filing cabinets to remind people of their participation in communication exchanges. The lack of tangible artefacts and perceived ephemerality cause people to lose mental sight of their communication partners." (Sproull & Kiesler 1991)

The point is that verbal face-to-face communication can be less ephemeral and more tangible than text messages in electronic communication, because what has been said has already caused visible and 'irreversible' reactions in the other participants – reactions that also exist in electronic groups but are not *perceived* by the speaker (or other members), and can more easily be ignored. The apparent contradiction with Culnan & Markus' point about the 'public stand' may be resolved by a clear distinction between the 'immediate' effects within the group, and the ('public') effects *beyond* the group: in Culnan & Markus' argument, group dynamics is 'dissolved' and exposed by the transcripts.

Sproull & Kiesler thus argue that the ephemerality of email communication reduces social *commitment* from the participants, which increases the potential for rationality and thus may improve their results[66].

Benjamin: technology, art and the dissolution of aura

There are some parallels between Sproull & Kiesler's emphasis on *buffering* and *ephemerality*, and Benjamin's theory of the role of technology in the dissolution of *aura*. Benjamin argues that the technical development, which makes it possible to make multiple near-perfect copies of a piece of art, changes both human perception

---

[66] *Lack of authenticity (and honesty)?* Others may emphasize *negative* and irrational consequences of ephemerality and decreasing attention to social convention: i.e. people may feel less inhibited from *lying*, resulting in dubious *authenticity* in electronic communication (i.e. people have false identities etc.). Compare pragmatic criteria for communication (incl. Habermas). One counter-argument would be that others will generally be less inclined to believe you, and thus will not be deceived. And perhaps one could refer to Popper's argument about the irrelevance of the *source* of knowledge: we do not have to fear the source, as long as 'candidates' for knowledge remain exposed to rational critique. Nevertheless Habermas and *pragmatic* philosophers of language seem to emphasize *authenticity* in communicative rationality: people should be honest when referring their own opinions and feelings. Obviously, authenticity and 'commitment' is crucial in electronic groups that are expected to deliver some result.

and the very status of art by dissolving its aura. Aura is defined as something essential to a 'pre-modern' world; it is a 'sense of belonging', of being part of a traditional context. Before its 'technical reproducibility', the aura of a work of art was tied to its *uniqueness* and *tangibility* ('Dauer'), which established a *distance* to the observer:

> "Einmaligkeit und Dauer sind [im Bilde] so eng verschränkt wie Flüchtigkeit und Wiederholbarkeit [in der Reproduktion]." (Benjamin 1998)

The aura evaporates when a work of art is brought 'closer' to the observer by improved technical reproduction, which destroys uniqueness (by repetitiousness) and dissolves *tangibility* (into *ephemerality*) – art can be 'perceived' outside museums, and without the awe-imposing effect of these 'temples of art'. To Benjamin, ephemerality is something positive, a mental 'emancipation' from aura (and experience). Instead of the bond (commitment) to the traditional aura, *detachedness* becomes a characteristic of the modern condition – and a precondition of an emancipatory practice.

Benjamin's theory of evaporation of aura as a fundamental process - which is not merely the effect of technology[67] - is a clear parallel to Weber's theory about the 'disenchantment' of the modern world.

It may seem paradoxical when Benjamin thus argues that the technical *mediation* (film) brings the object (of art) *closer* – as in the example of the movie actor mentioned previously – but the point is that the physical proximity of the actor in a theatre is associated with auratic distance, the unreachability of the actor. Here is a parallel to Sproull & Kiesler's argument that the electronic mediation ('distance') reduces the 'distance' in terms of status and hierarchy – while loosening the strong social ties characteristic of a face-to-face group. One may also compare Derrida's argument that the power exercised by the spoken word can be much more 'totalitarian' than the one exercised through writing (referring to Gorgia, Plato etc.):

---

[67] Adorno criticizes Benjamin's essay about art and technology: he does not share the optimism regarding technology, and he cannot accept the inherent disregard of art as mere ritual. He is also very critical of – 'not impressed with' – Benjamin's category of detachedness: "derudover vil teorien om adspredelsen, trods dens chokagtige forførelse, ikke overbevise mig. Om ikke andet så af den simple grund, at i det kommunistiske samfund vil arbejdet være organiseret således, at menneskene ikke mere vil være så trætte og ikke mere så fordummede, at de har behov for adspredelse" (Adorno 1994). (His argument here – before World War II and the *Dialectics of Enlightenment* – is very Utopian. I suppose he argues differently 10-20 years later, but he always remained critical of the idea of 'detachedness', i.e. in his characteristics of the 'private sphere' as inherently defined and restricted by Totality...). Yet, he finds the concept of aura and its evaporation useful.

> "La dynastie de la parole peut être plus violente que celle de l'écriture, son effraction est plus profonde, plus pénétrante, plus diverse, plus sure." (Derrida 1972)

4.3.2.2. The virtues of (textual) virtuality

Electronic communication thus has certain characteristics, which in particular situations give electronic groups – or 'virtual teams' – some advantages over 'physical' ones (and some weaknesses as well):

Ignore faulty reasoning – focus on the task

> "They will more often ignore faulty reasoning promulgated by people who, face-to-face, have good social skills or organisational status" (Sproull & Kiesler 1991).

Members of electronic group are less inclined to recognize a leader status, and they tend to focus more on the issue, and less on each other.

> "media appear to reduce consensus about leadership and to increase the focus of participants on the task at hand rather than on the individual members of the group." (Strickland et al., 1978), cited in (Culnan & Markus 1987)

Whereas *face-to-face interaction*, "[b]y directing too much attention toward the communicators, ... may lead to ineffective task outcomes" (Short et al., 1976). In other words, the *ephemerality* due to media only concerns the communication partners and the task at hand, apparently not the task or issue.

One may ask whether this emphasis on 'the task' does not exclude situations ambiguity. Does not ambiguity and hermeneutic understanding require that one must shift focus from the 'task at hand' and instead try to understand the underlying interpretations of the communication partners? Does this not imply that it is *necessary* to focus on the communication partners? Only to some extent: recall Gadamer's argument that understanding is not a question of psychology, not a question of revealing private, inner intentions; but of reconstructing the system of arguments and assumptions on which the argument is based. And the ultimate aim is to learn more about 'the task at hand' – although serious modification may be required. In the end the revelation of different, conflicting interpretations will generally still reveal more aspects of 'the task at hand'. Thus, the whole process opens with apparent ambiguity *in* the task itself; this 'objective' ambiguity is then traced back to a 'subjective' ambiguity between frames of interpretation; and ideally, the resulting shared interpretation will include elements from several of the 'original' ones, and thus reveal more aspects of 'the task at hand' than any of the preceding interpretations suggested.

More people consulted – more alternatives considered

"[E]lectronic groups will consult more people, which will increase the number of alternatives considered" (Sproull & Kiesler 1991), where face-to-face groups will normally consider only a few alternatives (often those suggested by high status members) and converge quickly towards a consensus. Electronic group members are less inclined to accept the first suggestion by a high-status member, and the text-based technology makes it possible for several members to offer proposals simultaneously.

More conflict

> "They may experience more conflict in solving problems. Electronic discussions can result in riskier choices, and group members may be unconscious of this." (Sproull & Kiesler 1991)

They may take long time to reach a solution – although the actual 'cost' in man-hours may be smaller – or perhaps not reach a solution at all. Notice that this observation indirectly confirms Daft & Lengel's argument that rich media are convenient for reaching decisions *in a timely manner*.

A 'paradox' in this and previous argument deserves some consideration, because Daft & Lengel seem to argue that electronic (poor) media will *increase ambiguity*. Is this comparison reasonable? Obviously, ambiguity is not simply a question of 'number of alternatives', because it is due to conflicting *interpretations*, and a (frame of) interpretation is 'more' than an alternative, at another cognitive level. Nevertheless it is reasonable to assume that 'alternative solutions' will often be based on different interpretations.

By emphasizing the benefit of more alternatives in the previous argument, Sproull & Kiesler imply that increased ambiguity is an improvement of decision-making or problem solving (i.e. brainstorming). This positive attitude requires that ambiguity can be reduced by reasoning rather than negotiations, that alternatives are not incommensurable. If not, the ambiguity encouraged by media is frozen as disagreement and conflict – and thus inhibit rationality, as in the last argument.

4.3.2.3. 'Domination-free' communication?

Basically, Sproull & Kiesler suggest that electronic groups ideally constitute an example of the 'domination-free' communication, which constitutes an ideal – but seldom obtainable – situation in Habermas' theory of communication. Electronic communication prevents or slows down the forming of consensus and social ties – and opens up the process for rational critique. Electronic media filter out social information that distracts attention from arguments themselves (and from inherent prejudices). Electronic media filter out 'signals' or nonverbal cues that operate below 'consciousness' and provoke immediate – pre-conscious, routine-like – reaction.

One might criticize them for sociological naivety and technological determinism, when they argue that electronic mediation 'brackets' social structure and hierarchy and establishes a 'domination-free communication'. Nevertheless, if one de-emphasizes the technological hype in their argument, one might recognize classical enlightenment and rationalist argument: the virtue of electronic mediation in groups is to emphasize *language* (logos); furthermore, the technology emphasizes *written* communication, and writing implies objectification and independence from the individual subject – and exposure to critique.

4.3.3. Comparison

I have argued that the there is a fundamental disagreement between Daft & Lengel and Sproull & Kiesler over the virtues of electronic media. While the former argue the need for rich media providing nonverbal cues etc. for resolution of ambiguity, the latter argue that 'poor' electronic, text-based media filter out social information to the benefit of open rational critique and problem solving. I tend to concur with the latter argument, and I certainly find that there is a need to 'hold back' on the general and widespread enthusiasm about rich media.

Nevertheless this comparison requires a few more words of justification. It may be argued that my comparison is misleading, that I exaggerate the disagreement and overlook similarities. I shall try to reconstruct this counterargument in order to answer it properly.

4.3.3.1. Is there any conflict?

In fact, Sproull & Kiesler do recognize that electronic groups are only preferable in some situations or task types, while others call for face-to-face meetings etc. If their duality of tasks corresponds to the distinction between uncertainty and ambiguity (although they do not use it consciously), then there is perfect agreement between the theories – and I have only found a conflict because I have compared Sproull & Kiesler's examples of uncertainty with Daft & Lengel's examples of ambiguity.

Commitment and negotiations

> "Face-to-face meetings are best when computer-based communication could impede performance or commitment to the group. If a decision requires complex and delicate multiparty negotiations, face-to-face communication is better than electronic communication because it is hard to persuade subtly in electronic communication. Even in these situations, electronic communication may still be useful to gather preliminary information and opinions in a premeeting meeting before a face-to-face meeting takes place. It also may be useful in the future to augment conventional face-to-face meetings with computer support in the meeting room... Face-to-face meetings are also best for generating commitment to a course of action, for

> better or for worse. Thus, project teams may hold many face-to-face meetings early in their life to secure commitment to the team's goals and to decompose the task into parts. The individual members can agree to work on the parts by themselves. Teams can then stay in touch largely through electronic communication, thus attaining … simultaneous linking and buffering... Finally, some decision must be symbolically ratified as important ones. Face-to-face meetings permit the laying on of hands in a way no mediated communication can do." (Sproull & Kiesler 1991)

Thus, Sproull & Kiesler acknowledge the virtues of rich media, arguing that face-to-face is necessary for 1) generating commitment from group members, 2) "complex and delicate multiparty negotiations ", and 3) if the situation generally calls for immediate action rather than thorough analysis and consideration. While the last example corresponds to Daft & Lengel's emphasis on the capacity for reaching decisions "in a timely manner"[68], the second (and perhaps the first?) example clearly refers to processes involving ambiguity. And there seems to be a general acceptance of this conclusion, which is also adopted in a more recent text discussing media richness:

> "certain organizational tasks, or types of work, may be more effective when performed in virtual mode than others; in particular, exchanges involving knowledge elicitation or sharing may more readily lend themselves to the virtual mode than those involving consensus formation or conflict resolution." (DeSanctis & Monge 1999)

Nevertheless, *negotiations* – where face-to-face is required – is only a limited and hardly representative example of 'reduction of ambiguity'. It might even be argued that negotiation is often an *alternative* to reduction of ambiguity. Nonverbal cues support rapid convergence by inhibiting conflicts and shortcutting discussions; they are thus supportive in reaching agreement, but not in a 'rational' (interpretive) process of understanding. Furthermore, in the citation above Sproull & Kiesler add that even in these situations preparations may be augmented electronically, supporting brainstorming and preliminary information.

Good solutions and correct answers

Electronic groups, according to Sproull & Kiesler, are more suitable for problem solving, where good solutions are not disregarded when proposed by low status members, and generally in situations where correct answers are valued over faulty reasoning:

---

[68]Even though such decision is reached 'in a timely manner', however, it may require the same or more resources in actual workings hours. In the case study, an interviewee admits that much time may actually be wasted in physical meetings because no one has had the time for better preparations (Face-to-face thus supports the 'bounded rationality' of group decisions).

> "Given the choice to convene a group, electronic meetings can be more appropriate than face-to-face ones. Group problem solving often falls short because a person with a good solution must convince others to adopt it, difficult in face-to-face meetings if the person with the correct answer has low status. Face-to-face groups do not always ratify an obvious correct answer when only one member proposes it; correct proposals may need to be endorsed by more than one person for the group as a whole to come to recognize their correctness... In electronic meetings, which are less influenced by status, support for correct answers might be more easily obtained from lower-status members." (Sproull & Kiesler 1991)

To what extent is this category or 'task type' similar to 'reduction of uncertainty'? Certainly, criteria such as 'good solutions' and 'correct answer' belong to a particular category of problems or tasks where rationality is essential – and a common interpretation is agreed upon. Nevertheless, the examples are more than mere 'data collection', the essence of reduction of uncertainty according to Daft & Lengel. Furthermore, Sproull & Kiesler emphasize that their discussion is not restricted to well-defined technical problems with *correct* solutions, because this would be a very unrealistic example of the problems real-life managers deal with.

This discussion has demonstrated that there does remain a conflict between Sproull & Kiesler and Daft & Lengel, that they do not simply present similar distinctions and recommendations with different words. Sproull & Kiesler do not accept a *general* need for face-to-face in all cases characterized by ambiguity, only in a narrow 'subset' of these cases. The conclusion is thus confirmed: where Daft & Lengel emphasize the valuable role of nonverbal cues for reduction of ambiguity, Sproull & Kiesler argue that poor media encourage critical judgment by filtering out social information and thus reducing attention to status and hierarchy, indeed, to social convention in general.

4.4. The poverty of text?

The purpose of this section is to qualify the concept and theory of media richness by applying a different perspective on similar issues, and to identify new characteristics of electronic communication and computer networks compared with the traditional medium of text – how do these new media affect the status of writing and its relation to speech? Philosophical discussions of writing, compared with the spoken word, is thus a classical 'media richness' issue.

First, I shall shortly discuss aspects of a type of writing that is separated from, or at least not secondary to the spoken word: *non-phonetic* writing. After this, the discussion of phonetic writing will take a somewhat polemical starting point in a selection of critical perspectives on writing. These critical remarks will then initiate a consideration of various characteristics of writing (vs. speech), concluding with a reaction to the critique resulting in more or less a defence of written communication.

4.4.1. Non-phonetic writing, i.e. mathematical symbols, logical expressions

There are two different categories of writing: the *phonetic* writing, which in principle represents the sounds of the spoken word, and the *non-phonetic* writing. One example of the latter is *figurative* or *hieroglyphic* writing like Chinese, in which the signs refer directly to ideas or objects by *picturing* or resembling them, without (intermediating) reference to sounds. In Saussure's semiologic terms, the *signifier* (the 'physical' or material side of the sign) pictures or imitates the *signified*. Such signs are also categorized as *iconic* (Peirce) or *mimetic* (Adorno), and Hegel speaks of *symbols* as opposed to the (more advanced) *sign*:

> "einer Anschauung, deren eigene Bestimmtheit ihrem Wesen und Begriffe nach mehr oder weniger der Inhalt ist, den sie als Symbol ausdrückt" (Hegel 1998)

Saussure argues that the tendency of writing to become a secondary language, and even to *replace* the 'primary' spoken one (see p. 158) is stronger in figurative than in phonetic writing, but less fatal, exactly because the separation is absolute and does not really affect the spoken language.

4.4.1.1. Pure writing – formalization and departure from the spoken word

There is another type of non-phonetic writing, characterised *pure* writing: symbolic notation used in mathematics, formal logic, the sciences (i.e. chemistry) etc., where signs and letters refer to objects independently of spoken words. Such *signs* are based on *reference* without resemblance. Financial reports and budgets ('numerical documents' in the 'media richness' hierarchy) may be regarded as examples of pure writing in organisational settings – although they are never pure 'numerical documents', but normally include 'verbal sensemaking', the function of which is to interpret or analyse the meaning of the numbers. Nevertheless, calculations operate independently (and automatically) of any sensemaking. And when (large) numbers are more easily perceived visually, easier to read than hear (over the phone), this may reflect how mathematical notation has departed from natural language.

Pure writing is the result of a historical process of formalization of scientific thought. Some of the milestones of this development were Leibniz' automation of multiplication and division, and the formalization of logic, which was thus removed from the spoken word. To emphasize the point: these examples of pure writing are used as techniques to enable (complex) calculation, which would be virtually impossible without. This process of formalization and ensuing *automation* of thought was the precondition for the computer, and has culminated in the research in Artificial Intelligence, expert systems etc. (Haugeland 1987).

Historical process from symbol to sign

Horkheimer & Adorno seem to refer to this development when they speak of a general tendency – in the over-all (dialectical) process of Enlightenment - to split the *word* in two and separate the *semiotic* (sign) from the *mimetic* (image, figurative) side. As opposed to the image (or symbol), the sign is based on an arbitrary relation between signifier and signified: "beim Zeichen als solchem hingegen geht der eigene Inhalt der Anschauung und der, dessen Zeichen sie ist, einander nichts an." (Hegel 1998) [69].

In most respects, the sign represents a more advanced state of thought than the image. This argument anticipates the discussion of art and nonverbal cues (see Appendix C), because it corresponds to the argument that a picture or image – a 'richer' medium in terms of – is incapable of logical structure; that formalisation – impoverishing of language – enables a more precise knowledge (of nature). Hegel argues that human intelligence is set free by the sign and better equipped to dominate nature:

> "Als bezeichnend beweist daher die Intelligenz eine freiere Willkür und Herrschaft im Gebrauch der Anschauung denn als symbolisierend." (Hegel 1998)

The *symbolic* sign, on the other hand, is more conservative and less compatible with the revolutionary process of enlightenment. It is basically static and incapable of following the developments in knowledge, because it would be required to change along with new knowledge of the object it represents. Each time the progress of thought reveals fundamentally new aspects of some issue a symbol/image would have to change to reflect such changes.

> "Jede Abweichung in der Analyse brächte eine andere Bildung des Schriftnamens hervor, wie in neueren Zeiten nach der vorhin gemachten Bemerkung sogar in dem sinnlichen Gebiete die Salzsäure auf mehrfache Weise ihren Namen verändert hat. Eine hieroglyphische Schriftsprache erforderte eine ebenso statarische Philosophie, als es die Bildung der Chinesen überhaupt ist." (Hegel 1998)

Hegel's discussion is illustrative in emphasizing the argument about the conservative nature of symbol or image. Yet it should be noticed that his argument is also misleading in this context: he does in fact not defend *pure* writing, but actually criticizes Leibniz' idea of creating a universal figurative writing, independent of national languages and thus of the spoken word. Thus Hegel here argues against both

---

[69] This distinction is classical. As already mentioned Peirce has a similar distinction, although comparison is confused by different, event contradicting labels: here, the *icon* is mimetic or resembling, while the *symbol* is arbitrary (corresponding to the *sign* in Hegel's and Adorno's definition). Peirce also includes a 3rd form of 'representation', the *index*, which is based on a natural or causal relation (Kjørup 1996). Saussure, on the other hand, defines signs as fundamentally *arbitrary*, which seems to imply that he does not recognize mimetic signs.

figurative and pure writing, and in defence of a phonetic writing that preserves the link with the spoken word:

> "Die Buchstabenschrift ist an und für sich die intelligentere; in ihr ist das Wort, die der Intelligenz eigentümliche würdigste Art der Äußerung ihrer Vorstellungen, zum Bewußtsein gebracht, zum Gegenstande der Reflexion gemacht." (Hegel 1998)

Dialectics of progress and separation of sign from symbol

Horkheimer & Adorno, however, see a general tendency to separate the sign from the symbol, and from the word altogether. It may be difficult to go too much in detail with the implied 'semiotic' theory because their focus is not on writing in itself, but on a broader tendency in Western thought. The idea is that the word has a mimetic origin, and that it has a *meaning* beyond the *reference* (characteristic of the *scientific* signs discussed above). The scientific ideal is to strip the signs of any (metaphysical) meaning, and 'purify' its function as mere reference to an object. This is in accordance with the positivist theory of 'meaning' distillated from metaphysic connotations –thus using 'meaning' in quite a different sense. One may also compare Habermas' theory of differentiation and the separation of science from natural language (p. 19).

Horkheimer & Adorno recognize the element of progress in this development, but also emphasize the potential loss. Science concentrates on the sign by renouncing on the 'proper' word, which remains as a 'residual' left to the arts (see later). Science focuses on calculation and renounces on meaning:

> "Als Zeichen kommt das Wort an die Wissenschaft; als Ton, als Bild, als eigentliches Wort wird es unter die verschiedenen Künste aufgeteilt, ohne dass es sich durch deren Addition, durch Synästhesie oder Gesamtkunst je wiederherstellen ließe ... Als Zeichen soll Sprache zur Kalkulation resignieren, um Natur zu erkennen, den Anspruch ablegen, ihr ähnlich zu sein." (Horkheimer & Adorno 1968)

Paradoxically, non-phonetic writing even tends to reverse its 'emancipation' from the mimetic tie to its object (the signified), because it ends up imitating *relations* and structures. Horkheimer & Adorno imply that the pure writing turns symbolic – that it regresses to a mimetic function, yet at another level. When Galileo uses *geometry* to picture *velocity* (see endnote, p.78), he represents 'eternal' laws. Symbols represent eternal repetition:

> "die sich wiederholende Natur … ist der Kern des Symbolischen: ein Sein oder ein Vorgang, der als ewig vorgestellt wird, weil er im Vollzug des Symbols stets wieder Ereignis werden soll..." (Horkheimer & Adorno 1968)

Conservative nostalgia for metaphysical meaning?

It should be emphasized that Horkheimer & Adorno's argument about the 'loss of meaning' is not merely a conservative and nostalgic longing for 'aura' and metaphysical meaning. They agree with the general enlightened critique of metaphysics, although Adorno in particular argues that something should be saved: for all the conservatism and traditionalism, metaphysics also contained some progressive and emancipatory aspects of importance to modern man.

In his will to force out some sense and hope from metaphysics and philosophy Adorno can be contrasted with Derrida, who has no mercy for any form of inheritance. Derrida criticizes Hegel's disregard of non-phonetic, pure writing, and sees it as illustrative of a general tendency in Western Thought to cling to a spoken language, which is – according to Derrida's fundamental critique of Western civilization – burdened by metaphysical prejudice (in a negative sense). The critique of pure writing reflects the 'phono-centrism' of Western metaphysics:

> "modstanden mod den logisk-matematiske notation har altid været logo-centrismens og fonologismens kendemærke." (Derrida 1970)[70]

Instead, Derrida welcomes this 'rebellion' by scientific *practice*, because he use of non-phonetic writing demonstrates and confronts the limitations of phono-centrism. He emphasizes, however, that science is 'revolutionary' merely in its *practice* that, because it still in its *concept* belongs to the phono-centric tradition:

> "le *concept de la science* ou de la scientificité de la science – ce que l'on a toujours déterminé comme *logique* – concept qui a toujours été un concept philosophique, même si la pratique de la science n'a en fait jamais cessé de contester l'impérialisme du logos, par exemple en faisant appel, depuis toujours et de plus en plus, à l'écriture non-phonétique. Sans doute cette subversion a-t-elle toujours été contenue à l'intérieur d'un système allocutaire qui a donné naissance au projet de la science et aux conventions de toute caractéristique non-phonétique. Il n'a pu autrement en être autrement. Il appartient néanmoins à notre époque qu'au moment où la phonétisation de l'écriture – origine historique et possibilité structurelle de la philosophie comme de la science, condition de l'*épistème* – tend à s'emparer de la culture mondiale, la science ne puisse plus s'en satisfaire en aucune de ses avancées. Cette inadéquation avait toujours déjà commence à donner le mouvement." (Derrida 1967)
>
> "Alt det der til enhver tid har været knyttet til *logos* og *fonê* har fundet sin grænse i matematikken, hvis udvikling er helt afhængig af udøvelsen af en ikke-fonetisk skrift." (Derrida 1970)[71]

---

[70] "The resistance against the logical-mathematical notation has always been a characteristic of logo-centrism and phonologism."

And he does not simply defend logical positivism against the 'metaphysical' critiques of formalization, because the associated philosophy of positivism is burdened with its own metaphysics, such as that of simplicity and logos:

> "Man må iøvrigt tage afstand fra den 'naive' side af formalismen og matematismen, der – må man huske – inden for metafysikken også har haft den birolle at komplettere og konfirmere den samme logocentriske teologi, som de netop først og fremmest kunne anfægte. Således gælder det, at Leibniz's matematiske og ikke-fonetiske udkast til en *characteristica universalis* nøje hænger sammen med en simpelhedens metafysik, og herigennem med en forudsat eksisterende guddommelig fornuft, en guddommelig *logos.*" (Derrida 1970)[72]

Despite the risk of deferring too much from the focus of this thesis, I have found Derrida useful in emphasizing some relevant aspects and advantages of pure, 'impoverished' writing, an example of a formalized language according to the richness hierarchy.

4.4.2. Phonetic writing (the written word)

4.4.2.1. Writing as usurping – useless *and* harmful?

The view of writing as impoverished speech, as something external, as an ill-tailored clothing of true, living knowledge is prevalent in much literature about organisational learning. The written word is seen as a vague reminiscence either of truly practical knowledge – a critique of writing obviously associated with an emphasis on the 'situated' and experiential form of knowledge – or of the living thought in the spoken word. There is a general tendency to see writing as *secondary*, as an impoverished representation of the spoken word. The critique of writing can generally be summarized in two paradoxical claims: that writing is both *useless* and *harmful*.

In Brown & Duguid's words formal, written procedures – "Abstractions detached from practice" – "distort or obscure intricacies of that practice" (Brown & Duguid 1996). This

---

[71] "Everything that always has been associated with *logos* and *fonê* has found its limitation in mathematics, the development of which depended completely on the use a non-phonetic scripture."

[72] "One must reject the 'naïve' element of formalism and mathematics, which – as one should remember – within metaphysics has had the secondary role of completing and confirming the very same logocentric theology that they more than anyone should be able to question. Thus, Leibniz' mathematic and non-phonetic outline of a *characteristica universalis* is closely related to a metaphysics of simplicity, and hence with a presumed existing deified reason, a deified *logos*."

reflects a general tendency in some of the 'social construction' literature seeing formal rules and procedures (canonical practice) as mere façade, window-dressing, behind which competent workers solve situated problems by the help of experience and collective memory.

It should be noticed, however, that Brown & Duguid's discussion does not explicitly concern the relation between the written and the spoken word; they tend to emphasize non-verbalized experience and practices, implying a general contrast to language *in general*. They seem to regard *language* itself is a usurper, and to suggest that this tendency is enhanced with writing.

Writing qualifies poorly in the richness hierarchy, due to its low 'variety of cues', and low feedback (interactivity) – although this latter characteristic has changed with electronic communication.

Plato: writing as forgetfulness

The disregard of writing echoes Plato's (or Socrates'?) denouncement of the 'new' medium in his *Phaedrus* dialogue. He refers to a myth of Theuth, the inventor of writing, proudly presenting his creation to Thamus, the king of Egypt:

> "This, said Theuth, will make the Egyptians wiser and give them better memories; it is a specific both for the memory and for the wit. Thamus replied: O most ingenious Theuth, the parent or inventor of an art is not always the best judge of the utility or inutility of his own inventions to the users of them. And in this instance, you who are the father of letters, from a paternal love of your own children have been led to attribute to them a quality which they cannot have; for this discovery of yours will *create forgetfulness* in the learners' souls, because they will not use their memories; they will *trust to the external written characters* and not remember of themselves. The specific which you have discovered is an *aid not to memory, but to reminiscence*, and you give your disciples *not truth, but only the semblance of truth*; they will be hearers of many things and will have learned nothing; they will *appear to be omniscient and will generally know nothing*; they will be tiresome company, *having the show of wisdom without the reality*." (Plato 2000) (*my italicisation*)

Writing is thus not only a poor aid to memory – "even the best of writings are but a reminiscence of what we know" (Plato 2000) – but worse: it is a *threat* to a persons true memory by replacing or repressing it, and it generally has negative *effect* on people. Writing is not merely secondary, but it also interferes in the subject's access to his original knowledge or memory – there is a parallel to Benjamin's argument that we have lost access to our private, individual experience, although Benjamin emphasizes the structure of messages, *information* vs. *narratives*, rather than writing (vs. the spoken word) (see p. 17).

Obviously it is problematic to compare Plato with a 'social constructivist' approach like that of Brown & Duguid, as they do not share Plato's emphasis on neither *truth, language* nor the *individual* (soul). Nevertheless Brown & Duguid etc. tend to argue that the collective (unmediated) subject is more '*efficient'* or *functional*, that it solves problems in a more competent way than suggested by the canonical (and written) practice. And even though criterions of 'efficiency' and 'competency' are different from that of 'truth', they still assume that practitioners have 'better' knowledge about their material.

Plato specifies his critique of writing:

> "[W]riting is unfortunately like painting; for the creations of the painter have the attitude of life, and yet *if you ask them a question they preserve a solemn silence*. And the same may be said of speeches. You would imagine that they had intelligence, but *if you want to know anything and put a question to one of them, the speaker always gives one unvarying answer*. And when they have been once written down they are tumbled about anywhere among those who may or may not understand them, and know not to whom they should reply, to whom not: and, *if they are maltreated or abused, they have no parent to protect them; and they cannot protect or defend themselves*." (Plato 2000) (*my italicisation*)

So, writing – like art – is static, lifeless, and inflexible. And written text become *orphans* separated from their parent, unable to defend themselves against abuse and misunderstandings. This he contrasts with "an intelligent word graven in the soul of the learner, which can defend itself, and knows when to speak and when to be silent" – an argument that may be seen in the context of his general theory that we were all born with a true knowledge of things, a knowledge that we have forgotten and repressed – and that learning (cognition) is basically a process of recovering. The famous example is Socrates' demonstration that a slave already knows (the proof) of the proper relation between the three sides of a triangle).

Plato's comparison of the written and the spoken word does not compare straightforward with the richness hierarchy. On the one hand his emphasis on dialogue – *answering* questions, *defending* oneself – implies a need for fast feedback (*time*), thus confirming one dimension of richness. On the other hand he does not praise the variety of non-verbal (vocal or visual) cues: truth is linked to language and verbalisation. There is in principle no reason to value video-meetings or face-to-face meetings over the phone, because all media allow for dialogue.

Saussure: writing, the impostor

A more recent example is Ferdinand de Saussure, who argues that linguistic research must focus on the spoken word and beware of the treacheries of writing. He argues

that voice – sound – is more privileged as a signifier due to its closeness to thought – although he does recognize that is not the only form of signifier:

> ”La langue est une convention, et la nature du signe dont on est convenu est indifférente. La question de l’appareil vocal est donc secondaire dans le problème du langage.” (de Saussure 1968)

The spoken word is the true research object of linguistics and should be studied independently of the written word, the sole function of which is to *represent* it. Saussure criticizes a tendency to focus on the written word because of its form and prestige. The tangibility of the written word distracts the attention from the true object of linguistic studies.

> “La langue a donc une tradition orale indépendante de l’écriture, et bien autrement fixe; mais le prestige de la forme écrite nous empêche de le voir.” (de Saussure 1968)

This true relation between the spoken and the (secondary) written word is easy to forget for the linguist who is often left with the latter as the only witness – as in the case of a language that is no longer spoken. Saussure argues strongly against the idea that writing due to its apparent permanence and solidity is better suited to secure the identity and cohesiveness of a language over time – this mistake is understandable but deceived by the superficial solidity of the written word:

> “D’abord l’image graphique des mots nous frappe comme un objet permanent et solide, plus propre que le son à constituer l’unité de la langue à travers le temps. Ce lien a beau être superficiel et créer une unité purement factice; il est beaucoup plus facile à saisir que le lien naturel, le seul veritable, celui du son.” (de Saussure 1968)

Saussure then gives a few examples of words that have survived merely through oral communication. Later he argues that the written word is immobile and thus unable to represent the incessant evolution of the spoken.

The written word tends to usurp the spoken, by putting itself in its place – it has gained a reputation and assumed an unmerited importance, not the least aided by literary language: “La langue littéraire accroit encore l’importance imméritée de l’écriture” (de Saussure 1968). A tendency that seems to increase, the worse it *mis*represents the spoken word. To focus on the written word is like focusing on the photograph instead of the person on the photo.

And in a parallel Plato, Saussure proceeds to make the stronger argument (which seems to contradict the first (Derrida 1967)): that the tyranny of scripture affects and modifies the spoken word:

> "Mais la tyrannie de la lettre va plus loin encore: à force de s'imposer à la masse, elle influe sur la langue et la modifie." (de Saussure 1968)
>
> "Ces déformations phoniques appartiennent bien à la langue, seulement elles ne résultent pas de son jeu naturel; elles dues à un facteur qui lui est étranger. La linguistique doit les mettre en observation dans un compartiment spécial; ce sont des cas tératologiques." (de Saussure 1968)

4.4.2.2. Aspects of writing

Inspired by the discussions above I shall emphasize a few characteristics of the written word: its *tangibility*, the tendency to *orphanage* – separation from its source, as opposed to the (relative) *situated* character of the spoken word, and the consequences for *memory*

Tangibility

Text is static, frozen, stable, eternal, and universal – as opposed to the spoken word, which inhabits the *temporal* medium of sound. Text is tangible as opposed to the ephemerality of the spoken word. Phonetic writing is time converted to space (*death* of the living word). Therefore, reading a written text allows another order of reading than if listening to a speech.

This tangibility also characterizes figurative art, but phonetic writing has inherited the *linearity* of the spoken word, which is projected onto the *lines* of a text:

> "Le signifiant, étant de nature auditive, se déroule dans le temps seul et a les caractères qu'il emprunte au temps: a) *il représente une étendue,* et b) *cette étendue est mesurable dans une seule dimension*: c'est une ligne... Ce principe est évident, mais semble qu'on ait toujours néglige de l'énoncer, sans doute parce qu'on l'a trouvé trop simple; cependant il est fondamental et les conséquences en son incalculable; son importance est égale à celle de la première loi [the *arbitrariness* of the signifier, *JT*]. Tout le mécanisme de la langue en dépend... Par opposition aux signifiants visuels (signaux maritimes, etc.), qui peuvent offrir des complications simultanées sur plusieurs dimensions, les signifiants acoustiques ne disposent que de la ligne du temps; leurs éléments se présentent l'un après l'autre; ils forment une chaîne. Ce caractère apparaît immédiatement dès qu'on les représente par l'écriture et qu'on substitue la ligne spatiale des signes graphiques à la succession dans le temps." (de Saussure 1968)

This linearity distinguishes phonetic writing from *pictures*, *sculptures* etc., and from two-dimensional symbolic models (but not from music, a temporal art form).

Obviously, tangibility corresponds to low feedback on the richness hierarchy. One could further argue that also the lack of temporality, lack of change, corresponds to low variety of cues – although may be problematic to confuse two different

dimensions by translating between feedback and variety of cues. As a mere *representative* of (spoken) words, text cannot offer *more* than speech.

This characteristic of writing – that it is static and tangible – has ambiguous consequences. The critics emphasize inflexibility, rigidity and conservatism, as in Plato's critique of the 'unvarying answer'. Yet this rigidity, the ability to 'freeze' an impression into a tangible sign (or image) is also a precondition for 'memory'. Hegel thus associates the sign with a *mechanical memory*:

> "Das von der Phantasie produzierte Bild ist nur subjektiv anschaulich; im Zeichen fügt sie eigentliche Anschaulichkeit hinzu; im mechanischen Gedächtnis vollendet sie diese Form des Seins an ihr." (Hegel 1998)

Yet this is also where thought differs from memory (of the particular event): the static sign (or image) serves as a vehicle for categorization and subsuming different impressions under one sign. Thus, it always *filters* individual details from the particular impression or event. A more photographic memory would inhibit generalisation and comparison.

To give one organisational example, Argyris & Schön seem to regard *writing* (or other forms of materialised representation) as a key to organisational learning, rather than being rigid and inhibitory:

> "the resulting understandings, priorities, and reframed norms become inscribed in the images, maps, and programs of the organisation and are thereby embedded in organisational memory." (Argyris & Schön 1996)

March *et al* make a similar point, and it corresponds to Gellner's argument that writing, *due* to its tangibility, is a vehicle for the progress of thought, because it is a precondition for avoiding *repetition*, *overlapping* and *incoherence*. There is a potential for accumulation and development rather than 'random drift'. Gellner argues that writing – literacy – take 'items' of knowledge beyond custom, beyond the practical context and expose them for critical validation. Writing thus becomes a crucial element of a 'critical rationality':

> "But the really significant difference is between what may be called validation systems: the procedures and principles employed for extending and deciding the acceptance of new items. Primitive societies do not codify these, and they can only be extracted from their practice, which need not be consistent. Literacy, by creating a norm outside custom, or rather, providing the means for stabilizing such a norm, is supremely important." (Gellner 1997)

This aspect of the written word – tangibility – appears to change with electronic media. Sproull & Kiesler characterize electronic communication as *ephemeral*, at least in the *perception* of the users. Electronic texts may change, move or vanish without a

trace. It is paradoxical that this ephemeral medium also provides powerful means for storage.

Objectification – orphanage

As a consequence of this tangibility, a text is objectified and separated from its author. Texts are *orphans*, with 'no parents to protect them', as Plato put it. A text does not *belong* to its author, who thus has no authority in reading its 'meaning'.

The text can – eventually, after a process of the 'miraculous understanding' – be read by an outsider. This alien reader has to 'achieve' the foreign horizon by merging it with his own, corresponding to Gadamer's characteristic of hermeneutic understanding. The discussion in this section will repeat some of the arguments presented earlier, yet in a new context, specifically focusing on texts. I thus seem to follow Gadamer 'in reverse': he developed the principles of classical hermeneutics – the study of texts – and extended them to a general 'theory' of understanding; now I more or less apply his general theory to texts in particular – at the risk of repeating myself.

The 'merger' of horizons implied by Gadamer is not 'participation' as in Lave & Wenger's theory – by hermeneutic understanding one does not simply 'participate' in a historical period, and one is not simply *socialized* (absorbed) into another culture. Furthermore, the possibility of understanding 'across contexts' or 'across horizons', and thus of overcoming particularity, appears to contradict any strong form of 'social construction'.

The text has something to tell us about an issue – they reach beyond their context. In his critique of Derrida, Habermas argues that while communication is always associated with a particular context, it will always refer to something beyond this context –the very readability of a text is an indication of this:

> "Das schriftliche Ausdruck erinnert nämlich mit größter Hartnäckigkeit daran, dass die Sprachzeichen '*trotz der völligen Abwesenheit eines Subjekts und über seinen Tod hinaus'* die Entzifferbarkeit eines Textes ermöglichen und *seine Verständlichkeit wenn nicht garantieren, so doch in Aussicht stellen*. Die Schrift ist die testamentarische Verheißung des Verstehens." (Habermas 1998) (*my italicisation*)

This dimension illustrates that it is misleading to regard the text as an impoverished medium compared with face-to-face communication, also because it implies a narrow focus on face-to-face communication as merely reciprocal identification between two individuals:

> "Der wirkliche Sinn eines Textes, wie er den Interpreten anspricht, hängt eben nicht von dem Okkasionellen ab, das der Verfasser und sein ursprüngliches Publikum darstellen." (Gadamer 1960)

It would be a mistake to read a text merely as an 'expression' of a given historical period or culture – as though it could only tell us about its own context or period. This corresponds to the emphasis on understanding based on 'truth claim' and content, discussed in the first chapter (p. 49). Gadamer criticizes this mistaken approach as a '*historical* understanding' that remains blind or deaf to the actual message: "Der Text, der historisch verstanden wird, wird aus dem Anspruch, Wahres zu sagen, förmlich herausgedrängt" (Gadamer 1960). The same critique is relevant against a 'cultural analysis' seeing a text as belonging to a closed horizon or 'culture'. Human 'existence' is *not* situated.

> "Wie der Einzelne nie ein Einzelner ist, weil er sich immer schon mit anderen versteht, so ist auch der geschlossene Horizont, der eine Kultur einschließen soll, eine Abstraktion. Es macht die geschichtliche Bewegtheit des menschlichen Daseins aus, dass es *keine schlechthinnige Standortgebundenheit* besitzt und daher auch niemals einen wahrhaft geschlossenen Horizont." (Gadamer 1960) (*my italicisation*)

The historical method prefers to scavenge on dead material. The object of research should be neatly enclosed in a coffin and posing no risk of provoking or changing the interpretation or perspective of the historian:

> "Die stillschweigende Voraussetzung der historischen Methode ist daher, dass erst dann etwas in seiner bleibenden Bedeutung objektiv erkennbar wird, wenn es einem abgeschlossenen Zusammenhang angehört. Mit anderen Worten: wenn es tot genug ist, um nur noch historisch zu interessieren. Nur dann scheint die Ausschaltung des subjektiven Anteils des Betrachters möglich. Das ist in Wahrheit ein Paradox – die wissenschaftstheoretische Entsprechung zu dem alten moralischen Problem, ob jemand vor seinem Tode glücklich genannt werden könnte." (Gadamer 1960)

Indexicality of the spoken word – situated context

There is a more physical aspect of *context*, besides the historical or cultural background mentioned above. In contrast to the orphaned text, the spoken word in everyday language is context-bound in a very situated sense. People use context-dependent denominators to indicate time ('now', 'tomorrow') and space ('here', 'there', 'this', 'that'). They may be supported in the speech situation by pointing, yet mostly this is not necessary. These denominators lose their meaning when taken out of context.

Problems of indexicality have gained renewed practical relevance, as the technologies of 20th (and 19th) century have changed the relations between speech and writing. To start with the oldest example, the telephone allowed a 'virtual' presence, where people had to accommodate to *a spoken conversation without physical context*. More

recently, it has become possible (or easier) to convert and preserve spoken communication with written transcripts (see Culnan & Markus, below); or people may use computer-based written communication in synchronous communication, thus in a situation where previously oral communication was the only option. Such texts become situated and indexical to a degree hitherto uncharacteristic for the written medium.

The indexicality of language complicates the use of electronic media for organisational memory or knowledge management. There is today an extensive potential for keeping automatic records with the intention of preserving rationales, argumentation etc. As an example, Culnan & Marcus suggest that the possibility of written transcripts may change organisational communication (Culnan & Markus 1987).

This indexicality of language challenges the philosophical assumption that natural language sentences can be converted to 'objective statements', that communicative 'meaning' can be (completely) reduced to, or projected on, objective references. The most 'notorious' example of this view is the 'logical paradigm' in theories of language (Frege, early Wittgenstein), which aims to translate sentences from natural language into logical expressions (Andersen 1991). Husserl is another example (as referred by Habermas) of the assumption that context-dependent denominators can in principle be translated to objective or universal references in time and space, an assumption that was criticized by Tugendhat:

> "Husserl bemerkt selbst, dass sich z. B. die Bedeutung singulärer Termini nicht ohne weiteres nach diesem Modell erklären lassen – es gibt 'subjektive Ausdrücke', deren Bedeutung mit der Sprechsituation wechseln. Aber Husserl begegnet dieser Schwierigkeit mit der Behauptung, dass '*jeder subjektive Ausdruck*, bei identischer Festhaltung der ihm augenblicklich zukommenden Bedeutungsintention, *durch objektive Ausdrücke ersetzbar ist*'. Individuennamen sollen durch Kennzeichnungen, die Orts- und Zeitdeixis durch Raumzeitpunkte usw. substituiert werden können. Wie Tugendhat gezeigt hat, ist dieses Programm der *Umstellung subjektiver Ausdrücke auf situationsunabhängige objektive Ausdrücke* undurchführbar; singuläre Termini sind ebenso wie performative Ausdrücke Beispiele für genuine pragmatische Bedeutungen, die sich nicht unabhängig von einer intersubjektiv ausgeübten Praxis der Regelanwendung erklären lassen." (Habermas 1998) (*my italicisation*)

Indexicality is thus not merely a practical problem but an indicator of a fundamental characteristic of language. Lucy Suchman, in her ethnomethodological critique of Artificial Intelligence, argues that language is *situated* in every aspect: language 'works' because language users know how to compensate for the 'poverty' of language, by applying and interpreting it *in situ* (and this context-awareness, she argues, can never be automated in a computer). This generalized argument has more to

do with language in general, and less with relation between the spoken and the written word, but as emphasized previously, the problem is actualised with new communication technologies[73].

Writing and memory

This section will consider and answer some of the critiques of writing mentioned previously. Derrida's critique of the allegedly dominating metaphysics of presence will be referred[74]. To a large extent I find his emphasis on *mediation* useful and relevant, and he is a good example of the disagreements between the two aspects of contextuality: he shares with a proponent of 'situated action' such as Suchman the emphasis on context, but he also criticizes the illusion of *presence*, in the sense of a situated practitioner with a firm grip on context. Derrida has much in common with Adorno, except that the latter insists on a reality beyond language.

All this overlaps the previous discussion about reference vs. meaning, situatedness/presence/experience vs. interpretation/understanding. Language is a medium and essentially about '*reducing richness*': "language breaks the dictates of immediate perception and orders the chaos of the manifold impressions into identifiable things" (Habermas 1971a). Compare also Benjamin's discussion of *recollection* ('Erinnerung') and *mémoire volontaire*. The difference is that the focus on *signs* emphasizes the role of media in a material or physical sense rather than 'forms of messages' (*information* vs. *narrative*). Derrida argues that *writing* has an important

[73] Derrida, Adorno and Suchman would all agree that language does not reach the particular and individual. The difference seems to be that Suchman claims that practitioners 'manage without', that they have a firm – functional – grip on the *particular* (i.e. situated context), *despite* language: "But the *communicative* significance of a linguistic expression is always dependent upon the circumstances of its use. A formal statement not of what the language means in relation to any context, but of what the language-user means in relation to some particular context, requires a description of the context or situation of the utterance." (Suchman 1990)

[74] Difficulties with identifying and specifying Derrida's critique may be due to Derrida's approach: Derrida deliberately tries to avoid a *discursive* or *logical* critique because it would draw him into the quicksand of metaphysics and rationality; instead he assumes the role of the *literary* critique who analyses the 'efficiency' of the argument (Habermas 1985) – he doesn't want us to pin him up on a specific 'position' (and this seems quite different from i.e. Gadamer's requirement). I.e. he shows how Socrates' own argumentation in the dialogues are often perceived as 'overwhelming', as a *drug* – an ambiguous metaphor often used by Plato/Socrates, the ambiguity of which is seized by Derrida. The drug is both poison and cure (Derrida 1972) – and apparently has nothing to do with the strength of a logical argument. By defining argumentation as drugs one withdraws from the logical content of the argument – one refuses to 'test' it in the sense described by Gadamer or Adorno.

role in establishing a medium that focuses and filters, remembers and forgets. It would thus be mistaken to see it merely as an 'aid to memory'.

Derrida criticizes the disregard of writing by attacking the metaphysical assumption that the spoken word has a privileged role as signifier, being firmly linked to the signified 'reality', the truth (through its contact with the soul). Evidently, the proponents of situated action such as Suchman cannot be accused of this focus on language, yet their emphasis is surely on *presence* and the competent dealing with the world. Derrida argues that the assumption of the link between signifier and signified is untenable, an argument not unlike Adorno's *negative dialectics*[75]; and he also suggests that we completely abandon the very notion of a 'signified', an argument similar to Heidegger's assertion that there is no 'an sich' beyond language, but at this point incompatible with Adorno.

According to Derrida's critique, focus on the voice – the phonetic sign – allows the illusion of *presence* and lack of mediation[76]:

> "Derrida ist überzeugt, dass Husserl den Substratcharakter des Sprachzeichens nur darum als unwesentliches Moment vernachlässigen konnte, weil in der abendländischen Tradition die Lautgestalt vor der Schriftgestalt, die phonetische Verkörperung vor der graphischen Einschreibung einen fragwürdigen Primat genießt. Die flüchtige Transparenz der Stimme leistet einer Assimilation des Wortes an die ausgedrückte Bedeutung Vorschub. Schon Herder hatte ja auf das einzigartige Selbstverhältnis hingewiesen, das im Sich-Sprechen-Hören vorliegt. Wie Herder (und Gehlen) betont Derrida die Intimität und Durchsichtigkeit, die absolute Nähe des durch meinen Atem und meine Bedeutungsintention gleichzeitig belebten Ausdrucks." (Habermas 1998)

---

[75] See (Habermas 1985) for a comparison between Derrida and Adorno.

[76] Perhaps the spatial metaphors in the graphical user interface illustrate a paradoxical refusal to realize the degree of mediation and abstraction in the computer. I.e. Andersen observes that users of an IT system still use space and time indexes: 'the file was here, and now it's gone/over there' (Andersen & Holmqvist 1991). The physical meaning of these terms is less obvious than they were before implementation of the IT system – i.e. a nostalgic reference to paper files. Thus, the workers/users continue to use outdated space/time metaphors – or: that they have survived only as metaphors, just as one can see in the current graphical user interface: there is no paper-basket or desk; on the other hand the file structure virtually resembles paper files and cabinets, but does not exploit the potential of the computer for easier categorization and location, i.e. databases offering multiple entries and ordering; or hypertext offering links and retrieval based on association.

Alternatively, the focus on the written sign would emphasize what is actually true for any sign, *also* the phonetic one: that it is non-presence and *intermediation*, because it establishes identity by ignoring or suppressing individual differences and uniqueness in time.

> „Für Derrida enthüllt sich im Gedanken der durch Präsenz beglaubigten Identität eines Erlebnisses der metaphysische Kern der Phänomenologie – metaphysisch insofern, als das Modell der anschaulich erfüllten Bedeutungsintention genau die *zeitliche Differenz* und *Andersheit* zum Verschwinden bringt, die beide für den Akt der anschaulichen Vergegenwärtigung desselben Gegenstandes und damit auch für die Identität der Bedeutung eines sprachlichen Ausdrucks konstitutiv sind. In Husserls Suggestion der einfachen Präsenz eines von sich aus Gegebenen geht jene Struktur der Wiederholung verloren, ohne die nichts dem Fluss der Zeit und dem Strom der Erlebnisse entrissen und *als* dasselbe präsent gemacht, eben repräsentiert werden kann... Die einfache Präsenz eines ungeschiedenen, mit sich identischen Gegenstandes zerfällt, sobald das Netz von Protentionen und Retentionen zu Bewusstsein kommt, in das jedes aktuelle Erleben eingebettet ist. Das ‚im Augenblick' gegenwärtige Erleben verdankt sich einem Akt der Vergegenwärtigung, die Wahrnehmung einem reproduzierenden Wiedererkennen in der Weise, dass der Spontaneität des lebendigen Augenblicks die Differenz eines zeitlichen Intervalls und damit auch ein Moment der Andersheit innewohnt. Die innig verschmolzene Einheit des intuitiv Gegebenen erweist sich tatsächlich als ein Zusammengesetztes und Produziertes. Weil der Husserl der ‚Logischen Untersuchungen' diesen ursprünglichen Prozess der Zeitigung und der Veränderung im Herzen der transzendentalen Subjektivität verkennt, kann er sich auch über die Rolle des Zeichens bei der Konstituierung von mit sich identischen Gegenständen und Bedeutungen täuschen." (Habermas 1998)

Language (the sign) is incapable of reaching the *particular* and *individual*, as illustrated in the discussion about the indexicality of language. *Words*, *qua* their universality as *concepts*, are no longer *names* attached to their object:

> "Det vigtige ved [tegnene i naturlige sprog] er, at de er fjernet meget længere fra virkeligheden end regulære navne er. Navne er etiketter som klæbes på virkelighedens genstand i talerens hjerne, men sprogtegn er fjernet endnu et trin fra virkeligheden. Virkeligheden findes i vores mentale verden som *repræsentationer*." (Gregersen & Køppe 1994)[77]

[77] "The important thing about signs of natural languages is that they have been separated further from reality than regular names. Names are labels that are attached to the real object in the mind of the speaker, but linguistic signs have been separated one more step from reality. Reality exists within our mental world as *representations*."

Once the (illusion of the) link between signifier and signified is abandoned, texts can be perceived and analysed properly as 'drifting around' in a complicated net of 'self'-references. Written texts are thus fundamental in constituting our view of the world.

The inspiration from Derrida requires a two-fold modification. First, his radical critique of the illusions of *presence* and *immediacy* is relevant, but a total exclusion of any form of situated experience takes the critique too far. Second, his rejection of the signified (beyond language) is problematic.

I would like to further twist the arguments about writing in a more rationalist way: texts leave their subjects behind and strive for universality. They no longer belong to their author and are thus exposed to critique.

4.5. Summary

4.5.1. Discussion: the 'ambiguous' concept of media – channel vs. tool

The comparison between the discussion of the 'media richness' theory and classical discussions of the written vs. spoken word and nonverbal media is confused by some degree of incommensurability due to two quite different perspectives on media: *communication* and *reference* (i.e. corresponding to the two functions of language, according to Adorno). Either the *medium* is perceived as a 'channel' for communication (between two parties), focusing on to what degree this channel filters relevant 'cues'. With this perspective the richest medium is 'no medium', and media can be analysed in terms of 'social presence' and 'virtual reality'. Or the medium is perceived as a *material* that can be shaped in order to express something, i.e. convert a rule-of-thump into a logical expression (though it is basically misleading to use *conversion* – from one medium/language to another – as an example).

I shall discuss each perspective further in the following, eventually arguing that each emphasizes a number of aspects relevant for all media. It is necessary to combine the perspectives and not get entrapped in one of them.

4.5.1.1. Interface perspective (subject-subject)

This perspective primarily regards media as a *link* or *channel*. The theory of media richness implies – and imposes on the reader – a view on media merely as a 'channel' or an *interface* between communication partners. In this perspective, the question of richness analyses the degree of 'filtering' between communication partners (feedback, nonverbal cues etc.), and the logic of the richness hierarchy is compelling: the richest medium would be *no medium*, *disintermediation*.

Media are measured on their ability to restore the 'natural' face-to-face communication, based on the ideal of *presence*, primarily between the communicators

– although the ideal of presence also has a parallel in the 'reference' perspective: presence in relation to a physical context.

This perspective alone is misleading for two reasons. First, it ignores that there will *always* be a medium between people: *language* represents a cultural or social element that goes beyond the actual intersubjective relation. Second, it forgets the other aspect discussed below: without media (signs) we would be unable to say anything about anything – we could only point. Disintermediation would be 'impoverished', because we would be unable to express or describe 'the matter'.

Culnan & Markus, too, criticize the 'filtering' perspective based on the ideal of face-to-face communication. Their critique confirms the arguments presented here, although their motivation and perspective is different from mine: they argue *against* comparison and suggest looking at computers 'in their own rights', as a (communication) technology with new functionalities that are incommensurable with traditional media and with the 'filter perspective'. By narrowly comparing new media to well-known ones, one tends to ignore new qualities and characteristics – the 'horseless carriage' syndrome:

> "In summary, the conceptual framework underlying much of the existing research on media effects assumes that face-to-face communication is the standard against which new media are to be evaluated and that *the electronic media are deficient compared to face-to-face communication* because they lack important communicative cues. We believe that these assumptions are too limited to support research on the organizational, as opposed to individual or interpersonal, impacts of these technologies. The electronic media have capabilities not found in face-to-face interaction, such as novel ways to address communication, new modes of communication storage and retrieval, and enhanced capabilities for the control over access to and participation in communication." (Culnan & Markus 1987) (*my italicisation*)

Media as 'transmitters' of messages

It may seem strange to associate this perspective with the interface perspective. It does not primarily regard communication as an interpersonal relation, but it is a 'mechanical' theory about message transmission. Yet they both share the emphasis on 'linking' and tend to exclude the 'content' or the message itself.

Shannon & Weaver theory of communication thus focuses on communication as transmission of messages (Fiske 1990;Jensen 1990). As a general theory of media, this perspective is problematic in assuming that the message exists independently *before* the medium. A medium or a sign (or a system of signs) defines what can be expressed; it does not simply 'transmit' a pre-existing content.

Some theories about organisational communication seem to be based on the 'transmission' perspective. Litterer argues that the need for communication arises with the increasing *size* of the firm: this increases the need for *coordination*, which again, increases the need for *documentation*:

> "With the increase in the size of the firm, there occurred an increase in the amount of detailed information necessary for efficient operation." (Litterer 1961)

Similarly, Yates, Allen, Sproull & Kiesler (ref. to Yates) seem to argue that new communication media facilitates increasing physical distribution of the company. They share a common emphasis on communication in the sense of coordination, transfer and exchange of messages. I agree that this is a relevant aspect, and that intranet media do support linking across organisational barriers, but I find it necessary to avoid the implied narrow perspective on media.

4.5.1.2. Tool or 'reference' perspective

In this perspective, media are primarily regarded as referring to some object (domain, environment, physical context), enabling 'memory', description, analysis, control or manipulation (a tool).

Compared with Litterer etc, Weber, Lukács and critical theory argue that mediation (language, and IT) is not merely 'communication' as a reaction to physical distance, in the sense of *transmission* of messages between people, but necessary for rationalisation and calculation. Language – logos – is a means to control the world (by calculation, signs etc.), of controlling the material (and the work process). This is what Habermas categorizes as Labour ('Arbeit') – characterized by a subject-object-relation, a fundamentally manipulative (instrumental) approach to an 'objective' world.

Presence and transparency

Within this 'reference' perspective on media, there are parallels to the richness hierarchy based on the ideal of presence and disintermediation. One example is the idea of a resembling image, ideally a photographic replica. The photograph has also been characterised as a natural (or mechanical) sign. In this perspective, the question of richness concerns the degree of filtering in relation to the object. As argued previously, however, this type of sign does not support analysis of causal relationships etc. .

Another example is the *tool perspective* in information systems design. The 'tool' perspective is inspired by Hegelian and Marxian theory of practice (and Heidegger) and suggests that a computer system should be designed 'as a tool', meaning that it should be 'transparent' and thus allowing the focus on the object of work (Bannon &

Bødker 1991). Anything that distracts the user from this focus and forces his attention to computer 'tool' itself is an indicator of inadequate design.

Andersen finds this emphasis on transparency problematic, because it ignores important aspects of the *sign*:

> "From a semiotic point of view, this ideal is not tenable as a general guideline. Assuming that the relation between the interface of the artefact and the work object is identical to the sign-function, the interface signifying the work object, this relation is in principle problematic, since it is not natural, but culturally coded. It can present the signified in a distorted manner, yes even be a lie, and there are many cases where the user is well advised to be suspicious and direct her attention towards the meaning producing mechanism of the interface." (Andersen 1990)

The tool perspective assumes an unbreakable bond between sign and object (signifier and signified) and is based on a naturalistic idea of signs as *reference*. Andersen argues that even the participant-worker may have to retreat from the participant perspective and assume the perspective of an observer in order to solve problems and mysteries ('what happened'?) – corresponding to *uncertainty* and *ambiguity* in organisational theory. There are thus two different elements in his critique. On the one hand, he emphasizes the occasional need for dealing with *ambiguity* – as a semiotician he draws the attention to the 'meaning' (intersubjective) aspect. On the other hand, he criticizes the *tool* approach for associating the pc with 'situated practice' and direct manipulation: this 'situated' perspective disregards the need for rational *abstraction* from the work process (indirect, mediated manipulation), the need for a quasi-'observatory' position (i.e. by looking at a *model* instead of executing the actual task).

4.5.1.3. The two perspectives integrated

As with language itself, the two aspects (or dimensions) are integrated. On the one hand, communication is always *about* something: a text has something to tell us; it *refers* to something. On the other hand, a tool or a word is always based on a perspective, a *meaning* (which is socially or culturally defined).

Different types of technologies?

To some extent the two perspectives (used to) correspond or apply to different media or technologies. Thus, *email*, *documents*, *hypertext* and *graphical presentations* are different types of material that can be used and shaped actively (tool technologies), while it is convenient to see *telephone* or *video meetings* as 'channels' that allow communication over physical distances, but filters the communication – some sort of virtual presence with a degree of filtering.

This distinction, however, is being bridged by a *convergence* between communication and computer technologies. As an example, Groupware is often regarded as a

combination of 'communication' and 'tool' technologies. It is essential to groupware that it combines large-bandwidth 'channels' with shared tool and workspace.

	Mediation	**Presence**
Subject-subject	Buffering (Sproull & Kiesler)	Face-to-face
Subject-object	Models, signs, symbolic notation	Tool, picture

Table 4. Two dimensions of media[78].

4.5.2. Media characteristics

4.5.2.1. Problematic hierarchy[79]

The theory of media richness is problematic insofar as it regards media as a 'fall from grace', a filter that distorts communication to a more or less tolerable degree. I can only accept part of the richness hierarchy: Natural language is 'richer' than more formal languages, insofar as it allows expression and critique of 'frames of interpretation' and thus is required for reduction of ambiguity. But nonverbal cues do not further enrich the *rationality* of the conversation: the possibility for justification and critique.

4.5.2.2. Pure writing – formalisation

Purification of language

A central purpose behind a formalised language is to avoid the ambiguities of the natural languages. The logical paradigm of linguistics and the positivist definition of 'meaning' intended to drive out all metaphysical connotations – meaning and interpretations in a 'metaphysical' sense – and provide a modern, purified language, ideally suited to deal with reality. The reason for presenting this background is to clarify the role of (pure) writing (and formalised language) in relation to the theme of this thesis: interpretations and ambiguity (in the sense defined previously).

---

[78] Literature on groupware and Computer Supported Cooperative Work distinguishes between three 'aspects' or dimensions: *communication*, *coordination*, and *cooperation* (Kühn & Abecker 1998). These dimensions cannot be completely separated, but groupware systems differ in their focus: i.e. group decision support systems mainly support coordination and communication, not actual cooperation.

[79] The richness hierarchy implies the following ordering (increasing richness): formalised language, natural language (spoken over written word), nonverbal 'language' (arts).

Eventually, the obvious ambiguities of the natural language, and the failure to 'purify' these (and the futility of the attempts) caused the collapse of the logical paradigm. It should be noted here, though, that ambiguity in this context is used in a sense that differs from the one defined in this thesis. Whereas I speak of ambiguity (equivocality in Weick's later definition) due to conflicting interpretations, linguists merely imply that the meaning of an uttered sentence is unclear or 'underdefined' (outside its context). Pragmatic linguistics concluded that there must be more to the meaning of a sentence than the actual *content* of the words (and their constellation).

Need for pure writing

On the one hand, some material or content can best or even *exclusively* be expressed in writing and is highly inconvenient in rich media: one cannot (easily) exchange numbers and data over the phone or a simple video connection. Yet, these examples probably correspond to reduction of *uncertainty* and thus merely confirm the theory of media richness.

On the other hand, symbolic notation may also be useful in less well-defined discussions, also in those that might be characterised by *ambiguity* or *equivocality*. Symbolic notation or some degree of formalisation may be used to emphasize and 'capture' logical arguments. Such models may even be two-dimensional graphical representations, and thus *spatial* rather than *temporal* and sequential. Yet I am not sure this is a question of providing rich material for the 'right' side of the brain (Andersen 1997), because the aim is to emphasize and represent multidimensional, logical structure rather than present a picture (imitation) – even though the representation is not temporal and sequential, it is a strong simplification.

4.5.2.3. Writing and the spoken word

Written documents can be distinguished from oral communication by their *tangibility* and *orphanage* (objectification). They tend to tear away from 'their' social context. They represent the hope of progress in thought. They may be 'merely' a 'reminiscence' of what we know, but by founding the idea of objective rather than subjective knowledge, they can help us to know *more* than we knew.

Electronic (intranet) media transform the relations between written and oral communication. Electronic text replaces tangibility with *ephemerality* and storage capacity (and search facilities etc.). Computer networks – by enabling transmission of exact copies – also change or dissolve the physical location of a text, which enables two quite different, new media: on the one hand email provides highly interactive, horizontal, interpersonal written communication; on the other hand, hypertext (the web) emphasizes universality by enabling access to shared knowledge and information, and hypertext links add an extra dimension to texts.

Email

One may assume that email (and to some extent other electronic, text-based media) change the balance between written and oral communication. One may expect a sort of trade-off.

First, areas of communication will 'transfer' from oral to written communication. For example, written communication will be used more for informal and interpersonal communication and will to some extent replace telephone communication.

Second, this new electronic text will differ from traditional written material by being less formal and elaborate and more context dependent – yet it will still differ from face-to-face communication by adapting to the virtual co-presence, the lack of a shared physical context (like telephone conversation differs from face-to-face).

This trade-off can be expected to have consequences for organisations (and in general). On the one hand the more extensive written material (sedimentation of communication) holds a potential both for *documentation* – i.e. of decisions made in the past – and for '*capture'* of knowledge, to the extent that it is possible to preserve and generalise rationales etc. and 'distillate' a universal, even prescriptive content. On the other hand, the new written (electronic) material more strongly resist the attempts at capturing a universal content of relevance beyond present context (organisational memory systems), because of the strong contextuality (compared to traditional written material).

Email also merges the written and the spoken word in another sense. According to Plato, *text* suffers from lack of dialogue, while the critical potential of (pre-electronic) groups is inhibited by conformist groupthink. Electronic communication has a potential for leveraging both text and dialogue – by integrating them.

Text-based media, due to the lack of cues, emphasize *verbalization*, putting words to arguments and ideas, which is a better precondition for a 'rational' resolution of ambiguity. Poor media filter 'noisy' cues about hierarchy, status and social relations that tend to distort the rationality of the process. Text-based media relax on the temporal nature of the spoken word (of the medium of sound), which inhibits detachment and rational distance. One may conclude that rich media do support a 'fast' conclusion – which may be a crucial requirement – at the risk of irrational or asymmetric 'consensus'.

The web – hypertext

In some sense, the web is a medium that is complementary to email. Instead of transferring messages it has the potential for storing a *single copy* of text or data. People do not in principle need to preserve a personal copy, because access is easy and immediate. Compared to email, this is another way of exploiting the capacity of computer networks for fast transmission of exact copies. This potential was emphasized by Ted Nelson and can be expected to have organisational consequences.

> "No copying operations are required among the documents throughout the system, and thus the problem of distributed update, so familiar throughout the computer world, are obviated." (Nelson 1980)

For example, this potential can be exploited to achieve *complete* files and *avoid* redundancy. On the other hand, the 'ephemerality' of the medium allows easy update & removal of old data (at the risk of a porous memory, unless storage capacity is used).

Because of the low interactivity, intrawebs are not well suited for reduction of ambiguity 'in a timely manner'. Nevertheless, an intraweb (as the internet) may still be useful in reducing of ambiguity as a more time-consuming and 'profound' if it is possible to retrieve extensive 'background'-information about (the source of) a text that is puzzling and ambiguous. This is a process more similar to hermeneutic understanding of classical text than the interactive processes of understanding emphasized by interpretivists and ethnomethodologists.

Finally, the link feature allows an *organisation* of the material, which is constrained compared to database technology. An intranet (web) shared by many may thus contain multiple different and contradiction 'organisational principles': hierarchies, categorisations (based on interpretations). The structure of an intranet may thus be a manifestation of organisational ambiguity.

4.5.2.4. Art and nonverbal cues

The value of images – photos, graphical presentations, and the virtues of internet technology – in 'knowledge processes' is often overstated. A picture is *static*– it is extended in (two-dimensional) space, not in time. Its 'richness' inhibits explanations and logical inferences and does thus not support discursive thinking[80]. An image may

[80] This argument seems to contradict Adorno's and Habermas' recognition of *art* as experience of the *new*. Adorno argues that art may speak the unspeakable, thus that art may symbolize what cannot be symbolized in language. And Habermas argues that art can experience – symbolize – *new* knowledge/content and thus go where language has not yet arrived…

'convey more than 2000 words', but it replicates the past, or the eternity, and is blind to future and to changes.

Subconscious impressions – richness suspicious

One argument in support of Sproull & Kiesler's critique of 'social presence' and nonverbal cues may emphasize that they appeal to those of our senses that are most susceptible to subconscious 'triggering' of behaviour. This corresponds to the common argument that images are efficient for emotional, affective reactions. One is thus more likely to react 'automatically' on facial expression, voice pitch etc. Perhaps 'social presence' is especially connected to those of our senses over which we have least conscious control[81], against which we are least protected by consciousness: we react immediately to signs of status or lack of accept and attention, and we tend to adjust or retreat from our line of argumentation more out of concern with the reaction than with the 'logical' soundness of the argument.

[81] This 'hierarchy' of the senses may be problematic? Some have suggested our impressions can in fact be divided into objective or primary qualities vs. subjective or secondary qualities. Thus, Galileo suggested that odours and colours be merely subjective (see p. 78). Others, i.e. Husserl, see this as *ratio*'s uneasiness with those impressions that are not easily subject to measurement and categorization. In Adorno's theory of art (and in Schopenhauer's), the potential of art for 'speaking the unspeakable' seems associated with impressions (senses, to some extent) that are least controlled by consciousness (or *Will*).

5. PharmaCo intranet – ambiguous challenges

In this chapter, I shall identify problems of ambiguity in relation to the intranet. I shall discuss whether ambiguity does play as significant a role as presumed, compared to other issues, and whether it is reasonable to speak of a connection between intranet technology and ambiguity. I shall further look at what is being done to reduce or handle ambiguity.

The key question concerns the role of the intranet in the dilemma between *universality* and *differentiation* (*ambiguity*). Is the intranet a vehicle for *reducing* ambiguity by establishing corporate standards and a corporate language? Or does the intranet increase ambiguity by enabling and encouraging communication across internal barriers – without affecting existing (local) interpretations, and without subsuming them to a common corporate standard. Does intranet support or enable bilateral – or network – cooperation and coordination, rather than centralized control and standardisation?

The role of the empirical data in this thesis is to test the hypotheses about the role and effect of ambiguity; identify actual problems related to ambiguity; and to discuss various means to deal with ambiguity.

5.1.1. Outline of the chapter

First, I give a short overview of the case, which is treated as four sub-cases illustrating different aspects of the theme of research. Next, I describe the method applied in the case study. Then I report in more detail from each of the sub-cases. And finally I discuss selected issues related to one or more of the sub-cases.

5.1.2. Four sub-cases

The case study was carried out as part of a larger research project, to which this thesis belongs. The focus in the larger project was on organisational experimentation with, and implementation of intranet technology, in particular on applications that explored the technological potential for new organisational processes rather than mere publishing of material or automation (workflow): such as knowledge sharing, communication and coordination across organisational barriers. This focus was guiding in our choices of which intranet applications we wished to investigate deeper, as well as in our interview guides. In this thesis I have selected those examples corresponding to my own emphasis on ambiguity, which is related to but also different from the over-all focus of the research project.

5.1.2.1. Intranet as a whole

The case is treated as four sub-cases, starting with a look at the intranet as a whole. To what extent does it succeed as a common platform for company information (and knowledge)? Can this 'universalising' technology compensate for structural differentiation (and ambiguity)? The organisation (primarily the IT department) has chosen a 'laissez faire' strategy to begin with: any department willing to invest the resources required can establish a site on the intranet. The quantitative success has been overwhelming, the total intranet growing rapidly with sites and applications of very different scope and ambition, but the usability of the resulting intranet is inhibited by ambiguous structure: it is difficult to navigate and find relevant information, and some information resources are redundant.

After looking at the intranet as a whole, three applications will be investigated. Most are quite simple, but some of them have wider perspectives, and they all demonstrate relevant aspects of problems with ambiguity. By 'simplicity' I refer to a classification proposed by Gonzalez (Gonzalez 1998), which is worth mentioning, both because it is representative for much literature on intranets, and because it is in fact based on two of the 'richness' dimensions mentioned previously. Gonzalez imagines a development of the intranet use that is progressing in four steps: 1) *Publication*, where simple documents are published on the web; 2) *Asymmetric interaction*, for instance an interface with a database that allows search and retrieval; 3) *Symmetric interaction*, as in databases where users can also *enter* information, or discussion groups, emphasizing *feedback*; and finally 4) *synchronous virtual environment*, where interaction is enhanced by sound and video: variety of cues.

Gonzalez evolutionary perspective on intranet applications may also be compared to Sproull & Kiesler's distinction between 1st and 2nd order effects: they argue that organisations implement computer networks for the purpose of mere efficiency gains, only to realise that this Trojan horse has smuggled in more profound organisational changes: horizontal communication, upward influence, and breakdown of information fortresses. One difference between the two sources is that what Sproull & Kiesler present as a 'sneak attack' on classical formal organisation, has been converted to an intended strategy.

The point in presenting these classifications is to give an idea of what our research team hoped to investigate. None of the examples, however, can be categorised beyond symmetrical interaction, and the only example at this level, SHARING, was no success.

5.1.2.2. SHARING

This application was chosen for further study as an example of a more sophisticated use of intranet technology – in its *intentions* rather than its design. It was envisioned as

a system for knowledge sharing, replacing top-down communication of formal routines with horizontal exchange of (written) informal routines – a database of *Better Practices*. It was a corporate database of process knowledge, shared by employees in all units of the company. It may be characterised as symmetric interaction in Gonzalez' terms. In principle, the system offers an example of how the technology could support informal, voluntary 'knowledge sharing' – of *practical* knowledge. There are different possible motivations for such an organizational memory of informal routines. One is emphasized in the interviews – to enable knowledge sharing and avoid redundancy (and 'reinventing the wheel'). Another is to protect against the 'porosity' of an organizational memory based on unwritten rules (March *et al*. 2000). Finally, there is potential for rationalization and learning in making rules explicit and draw them to attention (Argyris & Schön 1996).

SHARING is illustrative despite the lack of success, because this failure is hardly due merely to poor design, but also to problems with exchanging knowledge across organisational barriers (ambiguity). Furthermore it illustrates problems of verbalisation.

5.1.2.3. SQUARE

This application is illustrative as a complementary to SHARING. It is a database of (obligatory) formal routines, combined with a system for distribution via the intranet to relevant departments– and thus an example of top-down communication. It may be categorised as asymmetric interaction or even mere publication. This application demonstrates the technology's capacity as a tool for *reduction* (elimination) of ambiguity, both because this is the essence of formal routines, and because SQUARE is based on the separation of a description of *processes* from a specification of the *organisational context* (unit, department) in which the processes are to be executed – assuming that (the description of) a process or routine can de-contextualised, that it persists independent of organisational changes. It also illustrates some simple but significant '1st order' aspects of the technology: By replacing paper files, SQUARE promises a new degree of 'version control' by eliminating, in principle, every copy of an outdated document.

5.1.2.4. ProjectWeb

This application was designed as a standard website to be owned by a development project 'group'. It was chosen mainly for the long-term perspectives in using the technology to support a distributed or 'virtual' project group – characterised by high ambiguity. This sub-case illustrates the potential of this particular technology for support of communication (coordination, cooperation) and decision-making during a development project, across organisational barriers and geographical distances. Some of the projects are done in cooperation with other companies, i.e. a US biotech firm, thus almost qualifying for the term as a 'virtual organisation'.

	SQUARE	SHARING	ProjectWeb
Gonzalez hierarchy	Publication[82]	Symmetric interaction	Publication (potential for interaction)
Scope	Pharmaceutical Division (Potentially corporate)	Corporate	Project, Core group
Content	Formal routines	Informal routines	News, Records (minutes, agendas)
Direction of communication	Vertical, top-down	Horisontal	Mostly vertical (potential for document sharing and horizontal communication)

Table 5. Intranet applications.

In the first group of interviews (on which this study is based), however, only a few simple functions were implemented. It thus contains a variety of documents produced during the project, including minutes, agendas, reports, information about deadlines etc. Access is restricted to project participants, usually only a very small fraction of the very large number of people involved in this type of projects. Initially, the application is primarily used as a tool for the project management group consisting representatives from the various departments involved in a project.

5.2. Method

5.2.1. Choice of research method

The aim of the research project was to explore the organisational experimentation with new technology. To meet this purpose it was chosen to carry out a longitudinal case study based on qualitative data, primarily in the form of semi-structured interviews. Due to the explorative nature of the project, this method was more convenient than other and more quantitative data. It supports the forming of hypotheses, which may then later be used to design for instance surveys or questionnaires – in order to test these hypotheses. It may also be relevant to collect richer material, by observing users of intranet applications.

[82] The application is based on a database, which would probably qualify as asymmetric interaction rather than mere publication. Yet it is basically push rather than pull.

The semi-structured interviews offer a rich material, which is less restricted to the initial formulation of a research problem than more structured interviews or more quantitative data. This is both an advantage and a disadvantage. On the one hand, it may not fit the research theme very nicely. On the other hand the material is suitable for interpretations other than those guiding the original interview.

Other factors have led to the choice of semi-structured interviews over other types of data. All researchers were confident and had experience with this method. Furthermore, at least one of the research partners in PharmaCo argued that employees were fed up with questionnaires and not likely to spend much more time on this. From their perspective, the open interview is more reciprocal and may be more stimulating to the interview person.

5.2.2. Research partners

The research project was carried out in cooperation with PharmaCo, primarily the IT department, but also a manager in corporate headquarters responsible for the SHARING system, and the Head of the Project Directors' department. All of these expected us primarily to provide an evaluation of the various applications.

The IT department hoped for a detailed evaluation of the individual products delivered by their designers, preferably even support in development and redesign. Eventually, we agreed with this partner that we might provide a non-technical evaluation and not support in design. The IT department has a further interest in being informed about the general reception of the intranet, which they see as *their* success. They have taken the initiative with the intranet, but are being challenged by other departments, notably Communication, which finds that their department should be overall responsible for content; but also Line management is starting to worry about overall structure and usability.

The manager responsible for the SHARING application was interested in evaluation (and documentation) of 'his' system, with the purpose of judging its future. Eventually, the system was terminated, partly based on a report produced by this research project.

Finally, the Project Directors' department as a user and purchaser of the ProjectWeb application was interested in an evaluation of the project.

5.2.3. Description

The case study consists of several phases or 'sub-cases', all carried out in the period dating from August 1998- January 2000. Initially, a 'baseline study' was carried out in

order to establish an overview of the intranet as a whole, and to select a number of individual applications for more detailed analysis.

The data consist of 23 semi-structured interviews of 1-1½ hour. All interviews are recorded on tape, ten of them in summaries, the rest in written transcripts. Interview persons were selected via the various corporate partners in the research project. A table of interviews is presented in Appendix A.

Generally the selection of interview persons was affected by the fact that the contacts were placed in the company head quarters: in the beginning we would interview people close to headquarters, and only slowly, the research would 'spread out'.

Most interview persons were more or less directly associated with sites or applications, and no 'innocent' end-users were interviewed. As a result the data tell more about the *intentions* behind the various applications and sites, and the history of implementation, rather than the actual use. Although the sources are thus somewhat biased and more inclined to optimistic idealism about the prospects rather than critical and sober evaluations, this bias is justified by the fact that it was a new technology still in a phase of experimentation.

5.3. PharmaCo: 'a global network'

PharmaCo has is mainly a pharmaceutical company, but it also has a Biochemistry division. Both divisions use similar production technology, but the markets are fundamentally different, and subsumed to different degrees of regulation.

It is a multinational company with departments and affiliates in 60 countries. Organisational units have different cultures and a high degree of autonomy. Local affiliates are important for various reasons: for acquiring approval from regional authorities (Japan, EC, US); for securing access to markets, which requires an extensive sales network; for access to 'knowledge' in areas characterized by front research; and for developing application of biochemical products (industrial buyers).

The company presents itself as global network of autonomy centers. It is also described as a matrix organisation: the long-term development projects involve a large number of various departments and functions. Characteristic of the industry, the company is 'knowledge intensive': research and development represents 1/3 of the budget, and occupies 1/3 of the employees.

5.4. Intranet as a whole

5.4.1. Data

The original baseline study was carried out August-December 1998 and based on nine interviews: People from the IT department and various 'superusers' – people responsible for local sites on the Intraweb (Interviews 1-9). The baseline study has previously been documented in (Bansler *et al.* 1999a;Bansler *et al.* 2000). A further follow-up interview with the Webmaster was carried out in 1999 (Interview # 15), and interviews related to the other sub-cases also contain general discussions and comments on the intranet.

5.4.2. Description

The company has chosen a liberal, bottom-up strategy for the implementation of the intranet. One reason for this choice was the wish to encourage multiple initiatives, to 'let a thousand flowers grow', etc. Another motivation is economical and also reflects the role of the IT department, who assumed the initiative of the corporate intranet: a centralized corporate strategy would require an explicit major investment, and therefore be based on the ability to convince top management about the virtues of an intranet. Instead, the investment is now incremental and decentralized: any unit is allowed to set up a site on the intranet, with technical support from the IT department. The unit must pay a moderate price for a new site – which should cover the resources spent by the IT department, and motivate people to find a serious purpose for a site or application (Interview # 2). There is no central coordination of the sites – although several sites and applications developed for, or in cooperation with, central departments balance the bottom-up strategy.

The intranet has grown rapidly from the beginning: the ever-increasing number of sites has surprised the IT department. It appears that every unit must have its own site. The sites are very different in scope and technical quality. There are central initiatives with top-down communication, like the pharmaceutical division's database distributing formal routines to users in the units concerned (top-down) considered later in this chapter. At the other extreme a production unit designs its own site intended for internal communication (yet in principle open to everybody).

The result of this liberal strategy is ambiguous. On the one hand, the intranet has a very rich and varied content: compared to companies with a more central, top-down strategy, the sites are experimenting with many different aspects of the technology (Bansler *et al.* 2000).

5.4.2.1. Usability threatened by disorientation

On the other hand, a number of problems threaten the general usability of the intraweb. The lack of structure seems to cause disorientation for the users. They find it difficult to find the relevant information, and this problem inhibit the intranet's potential as an information source, as one manager complains:

> "der ligger utroligt mange informationer på IntraWeb'en, som ikke bliver brugt, fordi folk ikke ved de er der. Der er f.eks. ikke mange der ved, at man kan finde en prisdatabase på Web'en, eller en 'product availability' base, så der bliver stillet mange spørgsmål, som er overflødige i den forstand, at svaret allerede findes på Web'en." (Interview # 11)[83]

Furthermore, information may not be properly updated – although according to the Webmaster, users tend to trust the source and do not complain about outdated information (Interview # 15) – or worse: the same information is found at different sites and may not be identical. "folk møder modstridende oplysninger: 'der står en ting her og en anden ting dér, og så ved vi ikke, hvad vi skal tro på'"[84], the Webmaster reports about user reactions (Interview # 15).

These problems – '*disorientation'*; *infrequent and insufficient update*; overlapping information sources (*redundancy*); *contradicting* information – seem connected to the decentralized strategy and the lack of central coordination. One manager argues that individual departments fail to understand their own role in relation to other information providers:

> "Så kan man lægge alle de informationer ind, man gerne vil dele med andre, men uden nødvendigvis at tænke på, om andre bedre kunne vedligeholde nogle informationer, eller om de er der i forvejen." (Interview # 11)[85]

This argument implies that the problem may be solved by a clear definition of information responsibilities. Another manager finds that many sites are more focused

---

[83] "there is so much information on the IntraWeb, which is not being used because people don't know it's there. For instance, not many people that there is a price database on the Web, or a product availability database, so a lot of questions are asked, which are superfluous in the sense that the answer is already on the Web."

[84] "People find conflicting information: 'it says one thing here and another there, and then we don't know what to believe'."

[85] "Then you can put out all the information that you'd like to share with others, but without considering whether others might be better at updating this type of information, or whether it might already be there."

on 'self-promotion', on building an image of their particular unit, than they are concerned about sharing information of relevance to others:

> "I dag har mange afdelinger deres egne web-sider, som beskriver, hvilket ansvarsområde man har, og hvordan man kommer på nogen ting. Der står der mange dejlige ting om hver enkelt funktion. Det bliver ikke administreret sådan, at man tager udgangspunkt i de vigtigste forretningsprocesser i HC og angiver, hvilke ting der relaterer til disse. Der har overhovedet ikke i [PharmaCo] været nogen overordnet styring på brugen af Intraweb'en." (Interview # 4)[86]

5.4.2.2. Two solutions considered: portals or structuration

Eventually, some level of central coordination is being considered, but the situation is complicated by the fact that the company is splitting up, separating the large pharmaceutical division from the smaller biochemical one. Accordingly, the intranet will also be separated in two, although they continue to share some part of it.

The two divisions both wish to solve the problem of 'disorientation' on the intranet, but they consider quite different solutions. The Biochemistry division wants to establish its own *portal*. A portal is basically a separate website designed to guide the user through the intranet. It may contain relevant news, links and a search engine, and it is based a on a particular categorization of the content This is a moderate solution to the structural problems: they will help orientation by a central portal rather than affecting the content itself – and they hope that 'content providers' will adapt to the portal in the long run. But the portal is also a reaction to another problem. People in the Biochemistry division are looking forward to independence from the larger pharmaceutical division, as the Webmaster explains:

> "[PharmaCo] og dermed også IntraWeb'en er domineret af [pharmaceutical division = PD]: '[PharmaCo] *er* [PD]'… [Biochemistry division] har … ønsket sin egen portal, sin egen indgang til IntraWeb'en. De vil ikke have al den støj, som alle [PD]-informationerne i princippet er. Hvis man har brug for [PD]-informationer, skal man bare kunne hoppe til [PD]-delen. Hvad angår de 'korporate' nyheder, er de meget rare at have, men det er ikke dem,

[86] "Today many departments have their own web-sites describing their field of responsibility, and how they get ideas. It says so many lovely things about every single function. It is not administered by starting out from the most important business processes in HC and then describing what things are related to these. There has in NN not been any over-all control whatsoever of the use of the Intraweb."

> der er de vigtige i det daglige arbejde. Til gengæld vil man tilstræbe at bringe meget lokale nyheder." (Interview # 15)[87]

The 'portal solution' may be sufficient in the Biochemistry division because there are fewer sites, and most of them are owned by central functions rather than local units. Thus the problems of overlapping sources is less severe than in the larger pharmaceutical division, which, besides the size, is more complex with numerous sites with very different scopes and perspectives, as the Webmaster explains:

> "Til sammenligning har [PD] mange sites, der kan handle om et emne eller være tilknyttet en afdeling; kun nogle få er tilknyttet funktioner – man har ikke helt så mange organisatoriske topsites i [PD]." (Interview # 15)[88]

The pharmaceutical division now has plans for a more thorough re-organisation of the intranet. "Man har f.eks. ønsket at samle bestemte informationer på ét site, hvilket ville gøre det meget nemmere at finde rundt i, fordi man så vil vide, hvor man kan finde informationer af en bestemt type" (Interview # 15)[89]. Redundant information should then be removed from other sites. In the future new sites must be approved by a board, which will consider whether there is a need for a new site, or whether the information belongs to an existing site. The individual sites are then required to update their information frequently, or at least be checked with intervals. The Webmaster from the IT department approves most of these ideas, which can only be carried through now under the authority of the pharmaceutical division – the IT department did not have that authority:

> "Sådanne krav har [IT department] ikke kunnet stille som datterselskab, men når [PD] beslutter det, vil det være muligt at komme ud over meget af det der rod og redundans." (Interview # 15)[90]

---

[87] "PharmaCo and hence also the IntraWeb is dominated by the PD. PharmaCo *is* PD. Biochemistry has wanted to have its own portal, its own entry to the IntraWeb. They don't want all the noise that PD information in principle is. If you need PD information, you should just jump to the PD section. As for corporate news, they are nice to have, but they are not important in everyday work. Instead they aim to bring very local news."

[88] "In comparison, PD has many sites that may focus on a subject or may be belong to a department; only few of them belong to functions – there are not as many organization topsites in PD."

[89] "For instance, there has been a wish to concentrate particular information at one site, which would make it easier to navigate, because you would know where to find information of a certain type."

[90] "Being an affiliate, the IT department has not been able to make such requirements, but once PD makes the decision, it should be possible to get beyond all this mess and redundancy."

The question is, however, what structure the pharmaceutical intranet should have. The leader in this initiative is convinced that it should be structured around organisation charts, but the Webmaster is not sure this is what the end users need. Others have – implicit, at least – suggested that all websites be related to basic 'business processes', an idea probably inherited from the company's recent BPR projects.

5.4.2.3. Good ideas outgrow the individual initiative

One example illustrates the problems of redundancy and update of information. In a small production unit, it was decided to publish a telephone book on the website. Production is organized in teams, and it is important to be able to contact individual team members. This type of information overlaps one of the most successful corporate intranet applications, the telephone directory of all employees. Yet a local telephone book was found necessary, because extra information was needed that is not in the corporate telephone directory, such as membership of production team[i].

The problem of redundancy is perhaps perceived more on the corporate level than on the local one. They may not use the corporate directory, so redundancy is not 'their' problem – except that they invest resources that might have been saved. Which is illustrated by another problem in this case.

The telephone directory was designed by a production worker who had just learned html. So he designed a quick and easy solution in html, with graphical illustration of team membership etc. This solution, however, is impossible to update. It was then realized, due to this and similar examples, that the unit should spent the next half year designing more durable solutions that would support updatability, rather than launching new initiatives.

The example shows that this local initiative might have profited from more professional support early on; but it also shows that for the technology to serve as a reliable source of useful information, more routines are required rather than playfulness and experimentation. New sites and applications are often carried through (up to some point) by individual initiative, but they will soon require professional design and extensive routines guaranteeing frequent update. Pioneers prefer to focus on creative aspects and leave behind piles of routine work. All good initiatives outgrow the individual pioneers.

There is an economic aspect to this. The example illustrates considerable hidden costs behind the intranet: the (local) resources spent on developing sites are often invisible. The technology has an appeal to top management, not least because it does not seem to require large, risky investments at top level[ii]. Investments are generally left to local initiatives. And at the local level, the investment in a website seems insignificant: yet the initial 'price' paid to the IT department is insignificant in comparison with ensuing costs, particularly in form of manpower. Individual pioneers are taken out of

production to spend full time on local websites. They spend long time developing solutions, which professional IT designers could have done faster and better (or there may already be generic products on the market), and amateurish solutions prove to be extra time consuming, when information must be continuously updated.

All these are classical, intolerant arguments against 'amateurs' and in defence of rational planning and design. Yet the strength of these local initiatives is that they arise almost spontaneously from the 'situated' experience of the work processes and some – however vague – ideas about the potential of the technology. But the ends don't seem to meet. Initiatives tend to run sour or out of steam, and local management is reluctant to make the next step of investment.

5.5. A system for better practice sharing

The SHARING system was a crucial part in a broader 'knowledge sharing' (or 'better practice' sharing) initiative envisioned to support and balance a reorganisation of the company towards more 'decentralization'. This was an attempt to exploit the expected potential of the new technology for fundamental changes in communication behavior. The universality of the intranet should encourage and enable knowledge sharing across organizational barriers and 'cultural' differences (ambiguity), as an alternative to corporate, formal procedures.

5.5.1. Data

This case is based on various materials:

Access to the website in question and a CD-Rom made for those units in the company that will not have access to the intranet + other material referring to the SHARING system.

5 interviews: two moderators (reviewers), one facilitator, and two potential users.

Participation in a meeting with moderators and facilitators.

No actual *users* were found, and thus very little experience with the system was reported. The evaluation of the system is thus based on how a handful of people perceive the system and its intentions, rather than data about how it was used. Their comments and critiques from potential users and other people involved are presented and categorized – and I shall then discuss their comments in my own analysis in the next section. The confrontation between the idea behind the SHARING system and the experience of the people in question provide good observations about the fundamental problems in this type of system.

Yet it is worth considering the status of such interviews. They cannot be regarded simply as an expression of 'lived, situated experience'. Managers have been to dozens of management courses in various concepts and buzzwords, or they have been engaged in internal development projects with consultancy firms, where they – on some level – have been fed some of the same theories that researchers draw on. If they provide statements that confirm theories of i.e. personal networks, it is not simply an empirical confirmation of that theory; the statement may just as well be due to the fact that they have already heard about the theory, and have found it useful in their interpretation of own experience. The ideas circulate and recycle at the risk of living on self-maintaining processes, where vague and broad definitions protect against critique and falsification and guarantee survival, until they wear out – and people (organizational members and managers) grow tired of them. In one sense, the problem is the opposite to that of ambiguity: there is a 'lock-in' of interpretations and concepts. On the other hand it is also a question of ambiguity in a different sense: the ideas and concepts are used in many different and unclear meanings (with emphasis on lack of clarity).

This material resulted in a confidential report made for the company with this author as a co-author (Bansler *et al.* 1999b), on which the *presentation* and *description* – not discussion and analysis – in this thesis is based.

5.5.2. Background, context

From 1997, it was decided to 'loosen the grip' in the sense that more autonomy was delegated to lower management, project managers etc. Some areas – for instance on work climate – should no longer be regulated by standard corporate procedures, thereby giving local management increased 'freedom of method'.

It may be misleading to speak of a deliberate reorganisation. To some extent, it was a matter of adopting a strategy to match the actual cultural and structural diversity of a rapidly growing global company, based on the realisation that the difficulties in enforcing the same guidelines in affiliates in countries as different as Denmark and Japan would outweigh the potential benefits. The company also hired an anthropologist in order to cope with this diversity – as a conscious strategy/policy to establish a common ground within a culturally diversified company.

As an alternative to detailed corporate formal procedures, a fundamental policy, 'the PharmaCo Way of Management', was stated in the form of ten 'fundamentals'. Organisational units were left to develop and apply their own solutions in the 'deregulated' areas, as long as these 'ten commandments' were respected. Roughly spoken, the intention with the whole knowledge sharing initiative was that top-down 'enforced' standard procedures should be replaced by local initiative, formal procedures replaced by problem solving - within certain limits.

However, this deregulation faced the risk of overlapping innovative efforts: that different units were solving similar problems over and over again, unaware of previous solutions – the danger of 'reinventing the wheel'. As an answer to this problem it was emphasized that all units should share knowledge.

> "Virksomheden har tidligere været en topstyret organisation, hvor mange beslutninger er blevet taget centralt. Nu skal den i højere grad være rammestyret: beslutninger lægges ud, og der skal være plads til mangfoldigheden og forskelligheden. I gamle dage – og det er ikke så længe siden – var der fælles regler for, hvordan man f.eks. skulle lave klimaundersøgelser i [PharmaCo], med fast skema mm.. Nu siger spilleregel nr. 3, at alle afdelinger skal have en aktionsplan for, hvordan de vil forbedre deres klima – og så må de gøre det, som de vil... Med de forandringer i organisationen er det en vigtig mekanisme, at man lærer af hinanden. De to ting går hånd i hånd. [PharmaCo] siger, at hvis bare I overholder spillereglerne, kan I gøre tingene på jeres egen måde. Men så skal vi 'pinedød' også udveksle og lære af hinanden, så man ikke ender med noget, der ikke er en 'better practice'. [SHARING] er selvfølgelig kun én måde at udveksle erfaringer på." (Interview # 13)[91]

This principle was considered so important as to make it the first 'fundamental': "Each unit must share and use better practices". And an intranet-based system for sharing best – better – practices was designed.

5.5.3. The SHARING system: description

The system was a database of better practices, located on the top site of the intranet. The intended users were managers of organisational units who were expected to voluntarily supply and retrieve better (best) practices. *Formal* routines are abolished, and people are invited to share – contribute and retrieve – *informal* routines. Instead of following a written rule, they are required to engage in problem solving.

---

[91] "The company used to be top-down directed, many decisions being made at the center. But now decisions are delegated, and space is allowed for differences. In the old days – not so long time ago – there were common rules, for instance for the survey of work climate in PharmaCo, with fixed schemes etc. Now rule no. 3 says that all departments should have a plan for improvement of the climate – and then they can do it in their own way. With these changes in the organisation learning from each other is an important mechanism. These things go hand in hand. PharmaCo says that, as long as you don't break the rules, you can do things in your own way. But then we must exchange and learn from each other, so you don't end up with something that is not a 'better practice'. Of course, SHARING is only one way to exchange experience."

The system should contain 'best (better) practices', meaning a*dministrative* processes. It is thus a practical and process-oriented knowledge very different from the scientific, product-related knowledge (and procedures) used for *documentation* of a product, or from guidelines for production, tests etc. Such knowledge is stored in other systems. The better practices intended in SHARING should apply to situations that may be similar across very different organisational units - cross-functional, cross-unit, cross-organisational…

In principle, there are two different types of better practices. One is concerned with the interpretation of the aforementioned fundamentals, while another is associated with different 'business processes'. Obviously there are overlaps: a better practice can belong to a particular business process, while demonstrating that it is in accordance with a particular fundamental. In one version of SHARING, better practices were thus stored – and thus retrievable – according to these two categories: under one of the ten fundamentals, and/or one of a dozen business processes.

Generally, they system is not based on *reuse* of *existing* documents. Users of SHARING – as contributors – are expected to provide written descriptions of (generally) unwritten rules: local procedures and practices. And they are expected to present their 'better practice' in a form that can be read by potential users anywhere in the company: i.e. it must not be restricted to a particular context.

A reviewer explained the requirements for a better practice according to the slogan '*sharing better practices*'. It must be *sharable*, not too specific or technical. It must be *better* – at least in the sense that there must be something new to it, that it's not already done by half of the company. It must be *practical*: it must be 'in use' and not just 'a good idea'. And it must be in accordance with the fundamentals.

It is also emphasized that a better practice should be simple – "something you might have thought of yourself, but didn't" (Interview # 13). The aforementioned reviewer observes that people are reluctant to supply a practice to the database, because they consider it too simple, but argues that those are usually better than very technical and complex ones. The description of a better practice should be short. Rather than provide a complete description the application should provide a name encouraging the reader to contact the author over the telephone.

One example of a practice is: a simple method to investigate work climate. The previous, 'canonical', corporate model was based on questionnaires with 85 questions, which made workers in the production sigh[92]. Simple guidelines to work with

[92] Another example given by the facilitator was guidelines for interpreting the 'ten commandments'. The new policy raised questions of interpretation: what does it mean to respect a fundamental; what type of local processes will be accepted; and which will be in

'customer orientation' inside the company – referring to the BPR concept of customer – is another example of a better practice.

The intended readers of the system are managers facing a new task (that is not regulated by standard procedures) and thus engaging in a process of problem solving. They are supposed to look up the SHARING system to see if others have been in a similar situation, and what they have done.

5.5.3.1. Evaluation or edition of content – varying approaches

The SHARING system underwent a few changes during its short lifespan. One aspect of these developments illustrates the complexities in evaluation. In the initial phase it was designed as a system of *best* practices, and an editorial board of reviewers was appointed with the authority to accept or reject contributions. During the first few months they rejected 90 % of all contributions. This was regarded as problematic and discouraging to potential contributors, and the system of reviewers was abandoned, thus removing any form of filter – this change now reflected in a modified terminology, emphasizing (merely) *better* practices.

This second model was also soon criticized, however. It was argued that much content was of low quality and relevance – mere banalities. Thus, a different review system was implemented: various managers were appointed as *moderators* with the task of reviewing both the existing content and new contributions, but with the emphasis on editing or at least encouraging the authors to modify their contributions by generalization and de-contextualisation. They should even act proactively as 'ambassadors' of the system. An special team of so-called *facilitators* – described below – were appointed as moderators for those better practices related to the fundamentals, and they agreed that their task was basically not to *reject* any contributions but rather to determine, under which fundamental it should be categorized (Interview # 13).

Facilitators

In connection with the aforementioned re-organisation and implementation of the fundamentals, a team of ten 'facilitators' was appointed and relieved from other tasks in the company. Their job was mainly to audit all organisational units, and to some extent 'identifying' better practices in these units, and possibly suggesting ideas from the database. They saw SHARING as their tool and considered themselves its ambassadors (Interview # 13).

---

conflict with the fundamentals? A large part of the 'better practices' actually concern interpretation of the fundamentals and are categorized accordingly.

5.5.4. The reception of SHARING

Despite the high profile, the system never really took hold of the potential users. After the unfortunate initial phase, where only 10 % were approved, there was some increase in content, as 368 better practices were added in the first two years 1997-8. But then there was a sharp decline, with only 21 new better practices in the first half of 1999, and it was eventually abandoned by 2000.

Interviews and comments at the moderators' meeting offer 3 explanations of the failures of SHARING.

1) The material is of low quality and relevance.

People have checked the system once or twice without finding anything, and have lost interest. Interviews offer three further reasons for the low quality and relevance.

The system of moderators is insufficient. They are too busy to do more than just approving or rejecting. They don't have time for actual editing; and if they do take some initiative like suggesting improvements to the contributors, then they are met with indifference – which leads to the second reason:

People are generally unwilling to contribute. One major reason offered by the interviews refers to the fact that actually writing a contribution, describing an unwritten rule takes *time.* And they must make a further effort to present their 'better practice' to an anonymous reader who is not familiar with the particular context. So describing a 'better practice' for the SHARING system constitutes a task in itself, the purpose of which is too abstract to justify the effort by itself. Thus, a large part of the actual contributions were added in connection to an actual 'project', i.e. where a department was developing and writing down new procedures for their own use.

> Another reason offered for the reluctance to contribute refers to the *culture* of the company. While people are generally reported to be helpful and willing to answer personal requests (in oral communication), contributing to the SHARING system is perceived very differently: primarily as a over-zealous demonstration of own skills, as an attempt to profile oneself. With this reputation, contributors run the risk of ridicule – 'they are laughed at behind their backs'. This is one of the reasons why people tend to disregard their own potential contributions, considering them banal and not worth bragging about.
>
> Many have suggested that the company might increase the motivation to contribute by offering some sort of reward. A real 'payment' for the effort was not suggested, rather a symbolic response – because the potential reader may remain anonymous to the contributor.

2) People are generally reluctant to consult the intranet for information

This explanation ties the failure of the SHARING system to a more fundamental problem with the intranet in general, as discussed in the previous section: disorientation, redundancy, and infrequent update of information.

Another explanation was labeled 'culture' in the interview. There is a 'busy' culture, and people tend to have a schedule corresponding to 150 % of their time. They tend to jump into new projects without much initial planning ('left foot first', Interview # 11). A handful of people considered relevant are invited to a meeting. One tends to rely on personal networks rather than spending time on gathering information and structure the task – strong rather than weak ties. It was acknowledged in one interview that this approach may *not* be the most efficient, and that spending more time on gathering information may in fact both result in a better solution *and* save time.

3) The basic idea in the SHARING system may be mistaken

One critique addressing the very foundation of the system concerns the *type* of knowledge intended. A 'better practice' refers to practical and process-oriented knowledge, which must be carefully adapted to a specific context.

> "Hvis man skal hjælpe og støtte skal man vide, hvor folk er henne og så tilpasse nogle initiativer, lidt som kognitiv undervisning, til de forhold, der er lokalt i den specifikke situation." (Interview # 10)[93]

A better practice described in very general terms may be more inhibitive than helpful, because the very adaptation is complicated and 'expensive'.

Another argument against the very idea behind the SHARING system is related to the former: It is argued that better practices are shared via personal networks – rather than the open, corporate-wide character of the SHARING system. This argument differs from the apparently similar previous one about the culture in the company because it claims that using personal networks is not merely a 'culture' that has formed in this particular company, but a basic necessity for sharing this type of knowledge[94].

---

[93] "In order to help and support you must know where people are, and then adapt some initiatives – a little like cognitive teaching – to conditions that are local in the particular situation."

[94] This coupling of particular channels and particular types of knowledge is argued in recent knowledge management literature. Hansen et al. thus argue that the so-called *personalization* strategy is more convenient for customized, innovative and tacit knowledge (Hansen *et al.* 1999). Yet, 'practical and process-oriented knowledge' does not fit unambiguously into this categorization: practical knowledge can *also* be routinised…

Interviews emphasizing this form of knowledge sharing suggested that what is needed is not a database of 'practices', but of people and their qualifications – a system that helps finding the people who have the knowledge. As an illustration they find it problematic that authors of important company documents – i.e. handbooks – are anonymous.

5.6. ProjectWeb: Communication in projects

This sub-case report some experiences with using a website as a means for communication and 'storing shared knowledge' in a project that involves people from various departments in the company, in one case even with another company. ProjectWeb is a standard website designed to support document sharing etc. in individual projects in the company. The emphasis is on 'horizontal' communication across organisational barriers. Thus, it does not express the *universality* aspect associated with the intranet as a whole, or the SHARING system – as evident from the concerns about *confidentiality*.

5.6.1. Data

Based on 8 interviews with people from the project management department, carried out November 1999-January 2000: Project Directors and Project Assistants. Results have so far been reported in a confidential report (Thommesen *et al.* 2000).

5.6.2. Communication in development projects

Drug 'development' is not so much about *developing* a product, as about testing the effects and side effects of an already well-defined product. In this company, as in many pharmaceutical companies, development is separated from the *research* department that supplies the drug candidate (a chemical compound). Thus, the project produces a lot of knowledge in the form of test results, but most of this is considered irrelevant to the project itself, unless the tests report negative results that may halt or even cancel the project.

Drug development is organized in large, long-lasting (10 years) projects that involve a large number of departments: production, the 'clinic' (responsible for clinical tests), marketing, registration, various affiliates, etc. (not to mention the external partner in the co-development project).

Functional specialization + Project organization

A few years ago, the company has appointed ten fulltime project directors each to be (also financially) responsible for 2-3 projects at a time. These project directors were being located on the same floor close to company headquarters – partly in order to strengthen communications with relevant departments at this site, partly to encourage

sharing of expertise and experience across projects – and thus removed from their former physical location outside corporate headquarters. As an example, One PD choose to leave his (device) development team to get closer to Marketing and Registration, not because he found the relation to these central functions more important, but because he believed that he had already well developed relations (his 'base') to the local development and needed to improve those to the central functions.

> "Jeg har rimelig godt check på, hvad der foregår i [udviklingsafdeling], da jeg har siddet deroppe i ti år. Jeg kender hver eneste krog og har netværket deroppe, hvorimod jeg er svagere 'herinde' i [det korporate hovedkvarter]. Og det er derfor jeg har valgt at sidde her."(Interview # 18)[95]

Each project is managed and coordinated by a core group of 10-12 people, consisting of a project director (and assistant) and representatives from the involved departments. Besides the need to coordinate distributed activities, the core group is (presumably) designed to *draw on expertise* from different departments. Project management, communication, and coordination etc. is thus a 'virtual' structure on top of the functional structure of line of business – with various disputes over authority between project management and line management (Interview # 23). It may also be described as a *matrix* organization combining project organisational and functional specialization. And the core group may be described as a virtual team.

Ambiguity in a project

Obviously there is a potential for ambiguity, because people participate with different perspectives and interpretations. To some extent this ambiguity is 'deliberate', because different perspectives can balance each other. The most obvious example of ambiguity is the tensions between the parties in the co-development project, but also in internal projects, different units are involved in the core group and the decision-making concerning strategies, trouble-shooting etc. Director, Quality Department, Marketing etc. are all pulling in different directions – and are assembled there for the very same reason. A Project Assistant gives one example:

> "der er hele tiden spørgsmålet om 'speed vs. quality' (derfor er QA også med i core-gruppen – projektlederne har det med at gå meget hurtigt frem)." (Interview # 16)[96]

---

[95] "I am quite update with what goes on at the development site, as I was up there for ten years. I know every corner, and I have my network up there, whereas I am weaker 'in here' in corporate headquarters. And that's why I have chosen to sit here."

[96] "There is always the question of speed vs. quality (and that's why QA participates in the core group – project managers have a tendency to go very fast."

Different phases of a project

A project changes over time. The number of people involved increases exponentially over time, and then fades by the end, as marketing – and other departments – are taking over. Work in the core group changes in character. In the initial phase of a project, much time is spent discussing strategy etc., and whether the project is worth a long-time investment: extensive initial discussions are crucial, because it is better to stop the project early – before the expensive clinical tests. The meetings in this phase are usually long.

> "Vi har jo der her faser vi går igennem. Med de tidlige prækliniske faser, hvor det er meget internt og laboratoriearbejde, færre mennesker, og en masse diskussioner om strategier og hvad man nu skal gøre, lægge planer... Der har vi meget mere brug for hinanden, netop i 'core'-gruppen. Der foregår mange flere diskussioner." (Interview # 23)[97]

Later in the project the work is mostly characterized by coordination and reporting (short meetings), possibly trouble shooting.

> "Og så senere hen når det bliver stort, hvor det breder sig ud, så har man en masse planer og så arbejder folk meget mere selvstændigt i de forskellige enheder, der er meget mindre tværkoordinering af arbejdet. Det forandrer sig meget."[98]
>
> "Når man så kommer over i fase 3, så handler det meget om logistikken og passer tingene nu sammen. Møderne bliver kortere og folk har i øvrigt ikke tid til at holde så mange møder. De har alle mulige andre aktiviteter. Så jeg synes der er meget stor forskel på tidlige projekter og senere. Det betyder også noget for den måde man kommunikerer på." (Interview # 23)[99]

[97] "We have these phases. In the early pre-clinical phases, with a lot of internal and laboratory work, fewer people, and a lot of discussion about strategies and what to do next, planning… That's when we need each other in the core group. There are more discussions going on."

[98] "And later on, when it grows big, when it expands, then you have a lot of plans, and people work more independently in their different units. There is less cross-coordination of the work. It changes a lot."

[99] "Once you're in phase 3, it's all about logistics and do things actually fit together. Meetings are shorter, and people don't time for that many meetings. They have multiple other activities. Thus, I think there's a very big difference between early projects and later ones. This also has consequences for the way you communicate."

5.6.2.1. Communication, documentation

Several levels or categories of documents are produced during a project. A main product of the process is constituted by test results and registration documents. Their actual *content* is of limited interest to project management (unless it affects the schedules – 'timeline' – of the project; in the worst case, if intolerable bi-effects of the candidate result in a cancellation of the whole project); they are stored in the corporate database, DOCBASE, in order to be transferred to the authorities.

Another category of 'formal' documents is related to the project itself: plans, strategies, annual reports etc. constituting the *Project History* are also stored in DOCBASE. Most of these documents are also instruments for corporate management.

Agendas, presentations and minutes are not stored in DOCBASE, only in personal records (including that of the Project Director). They are seldom considered useful beyond the actual meeting. Yet often vital information – about decisions, clearing of authority – is not available in the *Project History* documents (but may be available as email communication).

Much information in a development project is sensitive and guarded by strict rules of confidentiality. Marketing strategy, dates for 'launch' etc. are considered vital and not to be disclosed before absolutely necessary.

The degree of confidentiality often depends on company policy or individual decisions by managers. Within the company, levels of secrecy vary between the projects, and project directors have different policies on this issue. One example was the project director who considered employees in small affiliates (in foreign countries) as less loyal to the company:

> "Problemet opstår, hvis man giver vores datterselskaber adgang til vores ProjectWeb. Vi får tit henvendelser, og der er jeg rimeligt restriktiv, fordi jeg ikke har nogen fornemmelse af, hvordan fungerer det her datterselskab. [PharmaCo] har et rimelig godt image i Danmark, og man er stadigvæk rimelig loyal, men det er man altså ikke, hvis man sidder i et lille datterselskab i f.eks. Spanien med 15 medarbejdere – så er der andre virksomheder, som er mere spændende. Der kan [PharmaCo] tit bare blive brugt som et springbræt til at komme videre – så kan man hoppe til Lilly og alt muligt andet, og så kan man simpelthen bare downloade alle vores dokumenter." (Interview # 18)[100]

[100] "The problem arises if the affiliates are allowed access to our ProjectWeb. We often get requests, and I am quite restrictive here, because I have no idea of how this affiliate works. PharmaCo has quite a good reputation in Denmark, and people are still quite loyal – which you will not be if you are in some affiliate in i.e. Spain with 15 employees. Then there are other

Another project director explained that one could not allow 'a blacksmith in Production' access to vital information. As for the outside, the company has been criticized for exaggerated secrecy: investors are interested in marketing strategies and dates to estimate the economic prospects of the company.

Confidentiality issues are *exposed* during implementation of this technology, but they are not *created* by the technology – similar issues have previously been linked to decisions about mailings lists. But the new technology may provoke reconsideration and change the 'cost-benefit' balance between openness and secrecy.

5.6.2.2. Communication etc. in co-development project

Obviously, the organisational barriers between two independent firms raises particular issues of *confidentiality* and organizational *politics*, when conditions for the cooperation are questioned, or choices about future strategy to be made. Yet one should be cautious in over-emphasizing this as a *particular* characteristic of such a 'pure' 'network' or 'virtual' organisation. *Internal* cooperation (in a matrix organisation) and coordination across internal barriers – functions, divisions, departments, affiliates – is also characterized by high ambiguity. It is difficult to decide to what extent ambiguities across internal barriers differ from those between different companies.

There is one important difference in the organization of internal projects vs. the cooperative project: dualism or redundancy. In the co-development project, most levels/functions are mirrored in the two organizations, core group, chemists etc. PharmaCo needs its own experts to match the partners' experts – one reason being the potential of learning new technologies. It must be assumed that specialization and division of labor is clearer in the internal project, and overlaps are avoided. It is worth noticing that both parties have hopes of extending the cooperation beyond the current project, as PharmaCo is interested in applying the same technology – developed by the partner – for other products. It is thus the intention to build a long-term 'network' relationship – which makes it even more crucial to achieve and maintain good relations.

Communication difficulties

The co-development project further faces a number of communication difficulties, which may, however, also characterize 'internal' projects in a globally distributed and strongly differentiated company.

---

companies that are more interesting. In such a situation PharmaCo will often merely be used as jump board to move on – so you can jump to Lilly and anything else, and then you can simply download all our documents."

In this case, communication, coordination and some degree of cooperation across large geographical distance is necessary, requiring extensive use of communication media, i.e. videoconferencing every two weeks in some work groups.

Synchronous communication is awkward because of the time difference of 9 hours – which is one motivation for the interest in ProjectWeb or other similar solutions.

Communication is further inhibited by *lingual* and *cultural* differences. The common language is English, which for both parties is only a secondary language, as many employees in the US Company are Asians. Both parties thus speak English with a different dialect. Furthermore, other – cultural – conversation conventions such as irony are very different: an ironic remark or a joke may be taken as an offence.

5.6.3. Intentions: defeating time zones and building team spirit

The intentions behind the development of ProjectWeb, concerned both document management and actual 'knowledge management': to share and store project knowledge in both discovery & development, covering both registration documents, project documents, 'ideas' etc. The first version was developed by people in Research, but when the IT department 'took over', the emphasis has been on creating a tool for Development – starting when a candidate has left Research until it is passed over to Marketing and others. (ProjectWeb is now also being used in other types of projects, but the case focuses on the use in the company's development projects.)

Besides 'knowledge sharing', another ambitious intention was mentioned in relation to the co-development project: it was hoped that this technology, by providing a platform for shared information, would contribute to the *team spirit*.

> "[samarbejdspartneren] har været mægtigt begejstrede for det de har etableret med Genentech, fordi det har givet utroligt meget for den der teamfølelse, at man har den fælles web og har adgang til de samme dokumenter, og det er det de håber, at vi også kan få her, fordi vi også har den tidsmæssige og den fysiske forskel." (Interview # 21)[101]

A more profane intention in relation to the co-development project was to avoid problems due to time-zone difference – by replacing real-time communication with asynchronous, written communication (shared documents, etc.). At first, this argument seems strange: if rich real-time communication media have been chosen because that

[101] "The partner has been very content with what they have established with Genentech, because it has meant a lot for this team spirit thing that you have a shared web with access to the same documents. And that's what they hope for us to get here, because we also have the temporal and physical separation."

is what the tasks require, then it cannot be replaced by 'poorer' communication. Yet the time-zone difference may also constitute a problem for less 'fragile' types of communication: simply requiring a document is difficult, when people abroad cannot be reached over the phone because they are not at work. In this case, the problem may not be very different from the experience made by other human 'information bases' or experts, who feel that they spend too much time answering the same information requests over and over again over the telephone.

The website was an alternative to the *shared drives* previously used to store the same documents. One problem with the old solution was the difficulties with identifying and locating these drives. The shared drive on a server was represented (mapped) on the individual PCs as a virtual drive with a random local name – thus, the same shared drive could have different names on individual PCs, which made addressing difficult (Interview # 20). With the introduction of ProjectWeb, the shared documents are assigned a 'public' address; 'bilateral' mappings are replaced by an 'objective' address in a 'public' 'information space'.

5.6.4. ProjectWeb – description

ProjectWeb is a website, where news of common interest to a particular development project can be published, and where shared documents are stored. In the first[102] version, documents are stored according to predefined categories. It is a secure site on the intranet (in the co-development project, it is an extranet on a neutral server) with restricted access. The Project Director decides who has access.

The first ('official') version did not support concerns of confidentiality by offering restricted areas (or documents) within the site – those who were allowed access to a site, would automatically have access to the whole content[103]. Such functionality was then implemented in the next version – as documents with restricted access – along with a chat function etc.

Each development project has its own ProjectWeb. A new site is opened, when a new project starts in Development, and is closed when the project terminates, perhaps ten years later.

---

[102] More correctly the second version, but the first was developed and used in the Research department. The *second* version that is examined here was the first to be designed by the IT department as a potential 'standard product'. It will in the following be referred to as the first version.

[103] This may not be quite true (Interview # 20), but implementing further restrictions in access seemed to require better technological skills than the typical user had.

5.6.4.1. How it was used

The most extensive bulk of documents, documentation for drug approval by authorities – clinical reports, registration documents –, have not yet been included. This is partly due to technical and economic problems: These documents are currently stored in an existing database, DOCBASE, and it was considered acquiring a new proprietary database in connection with ProjectWeb, but that solution was found too expensive. On the other hand, project managers are not very interested in these documents.

Actual use varies among project teams (director + assistant). One characteristic difference, which was partly due to the lack of support for confidentiality, was that it was either used as a tool or working archive for the *Core Group* and the Project Director, or for large-scale, one-way communication to other participants in the project. In the first case, only a very small number of people are allowed access. In the second case, it could be several hundred. Without the possibility for restricted areas, management must choose between allowing a large number of users (and leaving out important information) and being very restrictive while using the site for confidential information

As a working archive, ProjectWeb was used for semi-official documents that are not already stored in other corporate databases: minutes, agendas, and presentations. There appears to be no corporate policy for these records, and there are several overlapping archives. The project has a paper-based archive; now the website provides an electronic archive; and the Project Director normally maintains his own archive. The documents normally lose their relevance – as a reminder of recent decisions and rationales – after a short period, but they may suddenly gain renewed importance years after a project has concluded: one Project Director was thus called as witness in a trial years later and suddenly depended on his own archives. He hopes that ProjectWeb can relieve him of the task of maintaining these archives; this would require that these documents are stored *after* the termination of a project (Interview # 18).

It is hoped that ProjectWeb can replace email for a number of functions: announcement of meetings and deadlines, distribution of agendas and minutes. Instead of sending an email, the material is published on the website, which people are expected to check frequently for new information, instead of receiving material. The web seems to offer particular advantages in case of documents (or information) that are frequently updated. Instead of passing documents around by email with chaotic consequences for version control, it is in principle possible always to publish the most recent version on a website. As an example several Projects have chosen to publish the *Product Development Plan*, a strategic document containing multiple applications (pre-clinical plan, marketing plan, etc.) that are revised at different times, on ProjectWeb. One Project Assistant compares with (paper) mail:

> "Jeg har … valgt at lægge vores PDP [report], som vi laver en gang om året, ud på web'en. Der en masse underbilag, som bliver opdateret på forskellige tidspunkter – når vi skulle sende den ud p papir: man havde lige sendt den ud, og så kom der opdatering til. Det var simpelthen så irriterende. Men nu er den lagt ud på web'en, og så kan folk altid finde en opdateret PDP dér – med alle de bilag osv." (Interview # 22)[104]

So far, however, these documents are collected over email and assembled before being published on the web – the question is whether it will in the future be used for actual *co-authoring*.

It seems that the 'recipients' (so far) do not check the website frequently enough: they do not retrieve the information by themselves and have to be reminded about deadlines. This may be primarily a question of getting used to a new technology, but it also illustrates two characteristic differences between email and web: one is that email is temporal, distributed at specific time, while the web is static – even though information on the web, too, is published at a point in time, it remains there. The other characteristic is spatial: an email is physically distributed to the recipients, while information on the web is located at a particular address.

Perhaps this further illustrates one meaning of 'empowerment' in relation to intranets: it's your responsibility to keep updated – instead of waiting for the mail. And the traditional excuse in relation to deadline problems: that the information was never received, is no longer valid – the information is published and 'out there'.

As a compromise between the static web and the temporal email, emails with links to the relevant pages are distributed. The second version of ProjectWeb included a new facility, where new information published will at the same distribute a reminder by email.

According to the interviews, the changes in communication patters due to email were generally much more significant than the web. Negotiations about authority between different (contradicting) structures in the company are done in emails. One Project Director tells about occasional conflicts over authority with the Line management – such decisions are often made via email:

---

[104] "I have chosen put our PDP report, which we make once a year, on the web. There are a lot of enclosures that are updated at different times. When we had to distribute the paper version: immediately after you had mailed it, there was a new update. It was so annoying. But now it's out on the web, and people can always find an updated PDP there – with all the applications etc."

> ”Men nogle gange så bliver linien involveret på en eller anden led – og så er det tit det sker på en email.” “Det er tit en konfliktsituation. Så står der måske et sted at det er besluttet sådan og sådan, men ikke nødvendigvis hvor det er ‘clearet’ henne – hvis der ikke har været nogen procedure for det. Jeg tror det er nemmere i fremtiden. (Interview # 23)[105]

Previously, such negotiations would probably be made over the phone, but now email offers *documentation* due to its ‘tangibility’: it can be used as a ‘weapon’ in case of ensuing conflicts:

> “jeg har tit haft glæde af at kunne gå tilbage og finde det som dokumentation og sige ’jamen I har selv været med til at beslutte det her for to år siden’. Men det er faktisk tit emails jeg bruger til det. Det har jeg lært at gemme..” (Interview # 23)[106]

5.6.5. User comments

5.6.5.1. Archives, records

Most Project Directors claim that they have less need for ProjectWeb records and rely mostly on their own recollection of decisions etc.:

> “Som regel kan jeg huske hvorfor den [beslutningen] blev taget. Jeg har ikke det store behov… Men hvis der var en anden der havde overtaget projektet, så ville det være ret smart. Det er en kæmpefordel at have været i det så længe, fordi jeg kan huske det.” (Interview # 23)[107]

Yet there are exceptions, where the person cannot rely on her own memory, and documentation is needed: questions of authority (agreements across boundaries) as in the above example, and responsibility (court hearings).

The citation gives a crucial example of asymmetrical (organisational) benefit of records: in case of *turnover*. It is difficult for a newcomer to take over from someone

---

[105] “But sometimes the Line gets involved somehow – and then it often happens in an email.” “It’s often a situation of conflict. Then it may be written somewhere that something has been decided, but not necessarily where the decision has been cleared – if there was no procedure for it. I think it will be easier in the future.”

[106] “I have often benefited from being able to go back and retrieve it as documentation and say: ‘look, you took part in making that decision two years ago’. But I mostly use emails for that. I have learned to keep those.”

[107] “Normally I remember why the decision was made. I don’t have a great need… But if somebody else were to take over the project, then it would be quite useful. It’s a great advantage to have been there for so long, because I remember things.”

who relied extensively on her own memory; in ten-year projects, there is a large turnover, even in the core group, particularly marketing representatives. A Project Director thus reports a frequent change in the core group:

> ”Hovedsagelig i Marketing, hvor man skifter ud hele tiden – det er en måde hele tiden at holde sig ’fit for fight’ på. Jeg tror vi har nr. 3 på i øjeblikket på det her projekt. Det er også fordi det er en udklækningsanstalt for General Managers, der skal udstationeres og køre et datterselskab et eller andet sted – så det kan nok ikke være anderledes.” (Interview # 18)[108]

And he goes on to tell how a new representative from Marketing has been happy to find background material on ProjectWeb and thus better be able to acquire sufficient information about the current project:

> “vi har fået en ny mand på fra Marketing, og han var meget glad for, at han kunne finde alle tilgængelige informationer om projektet på web’en ved at bruge en dag på at kigge det igennem – og lige læse lidt baggrundsmateriale, og nogen af de sidste nye referater, dokumenter og tidsplaner. Tidligere var det næsten umuligt som ny mand at komme ind i et projekt, fordi... hvor var den viden henne? – den sad i hovedet på de andre projektdeltagere, og hvordan fik man den gjort tilgængelig. Det var meget svært, det tog tid, og som han sagde: da jeg kom til min afdeling her – man havde dårligt procedurer, og man havde ikke tid til at lære mig op, og det var lidt tilfældigt, hvad jeg fik ind på mit bord omkring afdelingen... og de ting, som var omkring projektet, det var også lidt sporadisk, hvad han fik af sin boss: ’han havde vist modtaget det her referat eller det her dokument på et eller andet tidspunkt, og det kunne han da lige kigge på’. Han følte sig ikke fuldstændig sikker på, at han havde total-viden til at kunne sætte sig ind og påtage sig det ansvar at køre marketingsaktiviteterne for det her projekt. Men efter, at han havde været på ProjectWeb’en, så havde han et rimelig godt overblik over, hvad det her drejede sig om. En ny medarbejder kan lynhurtigt gå ind og blive opdateret på mange punkter.” (Interview # 18)[109]

---

[108] “Primarily in Marketing where they substitute people all the time – it’s a way to stay fit for fight. I think we have no. 3 at the moment on this project. It’s also because it’s a place for breeding General Managers that are to be stationed an run an affiliate somewhere – so I guess it can’t be any different.”

[109] “We have new guy from Marketing, and he was very happy that he could find all available information about the project on the web by spending a day looking through it – and read some background material, and some of the latest minutes, documents and timetables. Previously it was almost impossible for a new man to enter a project because… where was all this knowledge? It was inside the heads of the other project members, and how did you make that available. It was very difficult, it took time, and as he said: when I arrived at my department – you hardly had any procedure, and there wasn’t much time for training, and it was quite coincidental what I received on my table about the department. And as for the project, it was

Another example of potential organisational benefit is the currently popular idea of knowledge management and having a shared knowledge base. The Project Directors, however, have difficulties in regarding the documents as a 'knowledge base'. They find the documents in ProjectWeb useless for 'knowledge sharing across projects'. They are often interested in each other's projects and need to consult others, but they use personal communication, i.e. with other Project Directors, are all located at the same floor – partly for that very reason.

In principle, the individual managers do recognize the need for records, but hope for secretaries to take care of such routine work, or expect the technology to solve the problem.

> "For mig har det været en meget stor lettelse, at jeg ikke behøver at printe alle de her dokumenter ud og gemme dem i et eller andet arkiv. Jeg ved altid, at jeg kan finde dem, og det har jeg stor gavn af." (Interview # 18)[110]
>
> "Det vil helt klart være en gevinst at have dem liggende elektronisk, hvis du har søgekriterier inde. Som I kan se på mit kontor, er jeg ikke specielt god til at arkivere. Noget af det sværeste er at arkivere, så man kan finde det igen." (Interview # 18)[111]

However, ProjectWeb is not yet designed to function as a long-term archive. One problem is that a ProjectWeb site is in principle closed with the termination of the project, and the documents must be stored somehow.

Categorisation

Another problem has to do with categorization: filing a document is more than adding paper to a file – the document must be categorized, if one should be able to find it later. These categories may change over time: in the beginning of a project, there are still only few documents, and detailed categorization is unnecessary, but as the bulk of documents grow, it is much more difficult to navigate. Thus, another Project Director

---

also rather sporadic what he got from his boss: 'he may have received these minutes or this document at some time, and he could have a look at that'. He didn't feel quite confident that he had sufficient knowledge to run the marketing activities for this project. But after having been on the ProjectWeb he had a good idea of what was going on. A new employee can quickly get updated on many issues."

[110] "It has been a great relief to me, not having to print out all these documents and keep them in some archive. I always know where to find them, at that is very useful."

[111] "Obviously, it would be an advantage to have them electronically, if you have the criteria for search. As you can see from my office, I am not particularly good at archiving. It is very difficult to archive in a way so that you can find it again."

was skeptical to the idea of the application as an archive: "Jeg ved ikke om det bliver for stort. ProjectWeb er jo mere sat op til at være kommunikation" (Interview # 23)[112].

When a document is published, particular aspects (and categorizations) are important, and it is often associated with deadlines – but such time-related categories are not very useful for later search, unless one remembers or knows the relevant dates. Other categories are more 'timeless', and new categories (and associations) may emerge with time.

Thus archives remain a difficult task in spite of the wonders of the web, and if distribution and records may be integrated by 'up-front' categorisation, then this task may best be supported by organisational routines, particularly in the form of well-defined, general categories. On the other hand, the users were uncomfortable with the predefined document categories in the 'first' version of ProjectWeb: they were awkward and inadequate, and it seemed impossible to find a system that was acceptable to all the users. This problem was dealt with by allowing user defined categories in the next version:

> "Vi havde f.eks. fået stillet nogle – navngivne – dokumentkategorier op, og dem kunne du ikke lave om på. Og så fandt vi meget hurtigt ud af, at når man prøver at lave overordnede kategorier, der skal gælde for alle, så kommer du hurtigt til at mangle noget eller andet... Det er en af de ting, som er blevet forandret ved 3-eren: du opbygger selv dine kategorier fra den ene ende til den anden." (Interview # 20)[113]

5.6.5.2. Confidentiality

The primary conflict between using the site as a tool – primarily a working archive – for the core group, or for broad communication within the whole project concerns confidentiality. This is partly a question of technical design, and the next version allows for different levels of access; although one Project Director fears that this solution – a complex system of different categories of people with particular access rights – will be too complicated. This solution corresponds to distribution lists used in email or postal communication.

Whether or not this technical solution is satisfying, it does expose confidentiality issues and barriers for information sharing. Though most Project Directors prefer

[112] "It may grow to big. ProjectWeb is more set up to be communication."

[113] "For instance, some – named – document categories were set up, and you couldn't change them. And we soon found out that when try to make universal categories that are useful to everybody, you will end up leaving something out… This is one of the things that have been changed in version 3: you build your own categories from beginning to end."

secrecy, debates on the confidentiality of particular documents are often raised in the core groups. At least one Project Director has accepted a high degree of openness (and people from the IT department regard this secrecy to be in conflict with the very idea of internet technology). A number of reasons for maintaining secrecy about certain information are offered.

Leaks and industrial espionage

One is the fear of leaking strategic information – i.e. about marketing strategy and launch dates – to competitors. There are many people involved in a project, and managers expect that not all of them feel the same loyalty to the company, i.e. people in production who are salaried on an hourly basis, or people in affiliates. As one Project Director puts it:

> "Resten, som sidder i lavere positioner i datterselskaberne, de skal have informationen, når de har behov for den, og ikke 2 eller 3 måneder eller flere år før." (Interview # 18)[114]

Another core group – in a different project – discussed the same problem, but didn't reach a decision before the Marketing department distributed the paper files.

Financial information

Another issue of secrecy concerns financial information, which should apparently not be exposed internally. A project assistant thus tried to publish 'rolling estimates', because some participants in the project often telephoned for an update, but the Project Director put an end to this, arguing that it was not in the interest of everybody (Interview # 22).

Organisational politics

A third reason for secrecy has to do with organisational politics. Managers do not wish to reveal discussions from ongoing decision-making before a decision has been agreed upon internally. "[D]et kan jo være nogle strategiske eller politiske beslutninger, der skal tages i projektet, som I første omgang kun skal diskuteres af en mindre gruppe …"[115], says the Director of the co-development project (Interview # 21), in which the political processes – between two companies – are obvious. In such situations, minutes are sensitive – or it

[114] "The rest of them, lower echelon in the affiliates, they get their information when they need, not two or three months or several years in advance."

[115] "There may be some strategic or political decisions to be made in the project, which should first be discussed by a smaller a group…"

is not mentioned in minutes at all (until later), because documents are considered 'too public':

> "I det øjeblik, det bliver taget til referat, så kan det i princippet nå vidt omkring. Og det er ikke altid, det behøver at komme ud på det tidspunkt, hvor referatet bliver skrevet. Det kan være, at der af forskellige årsager skal gå lidt tid, inder det bliver kommunikeret bredt ud." (Interview # 21)[116]

5.6.5.3. No use for chat and discussion groups?

While some interviewees are positively curious about the *new* forms of (interactive) communication offered by intranet technology, most of them are suspicious about the usefulness of discussion groups, and especially of the chat function.

One interviewee says that he might expect researchers to use discussion groups for theoretical discussions, but saw no other potential in this facility. No successful examples are reported in the company: discussion groups have been introduced everywhere on the corporate intranet and are almost never used. It seems that the success with Usenet and BBS from the Internet have not been reproduced on the organisational level (although Sproull & Kiesler report successful *organisational* examples).

As for the chat function, an IT manager seemed to express a general perception when saying that chat 'is just for teenagers'. Nevertheless the Assistant in the co-development project was an exception in seeing the chat function as a convenient alternative to videoconferences for some purposes: she found the video meetings too frequent and not very useful.

> "man kunne godt bruge det i stedet for en videokonference, hvor det hele nogen gange går så langsomt – så kunne man begge to være online, så man sidder og skriver til hinanden." (Interview # 22)[117]

One reason for this may be purely technical and due to the inadequacy and unreliability of the system: the connection is unstable, and it is difficult to hear what other participants are saying; the facilities in the other end (the US Company) are limited: "Det udstyr de har derovre kan heller ikke zoome og dreje, og nogen gange kan man på

[116] "The very moment it's in the minutes, it can in principle get very far. And it does not always have to get out at the same time as the minutes are written. For different reasons it may take some time, before it is communicated broadly."

[117] "you might use it instead of a videoconference, where everthing sometimes moves very slowly – then both could be online, writing to each other."

grund af forbindelsen være i tvivl om, hvem der taler"[118], as the Director explains (Interview # 21).

But there may be another reason for her interest in a written medium. She is responsible of accounting, and communication about figures requires 'accuracy' and is better mediated in text than voice – especially when one or both parties are forced to use a non-native language (English). The medium is so to speak inconvenient for her use, because it is too rich. In this case, it is not merely a question of the technical inadequacy of the videomeeting facilities – she may even prefer electronic communication to (or at least in addition to) meeting face-to-face.

The director of the co-development project, however, has a different perception of the videomeetings. Although she recognizes the inadequacies of the technology, she finds that email communication is insufficient and problematic by itself:

> "Der er problemer med kommunikationen udelukkende via e-mails har vi fundet ud af. Der er misforståelser og fejlkommunikationer. Engelsk er ikke vores første sprog, men [samarbejdspartneren] har også mange som har anden etnisk baggrund, end at være amerikaner, så man bruger ordene lidt forskelligt, og det kan give anledning til nogen problemer ind imellem. Her kan E-mail godt give problemer, for du kan ikke med det samme spørge, hvad mener du? Eller fornemme på tonelejet hvordan det er ment…..altså nogen gange, hvis man bruger nogle ord så kan de godt for en amerikaner være virkeligt stødende eller virke hårde eller skældende ud. Og måske er de slet ikke ment sådan, man har bare ikke haft et andet ord til sin rådighed, og det kan man bedre fornemme når man har telefonen eller en videokonference."[119] (Interview # 21)

In this case, the reason for a more positive perception of videomeetings may be that the Director has different tasks. The co-development project in particular offers numerous occasions for conflicts and ambiguities that she has to deal with.

---

[118] "Their equipment cannot zoom or turn, and sometimes, due to the connection, you're in doubts about who is speaking."

[119] "There are problems with a communication only based on emails. There are misunderstandings and erroneous communication. English is not our first language, but [the US partner] also has many employees with non-American background, so you use the words a little different, and that may cause problems from time to time. This is where email may cause problems, because you cannot immediately ask 'what do you mean?' Or guess from the intonation how it is intended... sometimes you may use words that to an American appear truly offensive or are perceived as rough or scolding. And perhaps it was not really intended that way; you just didn't have another word available. And you can better sense that in a telephone or a videoconference."

Example: the dangers of email communication.

Asked for examples she told the following story. Tensions arose on one level between the companies, when one group in the US failed to meet a deadline and gave as reason – in an email – that they were busy with other tasks. This message caused dissatisfaction in PharmaCo: were they not supposed to give this project highest priority? Are they unable to meet the conditions in the contract? According to the Director the conflict was only resolved ('ambiguity reduced'), when she had a telephone conversation with the corresponding project manager in the US company, who explained that they were busy not with another project, but with another part of the same project.

> "Mit seneste eksempel er fra i går, hvor en af [samarbejdspartneren] folk skriver at, noget af det de skulle lave for os, har de ikke leveret så hurtigt, som de godt kunne, fordi de havde nogle andre projekter, der var højere prioriteret. Og det støder så folk her, fordi de mener at aftalen er, at vores projekt har den højeste prioritet. Så reaktionen er: "nå der kan man bare se, det er sådan de alligevel gør". Og når jeg så taler med projektlederen der ovre, så fortæller han, at den person der har skrevet det ikke har engelsk som sit første sprog, og det hun mener er i virkeligheden, at der er andre dele af vores projekt, altså andre delprojekter af projektet, der har haft en højere prioritet. Men der var folk allerede begynde at gå i en forsvarsposition. Når jeg fanger sådan én, så er det jo min opgave at tage fat i min counterpart der ovre og gøre opmærksom på, at her er der noget som har stødt folk her ovre, og det er vi nødt til at få afklaret. Men det kan være mange ting. Det kan være svært nok internt, og det gør det ikke nemmere at det er en andet firma på lang afstand." (Interview # 21)[120]

This experience supports the theory of media richness. To some extent, the (potential) conflict is due to different interpretations. And the richness of the telephone, due to the variety of cues in sound + interactivity (high feedback), is necessary to negotiate and resolve the conflict.

---

[120] "My most recent example is from yesterday, where one of their people write that they haven't delivered something as fast as they could because they had other projects with a higher priority. And people here are offended because they think the agreement was that our project has the highest priority. Thus, the reaction is: 'there you see, that's how they do after all'. And once I speak to their project manager over there, he explains that the author of that mail doesn't have English as her first language, and what she really means I that there are parts of our project that has a higher priority. But at this point people had already turned defensive. When I catch one like that it is my responsibility to get hold of my counterpart and explain that this was something that offended people here, and that we have to clarify it. But it could be many things. It is already difficult internally, and it doesn't make it easier when it's another company far away."

5.7. SQUARE – organizational memory and unlearning

5.7.1. Data

Website. One interview with a manager in the Quality department, who took the initiative and was responsible for the development project. Part of an interview with a person in a non-pharmaceutical production unit. Several peripheral references to the system.

5.7.2. Background, context

The SQUARE system was first implemented in the pharmaceutical division, where many processes are regulated by written rules and extensively documented, partly due to the fact that this is a highly regulated industry. None of the instructions and procedures in the system is directly dictated by FDA and others but many of them are designed to satisfy the demands of the national health authorities.

5.7.3. Intentions

The immediate objective was to establish a document hierarchy in order to achieve ISO certification. Choosing an electronic solution also brought other advantages, by reducing the costs of updating procedures, and by – in principle – completely removing outdated versions. It is expensive to continuously print and distribute updated versions; and often people tend to stick to their old files and printouts, while ignoring the new versions. With SQUARE, it is less expensive to update the whole body of rules; *and* this reduces the problem of 'unlearning' because people – in principle – no longer maintain their own archives: the people and departments concerned would always only be in possession of the latest up-to-date version.

The person in charge of the project mentioned a further motivation behind the SQUARE system. It should render the procedural documents independent of organisational changes. This would save the work of rewriting every document, each time the actual instruction or procedure is to be carried out elsewhere in the organisation. The implication is that most processes are in reality mainly left unchanged by more 'structural' changes in the organisation: the same processes are just executed by other people and/or departments.

5.7.4. Description

The system is designed to store documents concerning instructions and procedures in the organisation, and distribute the documents to the relevant departments via the Intraweb. In contrast to the SHARING system, the content is obligatory, and so is the system – employees are required to check for changes once a week: When a document

has been changed it will be indicated in SQUARE system in the listing of the relevant documents.

A procedure, which formerly contained instructions about 'who, what, where and when', is separated into a *document* describing the procedure itself, and a *distribution matrix* determining who should read the document: the matrix specifies *where* in the organisation, i.e. in which of the 1000 *departments* in the company, a certain instruction or procedure is carried out, and in connection to which *product*. The documents are stored in an existing database, DOCBASE, but the *distribution* is based on the intranet, where people and departments are allowed access according to the matrix. The database contains two versions of every document, Word and PDF. The PDF is standard, because it looks the same on every platform. In addition to the electronic archive, it is still necessary to maintain a physical archive of signed paper documents, because they had not yet implemented an electronic signature that satisfies the demands of FDA.

There are two different ways of using the SQUARE system, usually corresponding to different users – and to the classical distinction between plan and execution. Some people enter documents into the database, while others use the actual instructions and procedures in their work.

Documents are first written as a Word document. As most users are not used to Adobe, the Word file will normally be sent to the Document Centre to be converted to a PDF. The electronic documents are then entered in the DOCBASE database, while a printout of the PDF file is signed by the authorized person in the corresponding department, and then returned to the Document Centre to be filed in the physical archive.

At the time of the interview, the system was mainly used for documents on *administrative* procedures, but it was the intention also to use the system in the production. However, the more critical documents awaited the implementation of an electronic signature, before they can be entered. It was furthermore decided to use SQUARE as a common standard for the company, also to be used in the biochemistry division.

The electronic distribution in principle replaces the old systems, where the users kept local files of the paper documents distributed by the Document Centre.

5.7.5. In use

The resulting system is reported as an overall success (according to the interviewee who was also responsible for the project), and judging by the number of hits, this is one of the most frequently visited sites on the company's intranet.

A few still do not use the system as intended, however. They stick to their paper files and therefore take printouts of SQUARE documents.

> ”For brugerne ude i afdelinger er det en fordel, at de ikke længere behøver at opdatere deres mapper. Der er dog altid nogen, der hænger ved det gamle. Nogle har svært ved at vænne sig til, at de ikke længere får dokumenterne på papir, og foretrækker så selv at printe dem ud for at beholde deres eget papirbaserede system – for dem betyder det nye system mere arbejde, mener de.” (Interview # 4)[121]

This practice can be problematic, because it means that there will still outdated versions of the documents in these departments. It is hoped, though, that all users in time will get used to the electronic documents and give up their old paper based file systems.

The decision to make the system a common standard for the company has been criticized by people from the Biochemistry production. Basically, the problem is that the whole process of changing rules – adding or replacing documents in the database – is too slow.

> “[SQUARE] er ikke særlig kundevenligt. Det er et elendigt system uden særlig gode søgemuligheder. Hvis kvalitetsstyringssystemet skal være noget, der du’r og som alle har et forhold til, og noget som driftsoperatører skal kigge i, så skal det ikke ligge i sådan et system som [SQUARE].” (Interview # 5)[122]

> ”Proceduren til [SQUARE]-systemet er for langvarig: man sender sit dokument indtil en bibliotekar el. l., der konverterer det til PDF og laver de nødvendige links til databasen. Det tager måske 14 dage, og det du’r ikke.” (Interview # 5)[123]

---

[121] “It’s an advantage for the users in the departments that don’t have to update their paper files. Yet some people stick with the old ways. Some have difficulties adjusting to no longer receiving paper documents and prefer to print it out in order to keep their own paperbased system – they find that the new system means more work.”

[122] “SQUARE is not very user friendly. It’s lousy system with no good search facilities. If the quality control system is to be something that works, that everybody can relate to, and that the operators can use, then it can’t be in a system such as SQUARE.”

[123] “The procedure for SQUARE is too slow: you submit your document to a librarian or other, who converts it to PDF an adds the required links to the database. It may take 14 days, and that’s no good.”

The resistance against using the 'pharmaceutical' system as a common standard also reflects the general feeling in the biochemistry division – before the separation – that the pharmaceutical 'worldview' – emphasis, internal regulation, etc. – was dominating the company as a whole and inhibiting development in the biochemistry division. But it's not 'merely' a question of worldview and ambiguity, but also a very practical one: all processes in the pharmaceutical division heavily regulated by formal routines that must be approved at high level, partly due to legislative regulation of drugs, and this regulation is perceived as inflexible and unnecessary in the biochemistry division. And even in the Pharmaceutical Division, the DOCBASE database, on which SQUARE is based, is considered to rigid for their purposes: "man kunne godt bruge det som arkivsystem – men det er alt for tungt." (Interview # 23)[124]

5.8. Discussion

I shall discuss a number of issues emerging from the case study that illustrate and confirm the relevance of ambiguity. First I discuss the potential for '1st order effects' of intranet media reflecting some of the characteristics presented in chapter 3. I thus focus on questions relating to relatively 'simple' use of intranet technology. To some extent, PharmaCo has failed to realize this potential, and a shall therefore discuss some of the reasons that organizational members may not adopt shared electronic files or consult the web for information rather than making a telephone call. I argue that at least some these problems are related to the *ambiguous* structure of the intranet and discuss the perspectives for solving this problem. Finally I discuss a few additional issues: aspects of ambiguity in relation to SHARING, ProjectWeb and SQUARE.

5.8.1. Potential of intranet technology: Information retrieval replacing paper files and 'rich' communication?

By publishing information on the web the organisation hopes to replace different media corresponding to two different forms of 'information retrieval'. On the one hand, electronic files should replace paper files – merely transferring existing content to a new medium. On the other hand the potential for finding information on the Web should replace (reduce) telephone requests, in order to save time and resources. This organisational motive was referred in one the interviews, who also noticed that people have become less *helpful* by simply referring to the web for information[125]:

---

[124] "You might use it as an archive system, but it is too cumbersome."

[125] Does this contradict the thesis that computer networks *increase* 'horizontal' communication in organisations (DeSanctis & Monge 1999;Sproull & Kiesler 1991)? Not necessarily, but the thesis may be qualified. This use of web communication may increase the 'amount' of communication, but there is a change of media and richness. Communication is moved from

> "lige meget hvilken oplysning du skal have nu, så skal du bruge web'en. Alt findes derude nu… Der er ikke nogen service i firmaet mere. Hvis du ringer og spørger efter et eller andet, så hedder det: gå ud og kig på web'en." (Interview # 20)[126]

Vertical one-way communication? A website (web publishing) may be classified as *vertical*, *one-way* communication. This is probably reflected in the project assistant regarding ProjectWeb as the 'ultimate communication tool', because as a key person in all 'official' communication in a development project she handles one-to-many (mass-) communication, sending material to various segments of the project 'members'.

5.8.1.1. Replacing paper files by a centralised master copy

The potential of intranet for 'advanced publishing' (based on databases) is based on the traditional advantage of electronic files: dynamic, continuously updated information, and removal of outdated information (ephemerality); and the complementary capacity for storage, categorisation and search, with potential of computer *networks* for fast access and distribution, which in principle makes it possible maintain *one copy* of any type of information, enabling easy update and version control (Nelson 1980). This potential makes the solution of a centralised (unified, or universal) archive more feasible.

To compare with the 'old media': with printing and paper files, one could only guarantee authenticity and version control by keeping the 'master copy' in a central archive. One could only avoid the inertia of distributed copies by simply refusing distribution and requiring readers to come and read the master copy in the centralized archive, and this solution is obviously unfeasible in the case of written rules in a global corporation.

Computer networks have a potential for integration of records and distribution, storage and communication, and this has different implications depending on the type of information or files considered.

---

the richer medium of the telephone – interactivity, verbal cues – to a text-based one-way communication. Use of web means easier access to information, which may encourage more people to actually seek useful information where previously they would have tried to manage without, but this communication is 'poorer' – with both positive and negative aspects.

[126] "No matter what information you need, you will have to use the web. Everything is out there now… There is no service in the company anymore. If you call and ask for something, the answer is: go and look on the web."

5.8.1.2. Records vs. routines – different types of files

Records (Project History), as a documentation of historical decisions, events and results differ from *routines*, whether formal (SQUARE) or informal (SHARING). *Routines* are *prescriptive descriptions* of processes – descriptions that 'work both ways': as a description of the past, as well as a prescription for future practice. Routines are an example of dynamic information, which emphasize other needs than records: control over changes, elimination of outdated information, whereas records are *accumulative* and emphasize completeness.

Another example of 'dynamic information' and ephemerality is the possibility for replacing email distribution of working documents (project reports, see p. 203) by one copy on the web, where all changes and comments can be collected.

5.8.1.3. Records, documentation

Asymmetrical benefit of records – need for routines

Records are an obvious example of how *routines* may counterbalance individual behavior (Levitt & March 1988;March *et al.* 2000). Individuals tend to be very selective in their records. They record only what they consider necessary and potentially useful and they often prefer to rely on their own memory. To them, the record does not offer sufficient benefit over their own memory to merit extra effort – the fact is that other parts of the organisation may benefit more from the record than the individual supposed to maintain it.

Yet documentation (i.e. by minutes or email) may be probably particularly useful against a higher-ranking authority or one at a similar level – it is a form of *rationalization* that restricts random exercise of power. Documentation is a *restriction* on authority; it characterizes bureaucratic or rational authority as opposed to the charismatic one.

5.8.1.4. A shared, complete record?

ProjectWeb illustrates the potential for replacing personal files, such as the Director's records. Intranet technology encourages the idea of avoiding redundancy in records. Previously there have been multiple overlapping archives: the 'official' project record maintained by the project assistant; the Directors personal record; personal records of the other members of the core group, etc. Each of these archives may be incomplete: a person may not have received documents presented at meetings he has not attended. It

would be helpful, if the multiple incomplete records could be 'replaced' by one complete record with easy access for all those involved[127].

5.8.1.5. Ephemerality – porous memory

A tool for forgetting and unlearning

Electronic files change the nature of written rules. In contrast to the purpose of records, the SQUARE application is perceived (by management) as a tool for unlearning, a 'cure' against the rigidity/inertia of local 'memory'. It is a problem when people rely on their own memory and practical habits – and the potentially outdated paper files they are already familiar with – instead of consulting the most recently updated material. 'You must access the system once a week! Do not rely on your own memory!'[128] (see Plato, Benjamin). At this point, electronic files differ from paper files: while it has been a characteristic of written rules that changes (in them) tend to leave traces (March *et al.* 2000), the expected advantage of electronic distribution – in the SQUARE system – over paper files is that they *do not* leave traces, at least not *locally*. It is a means to avoid the 'inertia' of paper files.

It may seem that a strengthening of central archives is paradoxical consequence of a characteristic of computer networks that have been expected to lead to 'empowerment': increase in upward and horizontal communication:

> "Computer-based communication technology differs from many other workplace technologies because it has more potential to support upward influence and lateral influence, not just downward management control." (Sproull & Kiesler 1991)

And for all the hype of the intranet technology as the key to knowledge management etc. enabling horizontal communication and empowerment, it may seem paradoxical

---

[127] This would imply a *fusion of personal tool and public files.* Many visions about knowledge management and early ideas about hypertext suggest that people share personal files, publish their personal notes and ideas on a shared server. Shared electronic calendar systems support personal calendars while changing their role, namely into a semi-public message. Calendar systems expose the difference between making a reminder for yourself and a message for the secretary: having a blank blade in your personal calendar means you have no appointments, but may be very busy. In a calendar system it is a message signaling that you are available for appointments. There is a fundamental difference – between the personal reminder and the official message – which can hardly be removed by technology, but they may be integrated, i.e. if the effort in making the 'message' (or in generalizing, de-contextualising, etc.) is reduced.

[128] Again: the devaluation of memory, which in this case is practiced by 'power', seems similar to a characteristic of *critical rationality*: never take anything for granted, and be prepared to abandon prior convictions and basic assumptions in case of falsification….

that the medium is so well suited for 'distributing' written rules (from a central archive), the hallmark of the 'old organisation'.

5.8.2. Failing to realize the potential

So far PharmaCo has – like many other companies embracing the new technology – only been able to realize little of the potential benefits of the intranet. I shall discuss some of the most probable causes, based on two different perspectives. *First*, from what can be characterized as a 'recipient' perspective: why do people still prefer other sources of information? Why do they use the phone instead of retrieving information from the intranet, as mentioned by one of the interview persons? *Second*, from a 'sender' perspective: why do they keep information in private (local), paper-based files?

5.8.2.1. <u>When do people prefer other sources of information?</u>

I shall start with two causes that are related to the ('ambiguous') structure of the intranet, and thus, in my opinion, to ambiguity.

Disorientation: it is difficult to find relevant information

This problem is partly due to ambiguity, because navigation is inhibited by the ambiguous structure of the intranet. The problem of disorientation is less relevant for an application like SQUARE, because in this case the source is obligatory and thus already specified to the user.

Unreliable information

Relevant information is found but unreliable, not updated, or overlapping other sources. This problem is partly due to the lack of a coordinated information *strategy*, and to the fact that development is driven by information *providers* rather than (representatives of) the potential recipients. They may not be ideal to judge the users' needs: which information do they want, in which form, and how can they find them (and how do they read them)? Yet this problem is, indirectly, related to the above problem of disorientation (and ambiguity): if a department wants to publish information, it is difficult to find out whether similar information is already provided by others, or whether others may be better at providing and updating this particular type of information[129].

[129] Redundancy reflects the fact that functional specialization is not clear and well defined. If specialization were well defined, there would be less doubt about who is capable of providing a specific type of information.

People prefer social networks and trusted sources

People prefer social networks (and oral sources) to written or electronic sources. Some of the interviews suggest that people prefer to use their personal network to achieve knowledge, and that they generally prefer to summon a meeting with the people considered relevant, rather than searching written (electronic) material[130] (Interview # 11). Although the interview was related to the SHARING system, the observation referred to the intranet in general. It was previously argued that the tendency to rely on trust and social networks for information is problematic, because it inhibits critique and limits the range of alternatives considered (p. 39).

Furthermore the reliance on social networks may be economically inefficient for two reasons. One is that people spend a lot of time on face-to-face meetings that are not well prepared, as suggested by one of the interviews – corresponding to Sproull & Kiesler's argument that electronic groups may take longer time, but require fewer man-hours. Another reason is that the tendency to consult experts over phone may be more 'effective' from the point of view the caller, but require too much time from the expert, as argued by Olivera:

> "In the firm under study, as in many other organizations, time is a valuable resource - both for individuals looking for information and, particularly, for the experts who provide information. Although calling an expert may be the most efficient way for an individual to obtain information, the expert may be underutilized as a resource, especially if other, less costly information sources are available. In fact, some of our respondents who are considered experts in certain domains complained about the frequency and types of information request they received." (Olivera 2000)

---

[130] On the other hand, Culnan & Markus suggest that one new quality of computer-based communication is that people tend to 'address by topic' rather than people, as when different people are drawn to the same newsgroup on the Internet. This attitude is very different from seeking knowledge via personal relations. Yet this observation may not threaten the argument that people seek *practical*, process-oriented knowledge via personal networks: 1) the knowledge found in newsgroups is of a different type, not process-oriented; 1) finding a newsgroup on the Internet corresponding to one's own, private interest is very different from consulting a database defined by corporate categories. This does not mean that people will not try to satisfy a professional interest at work. But it is likely that their interest is first and foremost professionally defined, or corresponding to more subjective preferences – and that it does not fit into the corporate categorization. On the other hand, they might be more interested in corporate level information, if it also offered corporately defined information. The whole idea behind SHARING was ambiguous: it was a corporate, highly profiled platform for information from local, anonymous contributors.

And this problem was obviously part of the original motivation for publishing information on the intranet.

Information or knowledge characterized by ambiguity

This argument modifies the previous critique of social networks etc. by admitting that certain types of information or knowledge – clarification of an issue (media richness theory), specification of a problem, non-codified knowledge (Augier & Vendelø 1999) – may require strong ties and rich media. The knowledge intended in the SHARING system may thus be more difficult than others to 'entrap' in poor media.

Yet even if one accepts the need for trust and rich media, the critique (above) still holds: it is a potential inhibitor of critical rationality. And there may be a potential for 'rationalization' in supporting learning or decision making based on trust and personal relations, by encouraging a specification (writing) of the arguments.

5.8.2.2. Why do people prefer *private, paper-based* records?

Why do people (and institutions) normally keep separate records (with different and mostly simple classifications, because they are paperbased and cannot exploit the potential of database technology (or hypertext))? It is not merely a question of conservatism and not yet having learned to use the new technology.

Access, mobility

One reason for maintaining personal paper files is *availability*: easy access requires a private copy at your hand. This condition has obviously changed with the new technology – and furthermore an electronic archive can offer the advantages of database technology and support search and retrieval. There remains the problem of *mobility*: paper files can easily be brought to a meeting – however, laptops and PDA's are making it easier to bring and access electronic files. People without desk and desktop – such as production workers – face similar problems with access to electronic files, although PharmaCo has thus to set up PCs at the shop floor to allow easy access to the intranet.

Personal notation

Another reason for personal records is the facility for personal notes etc. as a means to understand and interpret the content, be it rules, agendas or minutes. The possibility for adding personal, graphic notations everywhere on a sheet of paper (i.e. arrows, notes in the margin) is one quality that is yet unmatched in electronic documents. The problem with the web – and other electronic files – is that it virtually takes the document out of your hands and derives you of the ability to make notes margin, underlining or symbols. There may be some technical opportunities for supporting both 'public' (official) and private/personal sides of a document, and some of the

intentions behind hypertext systems were to support personal notations, but it is still much easier – at the current state of technology – to add symbolic and nonlinear 'comments' to a sheet of paper than a word document.

Confidentiality, secrecy

There is a further motivation for personal or local records, namely the possibility for filing confidential documents that are not (yet) considered suitable for the official records, as mentioned in relation to ProjectWeb. This problem is at least indirectly related to ambiguity: Both – confidentiality/secrecy and ambiguity – are a result of differentiation. Confidentiality may be motivated by political conflict and group interests that are largely defined by interpretations, or by the fear that others might *misunderstand* (mis-interpret) one's intentions.

Different interpretations, different categorizations

The problems with establishing a common set of predefined document categories is illustrated in ProjectWeb, but relevant for other types of files and reflects the different interpretations and perspectives used by different departments. ProjectWeb provides some examples of 'categorisation ambiguities': Different projects use different classifications and it is therefore impossible to establish predefined (corporate) categories. Different participants in the same project use different classification/categories based on their own perspective/interpretation. Categorisation within a project changes over time

The question is whether the new solution – *no* common categories – is satisfying. If any of the documents are to be stored in a corporate database, they must be filed according to a common set of categories.

5.8.3. Problem: ambiguous structure[131]

I shall discuss two questions related to problem of ambiguous structure. The first is whether a common structure and classification is indeed necessary to ensure searchability and usability of the intranet (*necessary condition*). This argument implies that the problems of usability etc. result from the current *ambiguous* structure. The second argument is whether such a common structure is possible, including the question whether the intranet would require an underlying 'corporate' (*necessary*) –

[131] There is a parallel between experiences with intranets and the story of the tower of Babel. When human beings were one people with one language, they started building a tower to reach the sky, and God realized they could do anything they wanted. Once they had set themselves a goal, nothing could stop them. So God divided them into separate peoples with separate languages, and they were no longer able to agree on or pursue a common goal.

this latter argument implies the one presented in this thesis, that ambiguous intranet structure reflects organisational ambiguities and differentiation.

5.8.3.1. Is a common structure necessary?

It is often stated that structure is unnecessary if there are facilities for full text search, for instance implemented in *portals* also offering a particular classification. Thus, Gonzalez argued that a *variety* of portals and search engines based on different perspectives is more useful – for the user (seeker of information) – than a single hierarchical structure (Gonzalez 1998), corresponding to Conklin's recommendation of 'multiple hierarchies', 'slicing up' the world according to 'several orthogonal decompositions' (p. 137).

This is hardly sufficient, however. Search machines can decrease the dependence on structure and classification, but only to some extent. The company has struggled with a shared corporate portal, but this faces some of the same problems of establishing a classification and a set of keywords that are meaningful to everybody. Without well-defined keywords, a full-text search may result in a large number of irrelevant hits, which is difficult to use, not the least because the *context* of the document is unclear[132]. People in the pharmaceutical division found the portal solution to be inefficient, because it would not solve the problem of redundancy and infrequent update of information.

One may further question, whether a well-defined structure is *sufficient* to guarantee realization of the potential discussed previously, such as replacing telephone contacts by 'information retrieval'. It does not solve the other problems listed above.

5.8.3.2. Is a common structure possible?

Two possible solutions have been suggested in the interviews. One was to base the intranet structure on 'organisation charts', thus on organisational structure. It was argued – by the Webmaster – that structure might not be very helpful to the users. Based on previous discussions, I may add that it may be difficult to properly picture the structure of the organisation and relations between the units.

Another solution would be to establish a structure reflecting Business Processes that cross (internal) organisational barriers. This idea is derived from BPR literature, and probably from the company's participation in BPR projects. BPR is based on the idea

[132] It appears that researchers (chemists, bio-chemists) in the company are quite content with full-text search, but this may have something to do with their profession: by specifying a particular compound, they will probably find a narrow range of sources. In other professions, however, a few words may not be a sufficient specification.

of focusing on organisational *business process* than run across functional specialisation, to rationalise a business process rather than rationalising individual processes within a function. Again it may be difficult to picture 'business processes' beyond a very simplified level.

This brings us to one of the central arguments of this thesis: that the task of establishing a *useful* intranet structure is not merely technical, because it should reflect organizational structure or, more important, the organizational knowledge base. A common structure cannot simply be imposed: if a common structure is decided on the corporate level, employees in semi-autonomous units may find it too inconvenient for search and retrieval of information. It is not sufficient that the intranet structure is clear and unambiguous, if it is incomprehensible and useless to local users around the company.

In this perspective it is a paradox that the intranet was envisioned as a *countermeasure* to strong differentiation and geographical 'distributedness' of an organization, even as a means to create a 'corporate culture' (Interview # 1), just as the extranet version of ProjectWeb see later was expected to encourage team spirit between the cooperating companies (Interview # 21). This vision seems to turn the causal relation upside down, by regarding the *precondition* as a *consequence*.

This argument implies that, in order to ensure usability and thus realization of the potential, implementation of a unified intranet structure must reflect changes in the organization and its knowledge base.

5.8.4. Writing and 'sharing' informal routines

SHARING is expected to support sharing of *written, informal rules* – by 'canonizing' non-canonical practices – and thus solve the problem that informal rules are badly preserved in formal organisations (March *et al.* 2000). To support preservation and sharing etc. of *informal* routines is a basic idea behind knowledge management. The very constellation – written & informal – is unusual, because there has traditionally been a strong coupling between the *written* and the *formal* in organizations[133].

To put a 'better practice' into writing is an effort that requires resources. This is illustrated by looking at two different steps (or aspects) in writing a better practice for the SHARING system: 1) Explicitation – verbalisation; 2) Addressing an anonymous audience.

---

[133] In contrast to a system of formal, written procedures such as the SQUARE system described later, SHARING must convince the *reader* of its usefulness.

From unwritten to written rule

First, there is a problem of turning an unwritten rule/informal procedure into a written one. This in itself requires a *conversion* of the informal, situated knowledge into another form, a change towards 'bureaucracy'.

The potential *incentive* to make a written description of a locally implemented process deserves some consideration. Would anyone write down a procedure for himself? Procedures are mostly written to ensure that *others* behave in a required way; abstraction from 'situated practice' is motivated either by delegation of work or by problems that trigger analysis or sensemaking (reduction of uncertainty). And as emphasized previously, there is an asymmetric benefit to documentation, which is in the interest of the *reader* rather than the. In this case, contributors are expected to quasi-'taylorise' themselves.

To avoid the difficulties in this step one might focus on existing written rules. By exploiting existing written material, locally applied written rules, one need not expect people to spend extra time and resources. This general suggestion is confirmed by the fact that a large part of the material in SHARING was actually added as a result of an ongoing process and considerations, rather than as a recollection of what was already done. Yet, as mentioned previously, this does not eliminate the problem of supporting non-local readers. See below.

A new, anonymous audience

'Next step' is relevant, either if one has succeeded in producing a written description, or if a particular department already has a local written procedure. This step on the one hand involves further generalization and de-contextualisation of an existing, locally implemented rule, in order to make it legible and 'meaningful' for the very different readers of a strongly differentiated organisation. The potential 'transfer' of a routine is inhibited by ambiguity. The idea of sharing or transferring better practice in a universal, corporate 'repository' does not take into account the ambiguity caused by different frames of reference due to differentiation, and functional and professional specialization.

This illustrates that even though a 'better practice' like SHARING would stand a better chance, if one focused on already existing local written rules, there still remains a large problem (or challenge) in 'going public'. The problem may be that what is already written is too specific and not authored for the average, anonymous reader of the corporation as a whole. Furthermore, especially when the system is voluntary, it may require an 'audience'-oriented tailoring of the message, a re-contextualisation into foreign interpretations in order to emphasize the interest and relevance perceived by the reader or user. In this perspective, filing a Better Practice is a very difficult task of communication, because one has no idea of the potential reader.

There are two different approaches to the problem of ambiguity in this context. Either one may try to *avoid* ambiguity by focusing on existing networks and contacts: support communication and knowledge sharing among those with similar context, and avoid ambiguity due to different interpretations. Or one should encourage situations of ambiguity and support processes aimed at reducing ambiguity, by providing technology, techniques and initiatives that emphasize critical rationality over negotiation and politics.

5.8.5. Any use for poor media in coordination across organizational borders?

It is still worth considering whether the new facilities such as discussion groups and chat may be used 'seriously'.

A traditional advice in accordance with the media richness/task fit theory would be that the core group needs 'rich media' such as video meetings in the initial phase of a projects, because the emphasis on planning and strategic discussions can be expected to face ambiguity. In the later phases electronic communication – written, interactive/fast-feedback – may be sufficient and useful for many purposes.

Especially in the co-development project it would seem practical to avoid face-to-face short meetings that require a lot of resources and man-hours in traveling. They already do this by using video-conferences, but at least one participants finds these meetings unsatisfying, possibly because the medium is too rich to her purpose: she needs to exchange information that is best transferred in writing.

On the other hand it is to be expected that there in a 'network' project like this will be more ambiguity in all the phases, compared to an internal project where ambiguity decreases as planning gets more well-defined and emphasis is on execution and coordination.

Yet electronic media may also be useful in the more strategic discussions the *initial* phase, by supporting brainstorming and preliminary discussions, and facilitating exploration of several alternatives before reaching a decision, according to the arguments of Sproull & Kiesler. Electronic media, perhaps with some *Group Decision Support Systems* functionalities, may expose and emphasize the various arguments and positions (and it would obviously require confidentiality and restricted access).

5.8.6. Inflexibility of SQUARE – ambiguity?

The negative reception in Biochemistry production of the QBIQ system reflects 'cultural' differences, ambiguity, between two different parts of the company. The slow process of entering documents is too rigid in organisational units (outside the

pharmaceutical division) where changes – 'innovations' – are more frequent, and where changes to a lesser degree are subject to central control and authority. SQUARE is based on (and implies) one-way vertical communication: documents are generally entered by one category of people, and read by another.

For the Biochemistry production unit – located far from company headquarters – the situation is different. To experiment locally with process changes they should enter a document and then wait for days or weeks for it to be effected in the system.

There are two different factors slowing the change process. One is primarily *technological*: documents must be converted to a form – PDF – with which the users are not familiar. The other – and probably decisive – factor is *organisational*: new procedures must go through a process of approval. In the pharmaceutical division (administration and production), the technological delay is accepted because it corresponds to the organisational process of approval. In the Biochemistry production, the technological delay is inhibitive to local experimentation – and therefore annoying.

5.9. Summary

I argue that intranet has increased the role of ambiguity in PharmaCo, and I shall focus on two examples.

Intranet as a whole has exposed the users to the ambiguities of conflicting frames of interpretations, both by its content and its structure, which is not merely a result of the *laissez-faire* strategy, but also reflects the ambiguous knowledge base of the company. The intranet has torn the 'veil' protecting organizational members from the complexities that were reduced by specializing into different interpretations. Different interpretations are projected (indirectly) on the shared information space or platform of the intranet. Yet the ambiguous structure also cause disorientation and threaten usability, and if these problems continue to discourage the users, they may turn away from the intranet and thus avoid ambiguity. Another scenario depends on the possibility for establishing a well-defined structure, based on a (useful) corporate classification, even a corporate language. In this case, users are being protected from ambiguity, which has been reduced 'from above'.

The use of the ProjectWeb application in the cooperation project – and internal projects – is another example. In this case, cross-barrier communication and ambiguity is obviously not a *result* of the technology. The co-operation project has already been decided for economic and strategic reasons, and only then it is decided to adopt a technology that may support communication (and team spirit?). Yet the choice of the technology seems to reflect that the virtual cooperation has faced difficult conditions. It seems that cooperation suffers somewhat from the relatively 'low' degree of communication forced by physical distance and time zone difference. The technology will enable processes that were impossible without.

[i] Lesson: the usefulness of a telephone directory depends on its association with other information, i.e. office or production team (or more ambitious: competencies, experience). In a large organization it varies significantly from unit to unit (division, functions) what type of information is relevant. I.e. in this production unit, people (locally) are interested in team membership, whereas information about their 'office' is meaningless, because workers do not have any. This variation in information requirements is not supported by the current corporate directory. Would it be possible to avoid redundancy and keep all information in the one directory? Yes, requiring a more sophisticated database design with different types of information according to functional association – but it may be a very complicated solution. Another solution would be to build a local interface with additional information to the corporate directory… This example illustrates that the 'differentiation' into different functions and specializations (and *interpretations*) is not merely a question of needing different information (i.e. to be solved by different portals or different databases), but also of needing the *same* (corporate) information in different contexts. (Some product-related sites in the pharmaceutical division provides another illustrative example: they integrate information from numerous functions and departments in the company, and the question arises: who should be responsible for updating the information? How can we ensure that they will include all associated information and not just those in their own interest. This illustrates the enormous difficulties in coordinating the information providers in that division). And this is why the purely decentralized and separated solution is unsatisfying: the problem arises with 'overlapping' information sources rather than purely redundant ones…

[ii] The IT department has chosen to avoid large, long-term and high-cost investments. They want to show their (internal) 'customers' that they can make visible results 'step-by-step' – and the customers are unwilling to make large (and risky) investments. This strategy seems to run into some trouble, however: in order to avoid redundant solutions (developing practically similar solutions for different sites) they hope to make more general and generic ones 'for reuse' (and this could also be described as a knowledge management problem). Yet such a generic project will seldom have a particular 'customer' in the company and would require an investment out of 'their own pockets' – this is the fundamental dilemma behind the very practical problems of not having 'spare time' besides the workload of 'projects-on-order'. Another example is the fact that the IT department has intended to redesign the intranet portal, but were incapable of this investment until the Biochemistry division was willing to order a similar product. (The IT department is expected to function as an independent unit and has been converted to an affiliate, yet they are unable to make proper investments of their own…)

6. Conclusion

First, I shall recapitulate how the individual chapters contributed to the argument that intranet media increase the role of ambiguity based on contradicting frames of interpretation.

In the first chapter I presented the ideal of rationality in order to argue understand the 'challenges' of ambiguity. On the one hand, ambiguity is inhibitive to rational processes and a source of conflicts and suboptimal compromises. On the other hand, ambiguity is also an 'opportunity', because there is a potential for a rational and universal resolution by revealing and overcoming particular frames of interpretation.

In the next chapter I focused on the role of ambiguity in organisations, partly in order to distinguish between technological and organisational causes. I argued that organisations are fundamentally characterised by processes of rationalisation and differentiation into different frames of interpretation, emerging as a reaction to complexity. Ambiguity increases with a tendency to more frequent and extensive cooperation across internal (and external) organisational boundaries (and frames of interpretation). This tendency to organisational networking of virtual organisations is motivated by various non-technological factors, but computer networks increase the potential and create new opportunities and forms of cross-barrier co-ordination.

In the third chapter I focused on the role and potential of intranet media. I focused on two different intranet media that may 'link' across boundaries and thus increase ambiguity in different ways. Email support increased horizontal communication, while hypertext – the web – represents the ideal of universality by providing a shared 'space'. Differentiation and ambiguity in the organisational knowledge base is *projected* onto the web, where individual frames of interpretation are embedded in the structure of the web.

The case study described in the fourth chapter illustrated that attempts to realise the potential of intranet technology were inhibited by an ambiguous structure, which reflected a *laissez-faire* strategy as well as the underlying organisational structure. So far, the intranet has primarily been used for simple publication, but people are unable to locate relevant information, which again results in redundancy. Thus, while the intranet exposes organisational members to the ambiguities inherent in the organisation, disorientation may discourage users who will then avoid using and thus avoid ambiguity. In PharmaCo intranet technology has been adopted in the wish of achieving a unified corporate culture, or building team spirit in a cooperation project. Yet the technology is unlikely to create such results by itself, and organisational actors are considering different measures to structure the intranet.

6.1.1.1. Universality or networking: two scenarios

On the one hand, the organization may strive to fundamentally *reduce* ambiguity by a corporate resolution of ambiguity: establishing ('universal') corporate standards, classifications, even a corporate language, and define clear responsibilities for various types of information in order to avoid redundancy, conflicts and outdated information. The question is whether this strategy is realistic: the underlying complexity and the centrifugal forces of differentiation has not disappeared. The point is that it requires more than a mere technical solution: defining responsibilities is an *organisational* solution based on a centralised strategy; and the corporate categories etc. must to some extent be adapted locally in order to be useful.

On the other hand, the organisation may avoid standardisation and instead support the ongoing bilateral, ad hoc, resolution of ambiguity, basically without affecting existing (local) interpretations and cognitive barriers? As an example, rich media[134] and group dynamics can support ad hoc resolution of ambiguity. There are several problems with this strategy. For one, the *ideal* process of understanding (resolution of ambiguity) does *not* leave the individual interpretations intact. Furthermore, the process is time-consuming and may be overlapping and repetitive, if it starts from scratch at every new attempt. And as mentioned before: while the process has a potential for rationality and transcendence, it is also vulnerable and prone to irrational factors.

6.1.1.2. Further research

This discussion inspires a number of ideas for further research, many of which aim at providing stronger and richer documentation for theses presented, and monitoring future development.

There is a need to explore in more detail the general *use* and *usability* of the intranet as a whole; to confirm the thesis of an ambiguous structure reflecting organisational ambiguity; and to confirm a connection between usability problems and structural ambiguity of the intranet. This could be done in the same company, in other companies with similar problems, or even as a comparative study.

There is a need to explore various alternative approaches to the problem, in PharmaCo as well as in other organisations. Which solutions have been, and are being considered? Which solutions are generally available or offered on the market? What are the organisational implications of such solutions?

I would also like to pursue the central thesis of the increased role of ambiguity as part result of intranet technology. One example would be to explore the extent to which

[134] While 'poorer', text-based media aim at a lengthier but probably also more durable process.

organisational members retrieve or search information and documents provided by other units and departments, and whether increased use implies problems of understanding (navigation included).

Another example would be to study the further use and adoption of intranet media in cross-boundary cooperation projects: How does the extranet reflect ambiguity? How do people handle ambiguity in association to, and with, these media? Will they experiment further with text-based communication?

Finally, I would like to explore the thesis that intranet media, email or other, extend the adaptation of written communication to new areas, and that this 'cementation' of communication has organisational implication.

References

Ackerman M. S. Definitional and Contextual Issues in Organizational and Group Memories. 1994. 27th. Hawaii International Conference of System sciences (HICSS).
Ref Type: Conference Proceeding

Adorno T. W. (1951) Minima Moralia. Suhrkamp, Frankfurt am Main.

Adorno T. W. (1964) Jargon der Eigentlichkeit - zur deutschen Ideologie. Suhrkamp, Frankfurt am Main.

Adorno T. W. (1968) Spätkapitalismus oder Industriegesellschaft. In: *Soziologische Schriften* (ed T. W. Adorno) pp. 354-370. Suhrkamp, Frankfurt a. M.

Adorno T. W. (1970a) Negative Dialektik. Suhrkamp Verlag, Frankfurt am Main.

Adorno T. W. (1970b) Zur Metakritik der Erkenntnistheorie. Suhrkamp, Frankfurt a. M.

Adorno T. W. (1979c) Beitrag zur Ideologielehre. In: *Soziologische Schriften I* (ed T. W. Adorno).

Adorno T. W. (1979d) Einleitung zu Emile Durkheim, 'Soziologie und Philosophie'. In: *Soziologische Schriften I* pp. 245-279. Suhrkamp, Frankfurt am Main.

Adorno T. W. (1979b) Einleitung zum 'Positivismusstreit in der deutschen Soziologie'. In: *Soziologische Schriften I* (ed T. W. Adorno) pp. 280-253. Suhrkamp, Frankfurt am Main.

Adorno T. W. (1979a) Individuum und Organisation. In: *Soziologische Schriften I* pp. 440-456. Suhrkamp, Frankfurt am Main.

Adorno T. W. (1979e) Zum Verhältnis von Soziologie und Psychologie. In: *Soziologische Schriften I* pp. 42-85. Suhrkamp, Frankfurt am Main.

Adorno T. W. (1991) Skoteinos oder Wie zu lesen sei. In: *Drei Studien zu Hegel* pp. 84-133. Suhrkamp, Frankfurt a.M.

Adorno T. W. (1994) Kære hr. Benjamin. *Kultur og Klasse* 22: 43-47.

Adorno T. W. (1996) Ästhetische Theorie. Suhrkamp, Frankfurt am Main.

Allen T. J. & Hauptman O. (1990) The Substitution of Communication Technologies for Organizational Structure in Research and Development. In: *Organizations and Communication Technology* (eds J. Fulk and C. Steinfeld) pp. 275-295. Sage, Newbury Park, CA.

Andersen I. (1997) Den skinbarlige virkelighed. Samfundslitteratur.

Andersen P. B. (1990) A Theory of Computer Semiotics. Cambridge University Press.

Andersen P. B. (1991) Computer semiotics. *Scandinavian Journal of Information Systems* 3: 3-30.

Andersen P. B. & Holmqvist B. (1991) Language, Perspectives, and Design. In: *Design at Work* (eds J. Greenbaum and M. Kyng) Lawrence Erlbaum Associates.

Argyris C. & Schön D. A. (1996) Organizational Learning II - theory, method and practice. Addison-Wesley, Reading, Massachussets.

Augier M. & Vendelø M. T. (1999) Networks, cognition and management of tacit knowledge. *Journal of Knowledge Management* 3: 252-261.

Bacon F. (1994) Novum Organum, Translated and edited by Peter Urbach and John Gibson edn. Open Court, Chicago and La Salle, Illinois.

Bannon L. & Bødker S. (1991) Beyond the Interface: Encountering Artifacts in Use. In: *Designing Interaction* (ed J. M. Carroll) Cambridge University Press, Cambridge.

Bannon L. & Kuutti K. Hunting the Snark? The Case for & against Organizational Memory. 1995.
Ref Type: Unpublished Work

Bansler J. P., Damsgaard J., Scheepers R., Havn E., & Thommesen J. (2000) Corporate Intranet Implementation: Managing Emergent Technologies and Organizational Practices. *Journal of the Assocation for Information Systems* 1.

Bansler J. P., Havn E., & Thommesen J. Baseline Study: the Novo Nordisk IntraWeb. Henten, Anders. 1999a. Lyngby, Denmark, Center for Tele-Information. Technical Reports of CTI.
Ref Type: Report

Bansler J. P., Havn E., & Thommesen J. Erfaringer med anvendelse af FACIT-systemet i Novo Nordisk. 1-19. 1999b. Lyngby, Center for Tele-Information, DTU.
Ref Type: Report

Bell D. (1976) The Coming of Post-Industrial Society. Basic Books.

Benjamin W. (1991a) Der Erzähler. In: *Gesammelte Schrifte II* pp. 438-465. Suhrkamp, Frankfurt am M.

Benjamin W. (1991b) Erfahrung. In: *Gesammelte Schriften II* pp. 54-56. Suhrkamp, Frankfurt am M.

Benjamin W. (1991c) Kleine Geschichte der Photographie. In: *Aufsätze, Essays, Vorträge 1* (ed W. Benjamin) pp. 368-385. Suhrkamp, Frankfurt a.M.

Benjamin W. (1992) Charles Baudelaire - ein Lyriker im Zeitalter des Hochkapitalismus. Suhrkamp Taschenbuch Verlag.

Benjamin W. (1998) Kunstværket i dets tekniske reproducerbarheds tidsalder. In: *Kulturkritiske essays* (ed W. Benjamin) pp. 129-158. Gyldendal, København.

Berger P. L. & Luckman T. (1967) The Social Construction of Reality - a treatise in the sociology of knowledge. Penguin Books.

Berners-Lee T. The World Wide Web - past, present and future. 1996.
Ref Type: Unpublished Work

Berners-Lee T., Cailliau R., Groff J.-F., & Pollermann B. (1992) World-Wide Web: The Information Universe. *Electronic Networking: Research, Applications and Policy* 1.

Boserup M. (1976) Deres egne ord. En antologi over den økonomiske videnskabs historie. Akademisk Forlag, København.

Bourdieu P. (1977) Outline of a Theory of Practice, English, transl. by Richard Nice from french: *Ésquisse d'une théorie de la pratique* edn. Cambridge University Press, Cambridge.

Breuer S. (1987) Adorno, Luhmann. Konvergenzen und Divergenzen von Kritischer Theorie und Systemtheorie. *Leviathan* 15: 91-125.

Brown J. S. & Duguid P. (1996) Organizational Learning and Communities-of-Practice - Toward a unified view of working, learning, and innovation. In: *Organizational Learning* (eds M. D. Cohen and L. Sproull) pp. 58-82. Sage, Thousand Oaks.

Brown J. S. & Duguid P. (1998) Organizing Knowledge. *California Management Review* 40: 90-111.

Brunkhorst H. (1999) Adorno and Critical Theory. University of Wales Press, Cardiff.

Burns T. & Stalker G. M. (1961) The management of innovation. Tavistock, London.

Burrell G. & Morgan G. (1979) Sociological Paradigms and Organisational Analysis. Ashgate.

Bush V. As we may think. Life Magazine , 112-124. 1945. Time Inc.
Ref Type: Magazine Article

Castells M. (1998) The Rise of the Network Society. Blackwell.

Churchman C. W. (1981) The Systems Approach. Delta.

Cohen M. D. & Bacdayan P. (1996) Organizational Routines Are Stored as Procedural Memory - evidence from a laboratory study. In: *Organizational Learning* (eds M. D. Cohen and L. Sproull) pp. 403-429. Sage, Thousand Oaks.

Collin F. (1987) Organisationskultur og Forandring. Nyt fra samfundsvidenskaberne, København.

Collin F. (1998) Socialkonstruktivisme og den sociale virkelighed. In: *Socialkonstruktivisme. Bidrag til en kritisk diskussion.* (eds M. Bertilsson and M. Järvinen) pp. 41-67. Reitzels Forlag, København.

Conklin J. (1987) Hypertext: An Introduction and Survey. *IEEE Computer* 20: 17-41.

Conklin J. & Begeman M. L. (1989) gIBIS: A Tool for All Reasons. *Journal of the American Society for Information Science* 40: 200-213.

Culnan M. J. & Markus M. L. (1987) Information Technologies. In: *Handbook of Organizational Communication* (eds F. Jablin, L. L. Putnam, K. H. Robers, and L. W. Porter) pp. 420-443. Sage, Newbury Park, London, New Delhi.

d'Holbach P. T. (1770) The System of Nature. Burt Franklin, New York.

Daft R. L. & Lengel R. H. (1986) Organizational information requirements, media richness and structural design. *Management Science* 32: 554-571.

de Saussure F. (1968) Cours de linguistique générale. Otto Harrassowitz, Wiesbaden.

Derrida J. (1967) De la grammatologie. Les Éditions de Minuit, Paris.

Derrida J. (1970) Semiologi og grammatologi. In: *Strukturalisme - en antologi* (ed P. Madsen) pp. 241-261. Rhodos, København.

Derrida J. (1972) La pharmacie de Platon. In: *La dissémination* pp. 69-198. Éditions du seuil.

DeSanctis G. & Monge P. (1999) Introduction to the Special Issue: Communication Processes for Virtual Organizations. *Organization Science* 10: 693-703.

Descartes R. (1637) Discourse on the method. TomeRaider.

Dimaggio P. J. & Powell W. W. (1991) The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields. In: *The New Institutionalism in Organizational Analysis* (eds W. W. Powell and P. J. Dimaggio) pp. 63-82. The University of Chicago Press.

Drucker P. F. (1999) Knowledge-Worker Productivity. In: *Management Challenges for the 21st Century* pp. 133-159. HarperBusiness, New Yorker.

Durkheim É. (1972) Den sociologiske metode. Fremad, Odense.

Elkjær B. (1999) In Search of a Social Learning Theory. In: *Organizational Learning and the learning organization* (eds M. Easterby-Smith, J. Burgoyne, and L. Araujo) pp. 75-91. Sage, London.

Engelbart D. C. & Lehtman H. (1988) Working Together. *Byte* December 1988: 245-251.

Engelbart D. C., Watson R. W., & Norton J. C. The augmented knowledge workshop. 42, 9-21. 1973. AFIPS Conference Proceedings.
Ref Type: Conference Proceeding

Fiske J. (1990) Introduction to communication studies. Routledge.

Gadamer H.-G. (1960) Wahrheit und Methode: Grundzüge einer philosophischen Hermeneutik. J.C.B. Mohr, Thübingen.

Gellner E. (1997) Relativism and Universals. In: *Rationality and Relativism* (eds M. Hollis and S. Lukes) pp. 181-200. MIT Press, Cambridge, Massachussets.

Gibbons M., Limoges C., Nowotny H., Schwartzman S., Scott P., & Trow M. (1994) The New Production of Knowledge: The dynamics of science and research in contemporeary socities. Sage, London.

Gonzalez J. S. (1998) The 21st-Century Intranet. Prentice Hall.

Gregersen F. & Køppe S. (1994) Idehistorie - ideer og strømninger i det 20. århundrede. Amanda, Aarhus.

Grønbæk K., Bouvin N. O., & Sloth L. Designing Dexter-based hypermedia services for the World Wide Web. 146-156. 1997. Hypertext 97, Southampton UK, ACM. 1997.
Ref Type: Conference Proceeding

Habermas J. (1971a) Der Universalitätsanspruch der Hermeneutik. In: *Hermeneutik und Ideologiekritik* (eds K.-O. Apel, C. v. Bormann, R. Bubner, H.-G. Gadamer, H. J. Giegel, and J. Habermas) pp. 120-159. Suhrkamp, Frankfurt a.M.

Habermas J. (1971b) Dogmatismus, Vernunft und Entscheidung - Zu Theorie und Praxis in der verwissenschaftlichten Zivilisation. In: *Theorie und Praxis* pp. 231-257. Suhrkamp.

Habermas J. (1974) Labor and Interaction: Remarks on Hegel's Jena *Philosophy of Mind*. In: *Theory and Practice* pp. 142-169. Heinemann, London.

Habermas J. (1981) Theorie des kommunikativen Handelns. Suhrkamp, Frankfurt am Main.

Habermas J. (1985) Exkurs zur Einebnung des Gattungsunterschiedes zwischen Philosophie und Literatur. In: *Der philosophische Diskurs der Moderne* pp. 219-247. Suhrkamp, Frankfurt a. M.

Habermas J. (1988) On the Logic of the Social Sciences. MIT Press, Cambridge, Massachussets.

Habermas J. (1993) Remarks on Discourse Ethics. In: *Justification and Application* (ed J. Habermas) pp. 19-111. MIT, Cambridge, Massachussets and London, England.

Habermas J. (1998) Überbietung der temporalisierten Ursprungsphilosophie: Derridas Kritik am Phonozentrismus. In: *Der philosophische Diskurs der Moderne* pp. 191-218. Suhrkamp, Frankfurt a. M.

Hansen M. T., Nohria N., & Tierney T. (1999) What's Your Strategy for Managing Knowledge. *Harvard Business Review* 106-116.

Hatch M. J. (1997) Organization Theory - Modern, symbolic and postmodern perspectives. Oxford University Press, Oxford.

Haugeland J. (1987) Artificial Intelligence - the very idea. MIT Press, Cambridge, Massachusetts.

Hayek F. (1986) The use of knowledge in society. In: *Putterman: The Economic Nature of the Firm* pp. 66-71.

Hayek F. (2001) The Constitution of Liberty.

Hegel G. W. F. (1998) Enzyklopädie der philosophischen Wissenschaften im Grundrisse, Der Text folgt der 3. vermehrten Auflage: Heidelberg (Oßwald) 1830. edn. Digitale Bibliothek.

Heidegger M. (1962) Die Frage nach dem Ding. Max Niemeyer, Tübingen.

Horkheimer M. & Adorno T. W. (1968) Dialektik der Aufklärung. de Munter, Amsterdam.

Horkheimer M. & Adorno T. W. (1993) Oplysningens dialektik. Gyldendal.

Huber G. P. & Daft R. L. (1987) The Information Environments of Organizations. In: *Handbook of Organizational Communication* (eds F. Jablin, L. L. Putnam, K. H. Robers, and L. W. Porter) pp. 130-164. Sage, Newbury Park, London, New Delhi.

Hume D. (1910) An enquiry concerning human understanding, Online edition edn. Collier & Son.

Hutchby I. (2001) Conversation and Technology - from the telephone to the Internet. Polity, Cambridge.

Jensen J. F. (1990) Formattering af forskningsfeltet: Computer-Kultur & Computer-Semiotik. In: *Computer-Kultur Computer-Medier Computer-Semiotik* (ed J. F. Jensen) pp. 10-51. Nordisk Sommeruniversitet, Aalborg.

Järvinen M. & Bertilsson M. (1998) Socialkonstruktivisme - Bidrag til en kritisk diskussion. Hans Reitzels Forlag, København.

Kant I. (1784) Beantwortung der Frage: Was ist Aufklärung? Digitale Bibliothek Band 2: Philosophie.

Kjørup S. (1996) Semiotikken. In: *Menneskevidenskaberne* (ed S. Kjørup) pp. 240-264. Roskilde Universitetsforlag.

Knights D. & Murray F. (1994) Managers Divided. Wiley.

Kragh H. & Pedersen S. A. (1991) Naturvidenskabens teori. Nyt Nordisk Forlag.

Kuhn T. (1970) Postscript - 1969. In: *The Structure of Scientific Revolutions* (ed T. Kuhn) pp. 174-210. University of Chicago Press, Chicago.

Kühn O. & Abecker A. (1998) Corporate Memories for Knowledge Management in Industrial Practice: Prospects and Challenges. In: *Information Technology for Knowledge Management* (eds U. M. Borghoff and R. Pareschi) pp. 183-206. Springer, Berlin.

Lave J. & Wenger E. (1991) Situated learning: Legitimate peripheral participation. Cambridge University Press, Cambridge.

Levitt B. & March J. G. (1988) Organizational Learning. *Annual Review of Sociology* 14: 516-540.

Litterer J. A. (1961) Systematic Management: The Search for Order and Integration. *Business History Review* 35: 461-476.

Luhmann N. (1968) Vertrauen - ein Mechanismus der Reduktion sozialer Komplexität. Ferdinand Enke Verlag, Stuttgart.

Luhmann N. (1975) Macht, 2., durchgesehene Auflage edn. Enke, Stuttgard.

Luhmann N. (1988) Familiarity, Confidence, Trust: problems and alternatives. In: *Trust* (ed D. Gambetta) pp. 94-107. Basil Blackwell, New York.

Lukács G. (1970) Geschichte und Klassenbewusstsein. Luchterhand Literaturverlag.

Lukes S. (1970) Some Problems about Rationality. In: *Rationality* (ed B. R. Wilson) Oxford.

Lübcke P. (1982) Vor Tids Filosofi I. Politiken.

Lübcke P. (1983) Politikens Filosofi Leksikon, 1 edn. Politikens Forlag, København.

Lübcke P. (1994) Husserl: Filosofi som streng videnskab. In: *Vor Tids Filosofi - engagement og forståelse* (ed P. Lübcke) pp. 35-68. Politiken, København.

MacIntyre A. (1970) The Idea of a Social Science. In: *Rationality* (ed B. R. Wilson) pp. 112-130. Basil Blackwell, Oxford.

MacIntyre A. (1971) Rationality and the Explanation of Action. In: *Against the Self Images of the Age* (ed A. MacIntyre) London.

March J. G. & Olsen J. P. (1976a) Organizational Choice under Ambiguity. In: *Ambiguity and Choice in Organizations* (eds J. G. March and J. P. Olsen) pp. 10-23. Universitetsforlaget.

March J. G. & Olsen J. P. (1976b) Organizational Learning and the Ambiguity of the Past. In: *Ambiguity and Choice in Organizations* (eds J. G. March and J. P. Olsen) pp. 54-67. Universitetsforlaget.

March J. G. & Olsen J. P. (1989) Rediscovering Institutions: The Organizational Basis of Politics. The Free Press, New York.

March J. G., Schulz M., & Zhou X. (2000) The dynamics of rules. Stanford University Press, Stanford, California.

March J. G. & Simon H. A. (1958) Organizations. Wiley, New York.

March J. G., Sproull L., & Tamuz M. (1999) Learning From Samples of One or Fewer. In: *Organizational Learning* (eds M. D. Cohen and L. Sproull) pp. 1-19. Sage, Thousand Oaks.

Marx K. (1890) Das Kapital, nach der vierten von Friedrich Engels durchgesehenen und herausgegebenen Auflage, Hamburg 1890 edn. Institut für Marxismus-Leninismus, Berlin.

Miles R. E. & Snow C. C. (1995) The New Network Firm: A Spherical Structure Built on a Human Investment Philosophy. *Organizational Dynamics* 23: 5-18.

Nelson T. H. Replacing the printed word: a complete literary system. 1013-1023. 1980. IFIP conf., 1980, North-Holland. Information Processing. Lavington, S. H. 1980.
Ref Type: Conference Proceeding

O'Reilly C. A., Chatman J. A., & Anderson J. C. (1987) Message Flow and Decision Making. In: *Handbook of Organizational Communication* (eds F. Jablin, L. L. Putnam, K. H. Robers, and L. W. Porter) Sage, Newbury Park, London, New Delhi.

Olivera F. Memory systems in organizations: an empirical investigation of knowledge collection, storage and access in multi-unit organizations. Easterby-Smith, Mark. 692-722. 2000. Organizational Learning third international conference 2, Lancaster.
Ref Type: Conference Proceeding

Parsons T. (1950) Psychoanalysis and the social structure. *The Psychoanalytic Quarterly* 19: 371-384.

Pedersen S. A. (1996) Kuhns videnskabsfilosofi, dens udvikling og betydning. In: *Videnskabens revolutioner* (ed T. Kuhn) pp. 7-44. Fremad.

Pinch T. & Bijker W. E. (1997) The Social Construction of Facts and Artifacts: or How the Sociology of Science and the Sociology of Technology Might Benefit Each Other. In: *The Social Construction of Technological Systems* (eds W. E. Bijker, T. P. Hughes, and T. Pinch) pp. 17-50. MIT Press, Cambridge, Massachusets.

Plato (2000) Phaedrus, translated by Benjamin Jowett edn.

Popper K. (1961) Facts, standards, and truth. In: *The Open Society and Its Enemies - 2. Hegel and Marx* (ed K. Popper) pp. 369-396. Princeton University Press, Princeton.

Popper K. (1963) On the sources of knowledge and of ignorance. In: *Conjectures and Refutations* pp. 3-30. Routledge, London and New York.

Powell W. W. (1990) Neither Market nor Hierarchy. *Research in Organizational Behavior* 12: 295-336.

Powell W. W. & Brantley P. (1998) Competitive Cooperation in Biotechnology: Learning Through Networks? In: *Networks and Organizations* pp. 366-394.

Powell W. W. & Dimaggio P. J. (1991) Introduction. In: *The New Institutionalism in Organizational Analysis* (eds W. W. Powell and P. J. Dimaggio) pp. 1-40. The University of Chicago Press.

Powell W. W., Koput K. W., & Smith-Doerr L. (1996) Interorganizational Collaboration and the Locus of Innovation: Networks of Learning in Biotechnology. *Administrative Science Quarterly* 41 (1996): 116-145.

Scarbrough H., Swan J., & Preston J. (1999) Knowledge Management: A Literature Review. Institute of Personnel and Development, London.

Schopenhauer A. (1859) Die Welt als Wille und Vorstellung. Digithale Bibliothek.

Schultz M. (1990) Kultur i organisationer. Handelshøjskolens Forlag.

Scott W. R. (1995) Institutions and Organizations. Sage Publications, Thousand Oaks.

Seel M. (1992) Sprache bei Benjamin und Heidegger. *Merkur* 46: 333-340.

Sepstrup P. (1999) Tilrettelæggelse af information. Systime.

Short J., Williams E., & Christie B. (1976) The Social Psychology of Telecommunications. John Wiley & Sons, London.

Sproull L. & Kiesler S. (1991) Connections - New ways of working in the networked organization. MIT Press.

Staropoli C. Cooperation in R&D in the pharmaceutical industry - the network as an organizational innovation governing tecnological innovation. Technovation 18[1], 13-23. 1998. Great Britain, Elsevier Science Ltd.
Ref Type: Magazine Article

Suchman L. A. (1990) Plans and Situated Actions - The problem of human-machine communication. Cambridge University Press.

Sørensen V. (1995) Schopenhauer. Det lille Forlag, Frederiksberg.

Teece D. J. (1992) Competition, cooperation, and innovation - organizational arrangements for regimes of rapid technological progress. *Journal of Economic Behavior and Organization* 18: 1-25.

Thommesen J. Udviklingen i den fagpolitiske forskningstradition. 1-116. 1997. Institute of Computer Science, University of Copenhagen.
Ref Type: Thesis/Dissertation

Thommesen J., Havn E., & Bansler J. P. Erfaringer med anvendelse af ProjectWeb i Novo Nordisk. 2000. Center for TeleInformation.
Ref Type: Report

Thomsen J. P. F. (1994) Ny-institutionalismen. *Grus* 14. årg.: 5-21.

Tönnies F. (1963) Gemeinschaft und Gesellschaft, Tysk edn. Wissenschaftliche Buchgesellschaft, Darmstadt.

Weber M. (1904) Die 'Objektivität' sozialwissenschaftlicher und sozialpolitischer Erkenntnis. In: *Gesammelte Aufsätze zur Wissenschaftslehre* pp. 146-214. J.C.B.Mohr (Paul Siebeck).

Weber M. (1919) Wissenschaft als Beruf. In: *Gesammelte Aufsätze zur Wissenschaftslehre* (ed M. Weber) pp. 582-613. J.C.B. Mohr (Paul Siebeck), Tübingen.

Weber M. (1988) Kritische Studien auf dem Gebiet der kulturwissenschaftlichen Logik. In: *Gesammelte Aufsätze zur Wissenschaftslehre* pp. 215-290. J.C.B. Mohr (Paul Siebeck), Tübingen.

Weber M. (1995) Den protestantiske etik og kapitalismens ånd. Nansensgade Antikvariat.

Weber M. (1998) Wirtschaft und Gesellschaft.

Weick K. E. (1979) The Social Psychology of Organizing.

Weick K. E. (1995) Sensemaking in Organizations. Sage, Thousand Oaks.

Yates J. & Orlikowski W. J. (1992) Genres of organizational communication: a structurational approach to studying communication and media. *Academy of Management Review* 17: 299-326.

Zimmerman D. H. & Power M. (1971) The Everyday World as a Phenomenon. In: *Understanding Everyday Life* (ed J. D. Douglas) London.

Appendix A: Table of Interviews

The data consist of 23 semi-structured interviews of 1-1½ hour. All interviews are recorded on tape, ten of them in summaries, the rest in written transcripts.

Interview 1	IT Department, Web Design	Manager	Intranet as a whole	24/8-1998
Interview 2	IT Department		Intranet as a whole	31/8-1998
Interview 3	IT Department	Director	Intranet as a whole	18/9-1998
Interview 4	Pharmaceutical Division	Manager	SQUARE	12/10-1998
Interview 5	Biochemistry Production	Controller	Intranet as a whole (SQUARE)	23/10-1998
Interview 6	Pharmaceutical Division	Secretary	Intranet as a whole	26/10-1998
Interview 7	IT Department, Security	Manager + Assistant	Intranet as a whole	14/10-1998
Interview 8	Communication		Intranet as a whole	
Interview 9	Corporate HQ	Manager	SHARING	10/12-1998
Interview 10	Bioechemistry Division	Manager	SHARING	18/6-1999
Interview 11	International Operations	Manager	SHARING	14/6-1999
Interview 12	Bichemistry Division	Manager	SHARING	22/6-1999
Interview 13	Biochemistry Research	Manager, (Facilitator)	SHARING	9/6-1999
Interview 14	Biochemistry Division	Manager	SHARING	26/5-1999
Interview 15	IT Department, Web Design	Webmaster	Intranet as a whole	17/9-1999
Interview 16	Pharmaceutical Development	Assisant	ProjectWeb	17/11-1999
Interview 17	Pharmaceutical Development	Assisant	ProjectWeb	22/11-1999

Interview 18	Pharmaceutical Development	Director	ProjectWeb	23/11-1999
Interview 19	Pharmaceutical Development	Director	ProjectWeb	29/11-1999
Interview 20	Pharmaceutical Development	Support Assistant	ProjectWeb	30/11-1999
Interview 21	Pharmaceutical Development	Manager	ProjectWeb	2/12-1999
Interview 22	Pharmaceutical Development	Assisant	ProjectWeb	2/12-1999
Interview 23	Pharmaceutical Development	Director	ProjectWeb	4/1-2000

Appendix B: Capture – communication converted to memory

The idea behind 'capturing' is to preserve a universal, (partly) de-contextualised element by saving people the trouble the 'overhead' – extra trouble – required in making this universalisation and de-contextualisation. To make it automatic or at least sufficiently effortless.

Will new media – incl. Intranet – is whether it will make it easier to 'capture knowledge/memory when it is created'? This opportunity arises because electronic media change or blur the distinction between speech and writing: i.e. automatic transcripts convert spoken language to text; chat and emails enable a form of written communication that resembles the spoken word; discussion groups or conference systems allow written communication in situations, where it was previously impossible. Electronic media have gained new territory for written communication in organisations. When 'content' is transferred to writing, it is available for manipulation by computers, i.e. by providing search facilities.

Transcripts

The simplest example is the idea of using transcripts, i.e. as an alternative to minutes. Culnan & Marcus suggest that complete written transcripts may have "profound effects on intraorganisational communication and decision-making" by preserving the *process* of the discussion, including all the initial positions that have been abandoned or modified before conensus is reached (for whatever reason: authority or the strength of the argument), while minutes are restricted to "a single person's understanding of the consensus".

> "complete written transcripts differ from minutes in several important respects. Minutes are generally written by a single individual (although the position of secretary may rotate) and so are more likely to represent a single person's understanding of the consensus than does a transcript, which records each participant's observations as they occur. Minutes rarely capture the initial positions of each participant or the interim postures taken as the consensus evolves. A transcript turns each utterance into a public stand to which others can easily refer at later points in time". "[T]he availability of transcripts could have profound effects on intraorganizational communication and decsion-making... For example, transcripts of proceedings might be useful in reducing the experience gap of new organizational members. On the other hand, they may inhibit opinion change and prevent formation of consensus. The availability and awareness of public stands may make a reinterpretation of the past impossible, thus altering workgroup processes in incalculable ways." (Culnan & Markus 1987)

The intention is to 'photograph' communication (discussions, etc.): using an *automatic* and 'subjectless' medium seems to offer two advantages[135]. On the one hand, people are relieved of the extra effort spend in expressing, recollecting and 'communicating' what has happened: writing the minutes after a meeting, or giving a summary of a rationale (and discussion) behind a decision after it has been reached. These efforts are inhibitory in organisational settings (and elsewhere), as there's generally an assymetric benefit in records and documentation: those who make the records are not the same as those who benefit. On the other hand subjective interpretation (and filtering) is avoided – or postponed[136].

This idea of automatic memory confronts a number of difficulties, which are evident in the light of the previous discussions. One example is the problem of physical 'situatedness': oral communication will contain numerous deictic references (temporal and spatial) the meaning of which is evident *in situ*, but lost to the outsider. And the fact that the material has not been 'interpreted' means that logical arguments and positions are not clarified: it may take some effort to see the meaning of those 'initial positions' that were ignored in the final decision – because it requires active

[135] In this respect, transcripts offer the same characteristics, as in Benjamin's comparison between the photograph and the painting. Even though the photographer obviously can choose perspective, apply techniques and arrange the setting and the posture of the model, Benjamin finds it less interesting to view photography as art – and suggests instead viewing art as photography. The photography is characteristic in being unconsciously 'designed', it allows impressions that would be 'filtered out' by the conscious painter – and Benjamin further argues that the *perception* of the photography focuses on elements that were *not* intended by the photographer: "Aller Kunstfertigkeit des Photographen und aller Planmässigkeit in der Haltung seines Modells zum Trotz fühlt der Beschauer unwiderstehlich den Zwang, in solchem Bild das winzige Fünkchen Zufall, Hier und Jetzt, zu suchen, mit dem die Wirklichkeit den Bildcharakter gleichsam durchgesengt hat, die unscheinbare Stelle zu finden, in welcher, im Sosein jener längstvergangenen Minute das Künftige noch heut und so beredt nistet, dass wir, rückblickend, es entdecken können. Es ist ja eine andre Natur, welche zur Kamera als welche zum Auge spricht; anders vor allem so, dass an die Stelle eines vom Menschen mit Bewusstsein durchwirkten Raums ein unbewusst durchwirkter tritt" (Benjamin 1991c).

[136] There are parallels to Suchman's defence of her ethnomethodological method, which requires extensive use of video cameras: actions are situated, carried out in a purposeful reaction to the conditions met. People are not able to consciously recollect their actions, exactly because these actions were *situated* and not the execution of a premeditated plan. "Such studies require extended participant observation of the internal life of a setting, in order to understand what participants themselves take to be relevant aspects of their activity. Importantly, this may include things that are so familiar to them as to be unremarkable (and therefore missing from their accounts of how they work), although being evident in what they can actually be seen to do" (Suchman 1990). A major difference, of course, is the emphasis on *video*: neither tape nor transcript would recall the 'situated context'.

understanding as described by Gadamer, implying attempts to reconstruct and improve the argumentation by 'acquiring' the perspectives or horizons on which it is based.

Instead of making an automatic photograph, other approaches may impose various degrees of structure on the communication in order to make the content more useful for later use.

Written communication

The use of electronic meetings, as described by Sproull & Kiesler, is a mild version of this solution: members of a group are required to use written communication during decision making. People have thus already made an effort to put their contribution in writing: There may be a stronger tendency to finish the sentences and to achieve more clarity; and there is a smaller degree of 'indexicality', especially if people are physically separated – they already have to compensate for the physical separation by verbalizing more of the content, unintendedly also making it more useful for later readers.

Structure – formalised language

Conklin and others have taken a step further by attempting to impose a simple structure – called gIBIS – on decision processes (Conklin & Begeman 1989). This structure is based on a distinction between *Issues, Positions* and *Arguments,* and it is supposed to support both *discussion/decision making* during software development projects – by making arguments and positions clear – and *memory*. During meetings, participants are expected to fit their arguments into this structure, and the authors emphasize the necessity of simplicity: "... discussions are clearer and the whole method works better if Issues are just a single question, Positions are *just* a single response, and Argument nodes each contain a single objection or supporting point". In principle, this is a rather vague version of the basic intention of the 'logical paradigm': to reduce sentences in natural language to logical expressions (to 'clarify', see discussion).

The normativity in their argument reflects the inherent conflicts and the problem in structuring natural language discussions, and experiments with the system suggest that people experience "the problem of classifying the rhetorical type of an utterance and placing it on the decision map (issue net) in an appropriate place quickly enough so as not to inhibit the conversations" (Bannon & Kuutti 1995). Another problem – recognized by the authors – is that discussions are restructured or 'broken down' into simple elements, which make them difficult to 're-collect' and understand for later readers outside the original context etc. (see Conklin & Begeman for elaboration), and thus threatens the system's value as a *memory* – the support of which was in fact the primary motivation for the system. It may be added that the system may not be well suited for 'reducing equivocality', as the gIBIS structure seems to inhibit representation of 'frames of interpretation'.

The wellknown databases of ‘frequently asked questions’ is another example, as illustrated with Ackerman’s organisational memory systems. The idea is to preserve and reuse responses from Technical Support to specific questions. However, the material in itself was found to be inadequate for the purpose because it was too specific, too context dependent. They therefore chose to edit the material by generalization and de-contextualization (Ackerman 1994).

Basically, the idea presumes that the situated oral commucitation has a content of of ‘objective statements’ that is not completely context dependent, that all statements are not merely situated or performative. This idea corresponds somewhat the intention of the logical paradigm to translate natural language into objective statements. It would probably be more feasible in situations, where people have retreated from everyday practice, from the role of a participant to that of an ‘observer’, i.e. in connection with problem solving.

Appendix C: Nonverbal 'communication' – art and media richness

The theory of media richness suggests that nonverbal cues enrich communication, while others claim that *rich data* constitute a better source of knowledge. These assumptions lead to the expectation that the enhanced graphical (and video) facilities associated with internet technology constitute a further qualitative revolution of IT-based communication. In this context there is some parallel to the idea that (nonverbal) art – based on other media/material than verbal language – constitutes another form of experience, one that may recover what was lost from (verbal) language. A comparison with Adorno's concept of art may put the idea of rich media and rich data in a new perspective.

One major difference should be kept in mind, however. A *work* of art implies active and 'conscious' shaping of the material, without which there would be no art. The theory of media richness, by contrast, basically regards the medium as a filter that is more or less *disturbing* – the richest medium is disintermediation: no medium at all.

Beyond the boundaries of language - Adorno

Adorno wants to reach beyond (or expand) the boundaries of language (by 'speaking the unspeakable'). He argues that art – music, for instance – may recover what was lost in language:

> "That which is silenced by the medium of language as such comes back to language by the means of the sublanguage of art that is modern." (Brunkhorst 1999)

This argument is based on the idea, presented previously, that language has been split in two, separating science from art, and the semiotic from the mimetic aspects of language. According to Adorno, the *word* has its roots in the (mimetic) *symbol*: "Wie die Hieroglyphen bezeugen, hat das Wort ursprünglich auch die Funktion des Bildes erfüllt" (Horkheimer & Adorno 1968). This symbolic function preceded the *concept* and still remains an element of language: "Das vorbegriffliche, mimetische Element der Sprache" (Adorno 1964). Words have a *history* and cannot be regarded merely as arbitrary 'Spielmarke' corresponding to the previous definition of *signs* , "einer blank nominalistischen Sprachtheorie…, der die Worte austauschbare Spielmarken sind, unberührt von Geschichte" (Adorno 1964).

Imitation vs. knowledge

Whereas *Science* has reduced the word to a *sign* that serves as a tool to '*know*' ('erkennen') and control the world instead of *resembling* it, *art* has preserved the remaining aspects of the word: sound, image – the word *proper*. Yet the word has been further split between the different art forms: the verbal arts of i.e. poetry and novels, as well as nonverbal arts: music, painting, sculpture – and all attempts during the

Romantic Era to reintegrate these into a common art form, the *Gesamtkunstwerk* (such as the opera), have been futile[137]. Art has preserved the capability to resemble or *imitate* the world (mimesis), by renouncing on the ability to *know* the world:

> ”Als Bild soll [die Sprache] zum Abbild resignieren, um ganz Natur zu sein, den Anspruch ablegen, sie zu erkennen. Mit fortschreitender Aufklärung haben es nur die authentischen Kunstwerke vermocht, der blossen Imitation dessen, was ohnehin schon ist, sich zu entziehen.” (Horkheimer & Adorno 1968)

This split between science and art, between *mimesis* and *semiosis*, cannot heal: neither form of knowledge can be reduced to – or replaced by – the other. Despite his critique of the formalization of scientific knowledge, Adorno recognizes the advantages of this development. And although art preserves the potential for ‘speaking the unspeakable’, mimetic behaviour is also problematic, if it contends with a mere replication of ‘what is already there’. True art should not be mere *imitation*, not just a secondary representation of an object – or even a ‘tertiary’, indirect representation of the *idea* behind the object, as mentioned in this encyclopaedia definition of *mimetics*:

> “Efterhånden bliver [betydningen *efterligning* – af personers handlinger, tilstande, erfaringer] fremherskende. Hos Aristoteles er m. som efterligning princippet for *kunsten*. Men der er her *ikke* tale om efterligning i betydningen kopiering el. afbildning. M. vil tværtimod sige en skabelse (*poiesis*) og involverer dermed en afstand til den givne virkelighed (natur). 2. Hos Platon nedvurderes kunsten, idet den blot er efterligning af en efterligning (f.eks. billede af et bord, der selv er afbillede af ideen om et bord).” (Lübcke 1983)

---

[137] Later – compare to *Dialektik der Aufklärung* from 1946 – Adorno developed a theory about ‘transgression’ of the art forms: modern art transgresses the classical borders of the art forms, yet without destroying these borders: “Adorno developed the ‘transgression theorem’ in the 1960s. ‘Transgression’ means the transgression of borders between music and painting, sculpture and text and so on, or between ‘high’ and ‘low’ culture, between art and life, theory, philosophy and art. Adorno’s word for ‘transgression’ is ‘infringement’ (*Verfransung*). ‘Transgression’ does not mean ‘regression’ that cuts down all differences and overcomes all limits… Adorno gives the name *Verfransung* … to the internal dissolution of the boundaries between the individual art forms and between art and life, which was long ago anticipated by surrealism and has become ubiquitous since the 1960s. The explosive dynamic between classical modernity, neo- and post-avantgardism forces *art of its own accord* to transgress the particular boundaries of its forms. Music, the classical temporal art, spatializes itself by consciously renouncing its expressive force, and painting gives itself temporal form by becoming expressive and non-representational. Adorno was always interested in the transgressions and overlapping moments on the boundaries of poetry and music, music and writing (the silent reading of the score as the ideal of listening to music), of philosophical essay and art, notes and literature” (Brunkhorst 1999)). Compare also Habermas’ critique of Derrida (Habermas 1985;Habermas 1998).

The complex view on mimesis is evident in Adornos disagreement with Benjamin, who argues that the development of photography makes the very art of painting superfluous (Benjamin 1991c;Benjamin 1998). Against Benjamin, Adorno argues that the technology has 'emancipated' the art of painting from the role of mere replication, just as the iconoclastic *ban on images*[138] liberated painters from obedient 'replication', glorifying and elevating existing objects or persons. Furthermore, mere imitation is conservative: it locks our attention on the past and is incapable of the *new* or *potential*.

Schopenhauer's hierarchy of arts: purity and independence

In his view on art, Adorno is inspired by Schopenhauer, whose discussion – and hierarchy – of the different forms of art is relevant and illustrative for the discussion of media richness. According to Schopenhauer, theoretical – scientific– knowledge is subsumed to the subjective *Will* ('Wille'), which imposes a specific form or perspective (and a *filter*) on impressions. This idea is inspired by Kants philosophy and corresponds somewhat to Adorno's critique of an (instrumental) rationality, and to Derrida's critique of the suppression of the particular. Schopenhauer, too, argues that art offers a means – in particular cases – to avoid this veil ('Nebel'):

> "Jedes Kunstwerk ist demgemäß eigentlich bemüht, uns das Leben und die Dinge so zu zeigen, wie sie in Wahrheit sind, aber, durch den Nebel objektiver und subjektiver Zufälligkeiten hindurch, nicht von Jedem unmittelbar erfaßt werden können. Diesen Nebel nimmt die Kunst hinweg." (Schopenhauer 1859)

In Schopenhauers 'hierarchy', the art forms are ordered according to their *decreasing dependency on random material in time and space*. *Sculpture*, which shapes figures *in* space, ranks higher than architecture, which merely shapes space, but lower than painting, which creates its own space. Poetry ranks even higher, because it makes use on free *imagination* ('Phantasie'), the role of which is crucial in making the observer an 'accomplice'. I.e. a wax figure is not art, despite its perfect replication of the object, because it leaves nothing to 'imagination', through which the perceiver must 'participate' in the work of art:

> "Aus dem in Rede stehenden ästhetischen Grundgesetze wird ferner auch erklärlich, warum Wachsfiguren, obgleich gerade in ihnen die Nachahmung der Natur den höchsten Grad erreichen kann, nie eine ästhetische Wirkung hervorbringen und daher nicht eigentliche Werke der schönen Kunst sind.

[138] According to Brunkhorst the ban of images (iconoclasm) was also a means to achieve 'disintermediation', which thus is an ideal of art: "The second aspect of the ban on images that has a similar function in the Bible and in modern art is to produce a direct, unreduced experience of the object. There should no longer be any access to the true reality of works of art that is mediated through (beautiful or ugly, more or less perfect) copies" (Brunkhorst 1999).

> Denn sie lassen der Phantasie nichts zu thun übrig. Die Skulptur nämlich giebt die bloße Form, ohne die Farbe; die Malerei giebt die Farbe, aber den bloßen Schein der Form: Beide also wenden sich an die Phantasie des Beschauers. Die Wachsfigur hingegen giebt Alles, Form und Farbe zugleich; woraus der Schein der Wirklichkeit entsteht und die Phantasie aus dem Spiele bleibt. - Dagegen wendet die Poesie sich sogar allein an die Phantasie, welche sie mittelst bloßer Worte in Thätigkeit versetzt." (Schopenhauer 1859)

The greatest effect, however, is achieved in music, because it does not *indirectly* represent or replicate the ideas behind the things, but directly represents the universal will behind the ideas[139] – and any attempt at 'musical painting', to use music for *illustration* of something, is contrary to the essence of music:

> "Ligesom kunstværket bliver jo renere, i jo højere grad kunstneren formår at frigøre sig fra det individuelt-tilfældige, står kunstarterne jo højere, jo mindre brug de behøver at gøre af tilfældigt stof i tid og rum og jo større spillerum de giver fantasien. Skulpturen, der former skikkelser i rummet, står højere end arkitektur og havekunst, der blot former rummet, men lavere end maleriet, der skaber sit eget rum; da skulpturen må lægge hovedvægten på formen, på skikkelsens skønhed, mens maleriet kan lægge hovedvægten på det sjælelige udtryk, er skulpturen ifølge sit væsen mere livsbekræftende end maleriet: den var oldtidens foretrukne kunstart, mens maleriet er den kristne tids. Mens beskueren af billedkunstens værker er bundet til et bestemt billede, er den frie fantasi det stof, som digtekunsten fremstiller sine billeder i; den har derfor, især i sin folkelige form, langt større virkning end billedkunsten, der gerne lader folket koldt. Men størst virkning udgår fra musikken, der ikke – som de andre kunstarter – indirekte afbilder ideerne bag tingene, men direkte afbilder viljen bag ideerne, - derfor er alle forsøg på

---

[139] Schopenhauer distinguishes between *idea* (in the Platonist sense) and *concept* (as it is *constructed* in science or philosophy: *arbitrary* signs). Concepts belong to science, and to use them in art is mistaken. A work of art should thus not be based on, or *illustrate*, a concept. "In Folge der vorhergegangenen Kapitel und meiner ganzen Ansicht von der Kunst, ist ihr Zweck die Erleichterung der Erkenntniß der Ideen der Welt (im Platonischen Sinn, dem einzigen, den ich für das Wort Idee anerkenne). Die Ideen aber sind wesentlich ein Anschauliches und daher, in seinen nähern Bestimmungen, Unerschöpfliches. Die Mittheilung eines solchen kann daher nur auf dem Wege der Anschauung geschehn, welches der der Kunst ist. Wer also von der Auffassung einer Idee erfüllt ist, ist gerechtfertigt, wenn er die Kunst zum Medium seiner Mittheilung wählt. - *Der bloße Begriff hingegen ist ein vollkommen Bestimmbares, daher zu Erschöpfendes, deutlich Gedachtes*, welches sich, seinem ganzen Inhalt nach, durch Worte, kalt und nüchtern mittheilen läßt. Ein Solches nun aber durch ein Kunstwerk mittheilen zu wollen, ist ein sehr unnützer Umweg, ja, gehört zu dem eben gerügten Spielen mit den Mitteln der Kunst, ohne Kenntniß des Zwecks. Daher ist ein Kunstwerk, dessen Konception aus bloßen deutlichen Begriffen hervorgegangen, allemal ein unächtes." (Schopenhauer 1859) (my italicisation)

> illuderende tonemaleri musikkens væsen imod. Det musikalske forløb er en fuldstændig parallel til verdensforløbet" (Sørensen 1995) (my italization).
>
> "[S]o zeigt uns eine Beethoven'sche Symphonie die größte Verwirrung, welcher doch die vollkommenste Ordnung zum Grunde liegt, den heftigsten Kampf, der sich im nächsten Augenblick zur schönsten Eintracht gestaltet: es ist rerum concordia discors, ein treues und vollkommenes Abbild des Wesens der Welt, welche dahin rollt, im unübersehbaren Gewirre zahlloser Gestalten und durch stete Zerstörung sich selbst erhält. Zugleich nun aber sprechen aus dieser Symphonie alle menschlichen Leidenschaften und Affekte: die Freude, die Trauer, die Liebe, der Haß, der Schrecken, die Hoffnung u.s.w. in zahllosen Nüancen, jedoch alle gleichsam nur in abstracto und ohne alle Besonderung: es ist ihre bloße Form, ohne den Stoff, wie eine bloße Geisterwelt, ohne Materie." (Schopenhauer 1859)

And even though Adorno does not share Schopenhauers appeal to *ideas* and a universal *Will*, he generally accepts the idea that music has an advantage for its lack of form.